

**Stormwater Pollution Prevention Plan**

**And**

**Spill Prevention, Control And**

**Countermeasures Plan**

**Prepared for:**

Rockydale Quarries Corporation  
4754 Old Rocky Mount Road  
Roanoke, Virginia 24014

**Site Location:**

Starkey Plant  
5925 Starkey Road  
Roanoke, VA 24014

**SWPPP Review and Update Prepared by:**

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March, 2016

## **STARKEY PLANT EMERGENCY NUMBERS**

CHRIS WILLIS

Area Manager – Southern Operations

(540) 774-1696 (office)

(540) 315-0375 (mobile)

EDDIE BURGESS

Plant Foreman – Starkey Plant

(540) 774-3222 (office)

(540) 493-5037 (mobile)

## **AGENCY CONTACTS**

1. National Response Center – Phone No. (800) 424-8802
2. Environmental Protection Agency – Phone No. (215) 597-9898
3. Virginia Department of Environmental Services – Phone No. (800) 468-8892
4. Emergency Services (Police, Fire, EMS, etc.) – 911
5. Virginia Department of Environmental Quality – Phone No. (540) 562-6700
6. City of Roanoke Wastewater – Phone No. (540) 853-5700

Other emergency numbers for assistance with chemical releases:

Draper Aden Associates (540) 552-0444

Environmental Options, Inc. (540) 483-3920



**INFORMATION TO REPORT:**

1. Name, address, and telephone number of owner or operator,
2. Name, address, and telephone number of facility,
3. Date, time, source, and place of incident (i.e. fire, explosion, spill),
4. Name and quantity of materials involved,
5. Extent of injuries, if any,
6. An assessment of actual or potential hazards to human health or the environment, and
7. Estimated quantity and description of recovered materials that resulted from the incident



## **1.0 INTRODUCTION**

The proper management of chemicals is an essential function of any facility using materials that may be dangerous or harmful to human health or the environment. This plan is designed to provide guidance to the Starkey Plant personnel for safe chemical handling, storage and preventative maintenance, as well as spill response and clean-up procedures. The plan also incorporates within its structure the Best Management Practices (BMP) plan. The goal of this Plan is to prevent spills and leaks of potential pollutants that could degrade storm water quality resulting in surface water, soil, and ground water pollution. The Plan emphasizes prevention of pollution rather than treatment of pollutants. To assure compliance with the terms and conditions of this permit and attain these goals, the elements of this Plan are structured to provide the following:

- The identification and assessment of potential sources of pollution associated with industrial activity from the facility which may reasonably be expected to affect the quality of storm water discharges, and
- The development and implementation of appropriate measures, controls, and practices, referred to as “Best Management Practices” (BMPs), to reduce the pollutants in storm water discharges and prevent soil, surface water, and ground water pollutants.

The Plan is kept on file at the facility, and is available for on-site review during normal working hours.

### **1.1 Regulatory Requirements**

This section includes discussion of the Storm Water Pollution Prevention Plan (SWPPP), Spill Prevention, Control & Countermeasures (SPCC) plan, and Best Management Procedures (BMP).

#### **1.1.1 Storm Water Pollution Prevention Plan**

This Storm Water Pollution Prevention Plan (SWPPP) is designed to address the requirements of the Virginia Pollutant Discharge Elimination System (VPDES) Industrial Stormwater General Permit (VAR052303 to be assigned). A copy of the VPDES General Permit may be found in Appendix A.

The Clean Water Act provides that storm water discharges associated with industrial activity from a point source to the waters of the United States are unlawful, unless authorized by a VPDES permit. The State of Virginia has developed an VPDES General Permit to cover storm water discharge associated with industrial activity. The permit authorizes storm water discharges to waters of the State in accordance with the conditions set forth in the permit.



Part IV of the permit requires the development and implementation of a Pollution Prevention Plan designed to reduce pollutants in storm water. This plan is prepared in accordance with this requirement and will be amended whenever there is a change in design, operation, or maintenance which has a significant effect on the potential for discharge of pollutants to the waters of the state or if the plan proves to be ineffective in eliminating or significantly minimizing pollutant sources identified at the Starkey Plant.

### **1.1.2 Spill Prevention, Control and Countermeasure Plan (SPCC Plan)**

Oil pollution prevention regulations found in 40 CFR Part 112 require the preparation and implementation of Spill Prevention Control and Countermeasure Plans (SPCC) for all non-transportation related facilities that have discharged or could reasonably be expected to discharge oil into navigable waters of the United States or its adjoining shorelines. The focus of the SPCC is preventive rather than reactive measures.

The SPCC Plan must be prepared by the owner or operator of facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, or consuming oil and oil products, provided the following criteria are met:

- Facility type: Non-transportation related,
- Oil Product Storage: An aggregate aboveground container capacity greater than 1,320 gallons, or a total underground capacity greater than 42,000 gallons, and
- Location: Facilities, which due to their location, could reasonably expect spilled oil to reach navigable waters of the U.S. or adjoining shorelines.

Facilities that pose a risk of causing substantial or significant and substantial harm to the environment from an oil spill are required to prepare oil spill response plans per the Oil Pollution Control Act of 1990.

### **1.1.3 Plan Amendment**

This SPCC Plan will be amended whenever there is a change at the facility that affects the potential to release petroleum or hazardous substances or at the request of the EPA Regional Administrator. Required amendments will be implemented as soon as possible but no later than six months after the change takes place. A Registered Professional Engineer must certify the amended SPCC Plan.

The SPCC Plan also will be reviewed and recertified within five years of the last certification. Portions of this plan not affecting its intent, scope or overall design, such as notification lists, may be updated without recertification.

If the facility has a reportable discharge, defined as either of the following:



- 1,000 U.S. gallons of oil into or upon surface waters of the United States in a single spill event, or
- > 42 gallons of oil in two spill events within any twelve month period,

the SPCC plan and spill details will be submitted to the EPA Regional Administrator and the state agency in charge of water pollution control activities within 60 days for review and recommendations. Upon receipt of recommendations, the necessary changes will be made and the plan recertified.

#### **1.1.4 Tank Integrity Testing**

For facilities with an aggregate above ground oil storage capacity of 25,000 gallons or greater Virginia SPCC regulations require tank integrity testing on a regular schedule, and whenever repairs are made (9 VAC 25-91-20). Above ground storage tanks with capacities greater than 12,000 gallons are subject to formal internal and external inspections in accordance with API Standard 653. Above ground storage tanks with capacities less than 12,000 gallons are not subject to the formal internal inspection unless the integrity of the tank is in question (9 VAC 29-91-130).

API Standard 653 states that all tanks shall be given a visual external inspection by an authorized inspector. This inspection shall be called the external inspection. Ultrasonic or other nondestructive examination techniques are considered external inspections, but may be substituted for internal inspections.

Federal SPCC regulations (40 CFR 112.8 (c)(6)) require that visual inspections must be combined with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of nondestructive shell testing. Tank supports and foundations must also be inspected.

Accordingly, each tank containing oil products will be subject to formal external and internal tank inspections according to the standards established by the American Petroleum Institute Standard 653 or equivalent (example Steel Tank Institute document "Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids" (SP001-00)). Tanks with less than 12,000 gallons storage capacity will require only external inspections. Tanks with greater than 12,000 gallons storage capacity will require both external and internal inspections.

Integrity testing will be done once every 10 years by a qualified tank inspector. Records of the inspection by the Qualified Tank Inspector will be kept for the entire life of the tank.



### 1.1.5 Best Management Practices Plan (BMP Plan)

The General Permit requires a narrative description of Best Management Practices (BMP's) for VPDES permitted facilities. BMPs identify sources as well as methods of containment, description of training, inspection, and security procedures, and emergency response measures to be taken in the event of a discharge to surface waters by contaminated storm waters.

### 1.2 Management Certification

*This Storm Water Pollution Prevention Plan has been reviewed by the plant management and is being implemented as herein described. The SWPPP will be reviewed at a frequency no less than once every year by the Pollution Prevention Committee, which will make recommendations to the Company Vice President concerning the SWPPP Plan implementation, maintenance, and revision.*

*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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Signature:

Gary Hubbard

Date:

3-9-16

Name:

Gary Hubbard

Position:

Vice President - Operations

### 1.3 Engineer Certification

*Having personnel under my direct supervision examine this facility and being familiar with the provisions of 40 CFR Part 112, this seal certifies that I find that this SPCC Plan has been prepared in accordance with good engineering practices.*

*This SPCC Plan shall be considered void upon facility expansion and/or change in operation. In the occurrence of these events, the Plan shall be re-evaluated, updated, and re-certified. This certification shall in no way relieve the owner and/or operator of this facility of his duty to fully implement and comply with such Plan.*



Certified by: Gary L. Shirley

Date: 2-23-16

Gary L. Shirley, P.E.  
Racey Engineering, PLLC

**1.4 Non-Storm Water Discharges**

As required by the VPDES General Permit, the storm drainage systems at this facility have been evaluated for the presence of illicit or non-storm water discharges. Personnel from Racey Engineering, PLLC and the management of the Starkey Plant visually inspected the storm water system for the purpose of determining the presence of non-storm water discharges in the storm water drainage system. No illicit discharges were found.

*I certify under penalty of law that the outfall(s) covered by this pollution prevention plan have been evaluated for the presence of non-storm water discharges.*

Signature: Gary Hubbard

Date: 3-9-16

Name: Gary Hubbard

Position: Vice President - Operations

**1.5 Statement of Purpose**

This plan is intended to establish a process through which the managers of this facility can evaluate potential sources of environmental incidents at a site and then select appropriate, cost effective measures and innovative techniques to prevent or control the discharge of any oil, toxic or otherwise hazardous substances, or non-storm water into storm water runoff. The process involves four steps:

1. Formation of a team of qualified personnel who will be responsible for the preparation of the plan and assisting management in the implements of the plan;
2. Assessment of potential storm water pollution sources;
3. Selection and implementation of appropriate management practices and control, and
4. Periodical evaluation of the ability of the plan to prevent releases of chemicals to the environment through storm water runoff.



## **2.0 POLLUTION PREVENTION COMMITTEE**

The Pollution Prevention Committee is the group of individuals within the plant organization that is responsible for assisting plant management in development, implementation, maintenance, and revision of the SWPP Plan. The committee is comprised of both management and operational personnel and their responsibilities include all aspects of the plan, such as:

1. Identification of toxic and hazardous materials inside the plant and materials handled or stored outside the plant in a manner which would allow contact with storm water.
2. Identification of potential spill sources.
3. Establishment of incident reporting.
4. Review of environmental incidents to determine and implement any necessary changes to the plan.
5. Establishment of training programs.
6. Periodic evaluation of the effectiveness of this plan (at least yearly).
7. Provide assistance to plant management in implementing, maintaining and updating the plan.
8. Notification of authorities in the event of a SWPPP incident.
9. Review of new construction and changes in processes and procedures at the facility relative to spill prevention and control.

The following Starkey Plant personnel comprise the Pollution Prevention Committee for this facility:

- Keith Holt, E,H, &S Coordinator – Rockydale
- Eddie Burgess – Plant Foreman



### **3.0 FACILITY LOCATION AND DRAINAGE CHARACTERISTICS**

#### **3.1 Facility Information**

Facility Name and Mailing Address: Rockydale Quarries Corporation – Starkey Plant  
2343 Highland Farm Road, NW  
Roanoke, Virginia 24017

Plant Location: Rockydale – Starkey Plant  
5925 Starkey Road  
Roanoke, Virginia 24014

Receiving Stream: Back Creek

Corporate Environmental Contact: Keith Holt  
E, H, & S Coordinator  
(540) 597-5017

Site Location Map – Refer to Figure 1

Site Drainage Map – Refer to Figure 2

##### **3.1.1 Site Drainage Area**

Refer to Appendix D for example calculation showing Storm Water released from the site during typical rainfall event.

##### **3.1.2 Description of Manufacturing Processes**

Established in 1944, the Starkey Plant is a nonmetallic mining facility, operating under SIC No. 1422 – “Crushed and broken Limestone.” Additionally, there is a “Biomix” production process involving the bulk storage and shredding of wood products, SIC No. 2499.

##### **3.1.3 Product Description**

The Starkey Plant manufactures a variety of construction aggregates including coarse, fine, base, erosion control, specialty products and agricultural lime. The Starkey facility manufactures lime products (bagged lime), fertilizer filler, and oil treated filler. The facility sells masonry sand, palletized lime and pallets.



### **3.1.4 Plant Operations**

The main process areas include overburden removal, drilling/blasting, loading/hauling, crushing, conveying, screening, shipping/receiving, maintenance and stockpile storage areas.

### **3.2 Solid Waste Handling and Disposal**

Solid wastes are stored in approved containers serviced by First Piedmont Corporation. Removal is done at the facility's request, usually once per week.

### **3.3 Wastewater Handling and Disposal**

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



## **4.0 MATERIALS INVENTORY AND RISK ASSESSMENT**

### **4.1 Inventory of Materials Exposed to Storm Water**

Site inspections have been conducted at this facility to identify significant materials that may impact a storm drain or surface water if accidentally released. Controls in place to prevent releases of these materials are addressed in Section 4.2. Typical materials stored on-site include lubricating, hydraulic and used oils. A material safety data sheet (MSDS) inventory of stored materials is found in Appendix F.

### **4.2 Risk Assessment and Spill Control**

The Rockydale facility has several oil storage and process areas, as further described below by Department or area (identified according to locations identified on Figure 2 – Site Layout).

#### **Starkey**

1. Diesel Fuel Storage (Building Exterior) One (1) 275 gallon tank with secondary containment.
2. One (1) Mobil/Delvac 275 gallon 15w-40 motor oil tank with secondary containment.
3. (Paraffin Wax Additive) TUFFLO One (1) 300 gallon tank.
4. Miscellaneous Drum Storage Products stored in 55 gallon drums are stored at various locations at the facility. Typical product is gear oil for the crusher lubricating system.

### **4.3 Past Spills and Leaks**

The term “Significant Spill” is defined in the General Permit as including, but not limited to: “release of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (See 40 CFR 110.10 and CFR 117.21 or Section 102 of CERCLA (See 40 CFR 302.4)).”

No significant spill has occurred at this facility.

### **4.4 Existing Storm Water Sampling Data**

This facility adheres to a storm water monitoring program as outlined in Section 7. Monitoring data is maintained in a file on-site by the Plant Manager or designates in Roanoke, Virginia.



## **5.0 MANAGEMENT CONTROLS**

### **5.1 Guiding Principles**

Starkey has developed spill control principles and practices that represent its general philosophy of spill and control and environmental stewardship. These principles are presented below:

- A philosophy of preventing unplanned/unpermitted releases and controlling sources should be used during the storm water pollution source identification and alternatives evaluation process;
- Sources should be controlled to prevent unauthorized releases to wastewater or storm water collection systems;
- Spills should be treated as close to the source as feasible, and/or adequate spill control facilities should be provided;
- Early warning and detection of spills and upset conditions should be provided to allow source control or treatment process changes;
- Passive or automated systems designed to control spills without operator action should be provided; where feasible, to reduce reliance on operator detection or reaction;
- Spill control features should be incorporated into new process construction;
- All releases are to be prevented, not just reportable ones;
- Spill control awareness and training should be emphasized; and
- Spill prevention projects should be developed and implemented in a timely manner after sources and problems are identified.

### **5.2 Best Management Practices**

The most effective method to prevent pollution of soils, surface water or ground water is to implement Best Management Practices (BMPs). BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

#### **5.2.1 Good Housekeeping**

Good housekeeping involves a common sense approach to improve and maintain a clean and orderly work environment by implementing the following practices:

- Sweeping paved parking lots



- Storing chemicals in a neat and orderly manner,
- Cleaning up small spills promptly,
- Regular refuse pickup and disposal,
- Good storage and materials inventory practices, including labeling of all containers,
- Schedule routine cleanup efforts, and
- Discuss and promote good housekeeping practices with employees.

### **5.2.2 Preventive Maintenance**

A preventive maintenance program is an effective BMP for preventing surface or ground water pollution. A preventive maintenance program should include:

- Timely inspection and maintenance of storm water management devices (e.g. cleaning oil/water separators, catch basins, secondary containment structures, storm gutters, etc.);
- Inspection and testing of facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface water and ground water (including pipes, pumps, storage tanks and bins, pressure valves, pressure release valves, and process and material handling equipment); and
- Proper maintenance of facility equipment and systems.

### **5.2.3 Release Response and Reporting Procedures**

Effective spill and release response and reporting procedures are important because they provide for rapid response to mitigate the impact of a release. Release response and reporting procedures for this facility are described in more detail in Section 8. These procedures describe the following measures that should be implemented upon discovery of a significant release:

1. Assess the risk;
2. Control the release to the extent possible;
3. Report the release to management and government agencies;
4. Clean up the impacted area as soon as possible; and
5. Follow up with preventive measures.



## 5.2.4 Inspections

Regular inspections are a simple way to ensure that all elements of this Plan are in place and working. Inspection and monitoring of materials storage areas is required at the facility to reduce the potential for spills and to ensure that spills are detected and responded to promptly. Facility personnel involved with inspection and monitoring are instructed to follow specific procedures.

Above ground tanks, storage containers, and secondary containment systems containing significant materials will be subject to periodic visual inspections and integrity testing. Results of the inspections should be recorded on log sheets, inspection report forms, or the facility operations log.

If corrective action is required, but cannot be taken immediately, then formal repair work orders should be initiated to ensure follow-up.

Inspections should be performed according to the following recommended schedule:

<b>Prior to Each Use</b>	All piping, hoses, valves, pumps, and connections that are to be used in the transfer of significant materials shall be visually inspected for leaks, excessive wear, or potential discharges.
<b>Daily</b>	As part of the normal job function, every employee should look for signs of spills and abnormal leaks from process equipment, bulk storage vessels, tractor/trailer parking areas, cooling systems, sumps and material storage areas. Spills and abnormal leaks should be reported to management immediately and corrective action should be taken immediately. Administrative controls should be checked.
<b>Weekly</b>	Drums and containers of hazardous and non-hazardous wastes should be inspected weekly for signs of leaks, deterioration, or bulging due to corrosions or other factors. Drums and containers should be tightly sealed at all times except when withdrawing or adding materials. Drums stored in a horizontal position should have drip pans beneath dispensing areas. Leaking or damaged drums will be immediately replaced with acceptable drums and disposed of in a proper manner.
<b>Monthly</b>	Storm water and wastewater management devices or structures such as grate guards or storm water retention basins and floor drains should be checked to ensure proper operation.



	<p>Containment dikes, curbing, valves, and blocked floor drains should be inspected for leaks and structural integrity. Valves that drain into containment areas should be inspected to ensure they are in the closed position. Holes or unsound valves in dikes will be repaired or replaced as soon as possible.</p> <p>Aboveground storage tanks should be inspected for signs of corrosion, structural fatigue, leakage, and general integrity. Tank supports, foundations, and valves will be included in the inspections. In addition, the outside of the tanks will be observed frequently by operating personnel for signs of deterioration, leaks, or accumulation of product inside the secondary containment areas. Findings that could possibly compromise a tank's integrity will be corrected immediately.</p> <p>Spill cleanup kit inspections should be conducted to ensure that sufficient inventory is in stock. Replacement materials should be ordered immediately.</p> <p>Transformers should be inspected for signs of leaks.</p>
<b>Annually</b>	<p>Aboveground storage tanks should be inspected for signs of corrosion, structural fatigue, leakage, and general integrity. Tank supports, foundations, and valves will be included in the inspections. Vents, o-rings, and gaskets should be inspected for loose parts, rust, weathering, faulty gauges, leaky pipes, etc. The ground surrounding the storage tanks should be checked for ground settling and puddling of water near tank. In addition, the outside of the tanks will be observed frequently by operating personnel for signs of deterioration, leaks, or accumulation of product inside the secondary containment areas. Findings that could possibly compromise a tank's integrity will be corrected immediately.</p>

### 5.2.5 Secondary Containment

Secondary containment systems are effective in controlling spills. To be most effective, secondary containment systems and diversionary structures should meet the following standards:

- The secondary containment systems should block possible routes by which spilled or leaked materials could reasonably be expected to flow, migrate, or escape into surface waters or upon to the land from the containment areas;



- The secondary containment systems have sufficient capacity to contain the contents of the largest tank in the containment area plus sufficient freeboard to allow for the 25-year, 24-hour storm, if the system is not inside or covered;
- The secondary containment system is sufficiently impermeable to contain a spilled material for a duration necessary for the cleanup or recovery of the spilled substance;
- The secondary containment system is routinely inspected for accumulated liquids, debris, or incompatible materials;
- No transfer area, cubed storage area, or secondary containment system is drained into a watercourse or public sewage treatment plant unless provision is made to retain, by valves or other means, any accumulated material until its condition can be determined; and
- No incompatible materials are stored within the same containment area.

### **5.2.6 Loading and Unloading Operations**

The following measures are important to prevent the release of significant materials during any wastewater or impacted storm water transfer operations:

- Training – Implementing procedures discussed during personnel training programs, regular safety meetings, and briefings relative to spill prevention.
- Vehicle positioning – Whenever possible, vehicles should be positioned within spill containment areas during transfer. Positioning near or over storm drains or sewer drains should be avoided. Wheel blocks and emergency brakes should be used to avoid sudden movement of the vehicle. If the vehicle is positioned near a traffic corridor, traffic barriers should be placed to avoid collisions.
- Loading and Unloading Dock trucks should be visually inspected for leakage and oil from saddle tanks and the vehicle under carriage.
- Pre-positioning of spill kits, booms, or sewer block mats – If spill containment is not available during loading or unloading, spill mats or booms must be readily available or pre-positioned to seal any nearby catch basins that could lead directly to surface water or sewer systems.
- Drip pans – Drip pans or buckets should be used to catch small volume leakage from transfer hoses or fittings under transfer operations. Captured materials should be reused or properly disposed.
- Overfill prevention – During a delivery, tank truck operators should remain with the vehicle along with at least one qualified facility employee. Employee training procedures include instructing operators not to leave the delivery area prior to checking and disconnecting the transfer line. Prior to material transfer, qualified facility personnel and the driver should:



- Predetermine the maximum volume of material that can be transferred without overflowing the tanks, vessels, containers; and
- Check the liquid level in the tanker during transfer to avoid overflowing the tank.
- Pre-inspection of connections, fittings, and hoses – Prior to each loading or unloading operation, a dock leveling apparatus, connections, hoses and fittings should be checked to make sure that they are in good working condition. Loading or unloading areas should be well illuminated if material transfer occurs at night.

### **5.2.7 Aboveground Storage Tanks**

The following practices should be implemented for aboveground storage tanks:

- All pipes leading to and from aboveground storage tank(s) that enter the tank(s) below liquid level are equipped with valves sufficiently close to the tank(s) so as to prevent the contents of a tank from escaping the confines of the secondary containment area in the event of a pipe rupture outside of the containment area. Any valves that permit the direct outward flow of tank contents are kept in the closed position when in non-operating or standby status;
- In heavy traffic areas, protective guards should be placed around tanks and piping to prevent vehicle or forklift damage;
- Tanks, associated valves and piping should be clearly labeled to reduce human error; and
- Tanks and associated piping should be routinely inspected for integrity.

### **5.2.8 Vehicle and Equipment Washing**

Washing trucks and equipment outdoors or in areas where wash water can flow onto the ground can pollute surface or ground waters. Wash water, especially from cleanup activities, can contain high concentrations of oil and grease, phosphates, and suspended solids. To reduce or eliminate these potential sources of pollution:

- Use designated cleaning areas only. Wash water is regulated as a process wastewater. It can only be discharged to a properly permitted sanitary sewer or process sewer line;
- If a permitted sewer line is not available, wash water should be collected in bermed areas or sumps for offsite disposal; and
- As an alternative, offsite commercial washing facilities can be used.



### **5.2.9 Waste Management Areas**

In waste management areas, the following practices should be implemented:

- Minimize the amount of waste managed on-site by cleaning the residual material after each use to prevent buildup of residues;
- Prevent run-off and run-on from contacting waste management areas; and
- Keep waste containers closed or securely covered.

### **5.2.10 Transformers**

[This section intentionally left blank.]

### **5.2.11 Drum and Container Storage Area**

The following practices should be implemented at drum and container (“drums”) storage areas:

- All drums should be properly labeled;
- Drums that are stored in a horizontal position should be tightly sealed to avoid seepage through the bung. Drip pans or spill pallets should be placed beneath horizontal drums that have a dispensing valves installed;
- Drums should be kept closed except when material is being added or withdrawn;
- For drums stored outdoors, drum caps should be used if accumulated rain water on the top lip of the drum can cause contamination of the product. Outdoor drums should be stored off of the ground to prevent bottom corrosion, which could lead to possible leakage from the drum. Wooden or plastic spill pallets may be used if an impervious surface is not available;
- Drums should be neatly stored with sufficient access and aisle space;
- Because empty drums contain residual product, they should be managed and according to the practices listed above, unless they have been thoroughly cleaned; and
- Leaking drums should be immediately moved to a containment area, placed in a salvage drum, plugged, or the contents transferred to another drum. Spilled product should be cleaned up immediately.



### 5.2.12 Sediment and Erosion Prevention

The following practices should be implemented in areas of high soil erosion potential or during construction periods:

- Preserve existing vegetation or re-vegetate disturbed soil areas,
- Stabilize stream banks,
- Install interceptor dikes and swales,
- Use fabric filter fences around disturbed areas, and
- Maintain storm water retention/detention ponds in good operating condition.

### 5.3 Employee Training

The facility has in place an employee training program that addresses handling and exposure to hazardous chemicals. Rockydale Quarries Corporation's Training Department maintains employee training records with a copy in the personnel file. This program is part of the *Hazard Communication Program* training. In addition to "Right to Know" materials, the training for individuals handling and transporting hazardous materials shall require the following:

1. Attend sessions on the safe handling of materials. Sessions should emphasize safety hazards, personnel protection, and safe practices for responding properly to a hazardous material incident. SWPPP training will be given in conjunction with appropriate MSHA and RCRA training programs.
2. Have on-the-job training as required by the position.
3. This training will occur at least annually and at a minimum include:
  - SWPP plan goals and objectives,
  - Spill response,
  - Good housekeeping,
  - Material management practices,
  - Operation and maintenance of spill control systems,
  - Update on applicable laws, rules, and regulations,
  - Review of recent spill events, why the spill occurred, and measures taken to prevent similar spills,
  - Health risk and environment risk of materials handled,



- MSHA Hazard Communication Standards,
- Material Safety Data sheets,
- Procedures for using, inspecting, repairing, and replacing emergency and monitoring equipment,
- Proper use of communication methods and alarms,
- How to respond in event of fire, explosion, or release involving hazardous wastes, and
- How to respond to groundwater contamination incidents.

#### **5.4 Record Keeping**

A written record will be made for each training session showing a list of employees trained, date of the training session, instructors, and lesson plan. This written record will be filed under the SWPPP file kept on file in the office.

Responsible plan personnel should be trained regarding the requirements of the SWPPP plan and applicable pollution control laws and regulations.

#### **5.5 Spill Prevention and Response Procedures**

The following measures should be implemented upon discovery of a release:

- Asses the risk,
- Control the release to the extent possible,
- Report the release to management and government agencies,
- Clean up the impact area as soon as possible, and
- Follow up with preventive measures.

#### **5.6 Emergency Coordinator Response and Reporting**

Upon notification of a possible SWPPP incident, the Emergency Coordinator may request confirmation by a Supervisor before responding to the scene of the incident. The Emergency Coordinator would then state that he is standing by and can be contacted at a specified telephone number. The Emergency Coordinator will then assess the incident and if he determines that an actual or imminent emergency situation exists he will immediately take the following actions:

1. Use internal facility communication system to notify all facility personnel; and
2. Notify appropriate State or local agencies with designated response roles if their help is needed.



3. Whenever there is a release, fire, or explosion, the Emergency Coordinator will immediately identify the character, exact source, amount, and area extent of any released materials. The Emergency Coordinator will assess the incident by observation or review of facility records or manifests and, if necessary, by chemical analysis.
4. The Emergency Coordinator will assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g. the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-reduced explosions).
5. The Emergency Coordinator will follow procedures given in Section 5.7 (below).
6. During the emergency, the Emergency Coordinator will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, reoccur, or spread to other hazardous materials at the facility. These measures will include, where applicable, stopping processes and operations, collecting and containing released materials, and removing or isolating containers.
7. Immediately after the emergency, the Emergency Coordinator will provide proper treatment, storage, recovery, or disposal of recovered material(s), wastes, contaminated soil or surface water, or any other material that results from a release, fire or explosion at the facility

If the Emergency Coordinator makes an assessment of the incident and determines that no actual or imminent emergency situation exists, he may direct a clean-up of the incident by immediate area employees as outlined in Section 5.6.2. If the volume, type of material(s) involved, or nature of the incident requires response or assistance by individuals outside the company, the Emergency Coordinator may contact appropriate clean-up contractors.

Following a SWPPP incident, the Emergency Coordinator will interview all individuals involved in the incident and the response. He will then prepare a report for the SWPPP Committee and call for a meeting to review the SWPP Plan and will then make any required reports to Federal, State, or local agencies.

#### **5.6.1 Assess the Risk**

The risks presented by a release should be assessed the moment a release is observed or discovered. Because the risks can change throughout an emergency, assessing the risk should continue throughout the duration of the incident. Employees should react according to their level of training. A major release may require employees to evacuate. Response by outside emergency services that are equipped and trained to handle major releases may be required.



### 5.6.2 Control of the Release

Every effort will be made to keep a spill from entering the storm or sanitary sewer system. Facility personnel will immediately commit all necessary manpower, equipment, and materials required to prevent the spill from reaching waterways, shorelines, or sewers.

### 5.6.3 Types of Control Methods

Methods that can be used for controlling spills include:

<i>Absorption</i>	Use materials such as clay, sawdust, or vermiculite to absorb liquids. When absorbents become contaminated, they retain the properties of the absorbed liquid. Therefore, they must be disposed of accordingly;
<i>Covering</i>	Spill areas can be covered with appropriate materials, such as plastic sheets, until cleanup efforts can be completed;
<i>Dikes, dams, diversions, and retention</i>	These temporary or permanent physical barriers can be used to retain spills, change the direction of flow of the liquid, or minimize storm water run-on to the impacted area;
<i>Overpacking</i>	Leaking drums can be placed in larger containers to hold the leaking liquid; Plug and patch – Compatible plugs and patches can temporarily stop the flow of materials through small holes; and
<i>Transfer</i>	Liquids can be transferred from a leaking or damaged container or tank. Care must be taken to ensure transfer hoses and fittings are compatible with the liquid. When flammable liquids are transferred, proper concern for grounding must be observed.

### 5.6.4 Implementing Control Methods

In general, the control methods listed above for controlling spills should be implemented as follows:

- Spills confined to immediate area – Place sorbent materials in direct contact with the liquid, working inward from the farthest point of progression of the liquid. A quicker response will result in a smaller contaminated area.



- Spills escaping from the immediate area – If liquid begins to spread outside of the immediate area, attempts should be made to stop the flow before it enters a foundation drain, catch basin, or manhole by building up sorbent materials to dike the sewer entrance. As an alternative, sewer mats or sheets of plastic should be placed over sewer entrances and weighed down with heavy objects or gravel. In the event the liquid enters a sewer, sorbent material should be used at the discharge points or in the storm and sanitary sewers to collect the material.
- Facility personnel should consider, as appropriate, assistance from neighboring industry, outside contractors, oil skimmers, backhoes, pumps, emergency dikes, oil absorbent, hay bales, booms, etc.

## 5.7 Reporting and Notification Procedures

### 5.7.1 Definition of an Incident

A SWPPP incident is defined as a spill or loss to the ground of a material or mixture of materials such that a hazardous substance as defined under NPDES permit guidelines for a reportable quantity could reach surface water or groundwater. This will include any spill or leak from the drums, tanks, or trucks in loading, unloading, transferring and usage of hazardous substances other than contained occupational spills.

A reportable spill is defined as either:

- 1,000 US gallons of oil into or upon surface waters of the United States in a single spill event, or
- 42 gallons of oil in two spill events within any twelve month period.

### 5.7.2 Reporting an Incident

**An incident observed by or reported to any facility personnel of Rockydale must be immediately reported to the Emergency Coordinator.** The SWPPP Committee will be notified and action taken to secure equipment that is contributing to the incident or could possibly contribute to the incident, and contain the incident as well as possible, e.g. dams of inert material or absorbents for spills. Initial containment should be carried out in such a fashion as to prevent worker exposure to hazardous conditions. Material Safety Data Sheets (MSDS) notebooks (See Appendix F) and the DOT Emergency Response Guidebook will be used as a quick reference for information on personnel protection, handling spill containment and cleanup methods for specific hazardous materials.

In the event a spill leaves the property, the information called for in Items 1 through 7 below (Required Reports) should be supplied in the initial spill notification to the authorities. The Authorities who must be notified in the event the spill reaches the receiving water are listed on the Emergency Phone List at the front of this plan.



A SWPPP release incident will be immediately evaluated by the facility Emergency Coordinator to determine if notification under other regulations (CERCLA, SARA, Right-to-Know, RCRA, etc.) will need to be made to the appropriate Federal, State, and Local Authorities. Also, the appropriate State authority will be notified of an incident involving hazardous waste disposal resulting from a spill prior to resuming normal operations.

### 5.7.3 Required Reports

An oral report of a SWPPP incident will be provided within 24 hours of the occurrence. The following method should be included as information:

1. Any unanticipated bypass; and
2. Any upset which causes a discharge to surface waters.

A complete written report of a SWPPP incident will be submitted within 5 days of the occurrence to management and appropriate authorities, when applicable. The report will include the following information:

1. Name, address, and telephone number of owner or operator;
2. Name, address, and telephone number of facility;
3. Date, time, source, and place of incident (i.e. fire, explosion, spill);
4. Name and quantity of materials involved;
5. Description of the occurrence and its causes;
6. The period of the occurrence, including exact dates and times and if the occurrence has not been corrected the anticipated time it is expected to continue;
7. Steps taken or planned to reduce, eliminate, and prevent reoccurrence;
8. Extent of injuries, if any;
9. An assessment of actual or potential hazards to human health or the environment; and
10. Estimated quantity and description of recovered materials that resulted from the incident.

As outlined in the Special Conditions section of the storm water permit, the facility is required to notify the department as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
  - a. One hundred micrograms per liter (100 mg/l);



- b. Two hundred micrograms per liter (200 mg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 mg/l) for 2, 4-dinitrophenol and for 2-methyl-4, 5-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
    - c. Five times the maximum concentration value reported for that pollutant in the permit application; or
    - d. The level established by the board.
  2. That any activity has occurred or will occur which would result in any discharge, or a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - a. Five hundred micrograms per liter (500 mg/l);
    - b. One milligram per liter (1 mg/l) for antimony;
    - c. Ten times the maximum concentration value reported for that pollutant in the permit application; or
    - d. The level established by the board.

The immediate (within 24 hours) reports may be made to the Department's Regional Office by telephone or by fax. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at (800) 468-8892.

A copy of the incident reports will be maintained by the Plant Manager or designate.

## **5.8 Response Equipment**

This facility maintains response equipment for small occupational spills. In the event of a more significant release, Rockydale will engage a qualified clean-up contractor with appropriate training and equipment. The following table lists response equipment located at various spots within the facility.

- Floor dry – Clay material absorbent.
- Shovel – To clean-up spilled and absorbent material.
- Squeegees – To clean up spilled and absorbent material.
- Broom-Straw – To clean up spilled and absorbent material.
- Absorbent socks/booms.
- Earth moving equipment (i.e. bulldozers, front-end loaders, etc.)



## **5.9 Record Keeping**

A description of incidents such as spills, or other discharges, along with other information describing the quality and quantity of storm water discharges (if required) are to be included in the plan. Inspections and maintenance activities are to be documented and records of such activities will be incorporated into the plan. Records must be kept of the frequency and estimated volume in gallons of discharges from containment areas. Employee training records are to be maintained on site for review.



## **6.0 SITE COMPLIANCE EVALUATIONS**

### **6.1 Comprehensive Site Compliance Evaluation**

A storm water requirement is to complete an annual Comprehensive Site Compliance Evaluation for use in the review and update of the SWPP Plan. Members of the Pollution Prevention Team will conduct inspections semi-annually of the facility and all storm water systems. This evaluation provides a basis for evaluating the overall effectiveness of the SWPP Plan. The compliance evaluation includes the following elements:

- A visual inspection of the site;
- Based on the results of the inspection, the SWPP plan will be revised. Additional measures and controls, as necessary, will be implemented; and
- A written report summarizing the results of the annual evaluation.

#### **6.1.1 Visual Site Inspection**

A comprehensive visual site inspection shall be conducted semi-annually, once in the fall (September – November) and once in the spring (April – June), to evaluate the following:

- Visual evidence of pollutants entering the storm water drainage system;
- Best management practices are adequate and properly implemented;
- Storm water structural features and sediment controls are operating properly; and
- Spill response equipment is in proper working condition.

Inspection check lists contained in Appendix G are used to summarize the results of visual inspections of the outfalls, pollution sources and the storm water data, respectively. The schedule for this inspection should be included in the preventive maintenance check list, or in another similar task management system used by the facility. The inspection should include, but is not limited to, the following areas:

- Areas around all process equipment;
- Areas where spills and leaks have occurred;
- Material storage areas (tanks, drum storage, etc.);
- Loading/unloading areas;
- Waste management areas; and
- Storm water outfalls and control features.



Figure 2 – Site Layout provides an inventory of significant materials used at the facility and sources that can potentially impact storm water. It should therefore be used as a visual inspection checklist and kept as a record of the inspection. It should also be expanded or updated as necessary if sources or conditions change around the facility.

### **6.1.2 Implementation of Changes**

Based on the results of the annual inspection, necessary revisions to pollution prevention measures, controls, and the SWPP Plan will be initiated within 2 weeks of such inspection and completed within 12 weeks of the inspection.

The SWPP Plan shall be reviewed and the following sections updated, as necessary:

- Changes to the Pollution Prevention Team member roster;
- The Inventory of Significant Materials and BMPs, Site Drainage Map, and
- The History of Significant Leaks and Spills

### **6.1.3 Semi-Annual Report**

A report summarizing the scope and results of the compliance evaluation must be completed and incorporated into the SWPP Plan. The report will include information about the scope of inspection, personnel making the inspection, the date and time of the inspection, major observations relating to the implementation of the SWPP Plan, and actions taken. The report must be completed and a copy retained in Appendix C as part of this SWPP Plan.

## **6.2 Non-Storm Water Discharge Assessment**

### **6.2.1 Non-Storm Water Discharge Sources**

Non-storm water discharge includes:

- Discharges from firefighting activities;
- Discharge of fire hydrant flushing;
- Discharges of uncontaminated potable water sources, including water line flushing;
- Air conditioning condensate without added chemicals;
- Natural Springs;
- Uncontaminated ground water (although a “Non-Discharge” permit may be required for this); and
- Foundation or footing drains where flows are not contaminated with process materials.



### **6.2.2 Procedure for Conducting a Non-Storm Water Assessment**

This procedure applies only to storm water outfalls that have not previously been permitted but are now covered by the Storm Water Permit. The facility's storm water outfalls are identified in the SWPP Plan site map (see Figure 2).

During times of no precipitation, annually observe each applicable storm water outfall on three separate occasions. The most practical method for detecting the presence of non-storm water sources in a storm water collection system is to observe all applicable storm water outfalls during times of no precipitation. As guidance, "times of no precipitation" can be defined as a dry day preceded by at least 72 hours of no measurable rainfall events (<0.1 inch). The observation should be done on three (3) separate days during a year. As a rule, the outfall should be dry. However, drainage of a particular rain event can continue for three days or more after the rain has stopped. In addition, infiltration of ground water into the storm water collection system is also common. To be sure about the source of any flow during dry weather, use of dye testing or an equivalent method may be necessary.

Once a year, personnel from the SWPPP committee will conduct site evaluations that will include visual inspections of areas contributing to storm water discharges for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings will be evaluated to determine whether they are adequate and properly executed in accordance with the plan. Structural storm water management measures, sediment and erosion control measures, and other pollution control measures will be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made at this time.

Based upon this inspection, this plan will be modified as needed within 14 days of inspection, and changes to the plan shall be implemented within a period of no more than 90 days after the inspection.

A narrative report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the execution of the storm water pollution prevention plan, and action taken shall be maintained by the Environmental, Health and Safety Director or otherwise appropriate personnel. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and the storm water permit. The report shall be signed by the responsible official and retained at the facility.



## **7.0 MONITORING AND REPORTING**

Storm water monitoring requirements are defined in Section II of the General Permit. This section describes the sampling protocol taken from the General Permit.

### **7.1 Storm Event Requirements**

A qualifying event must be greater than 0.1 inches in total rainfall and must be at least 72 hours from the previously measurable (i.e. greater than 0.1 inches) storm event. Rainfall measurements can be made using any standard rain gauge that has 0.01 inch increments. In order to minimize errors, the gauge should be placed on a level surface that is not windswept and is away from trees or buildings that might interfere with the path of rainfall.

### **7.2 Sample Type**

#### **7.2.1 Grab Sample**

A grab sample must be collected during the first 30 minutes of the discharge from the outfall. Should this be impractical, a grab sample may be collected during the first hour of discharge and a written description of why the grab sample was not collected in the first 30 minutes submitted with the monitoring report. In order to ensure that a manual grab sample is representative of the storm water discharged, the following procedures should be followed.

1. Label containers prior to sampling event.
2. Take cooler with ice to the sampling point.
3. Take the grab sample from the horizontal and vertical center of the channel.
4. Avoid stirring up bottom sediments.
5. Hold the container so that the opening faces upstream.
6. Avoid touching the inside of the container.
7. Keep the sample free from uncharacteristic floating debris.
8. Use safety precautions.

*Refer also to EPA documents 833-b-92-001, "NPDES Storm Water Sampling Guidance Document", September 1992.*

#### **7.2.2 Sample Location**

Sample locations are shown on Figure 2. Samples are to be collected from Outfalls 001 and 002.



### 7.3 Parameters

Part I of the General Permit describes the monitoring requirements that are applicable to this facility. In accordance with these requirements the parameters on the following page must be monitored:

1. Total Flow
2. Total Suspended Solids (TSS)
3. pH
4. Total Petroleum Hydrocarbons

In addition, for those outfalls that collect runoff from the biomix area, the following must also be monitored:

5. Total recoverable Arsenic
6. Total recoverable Chromium
7. Total recoverable Copper

A measurement frequency of once per year during a representative storm event will be employed. For each sampled representative storm event, the total precipitation, storm duration, and total flow must be monitored. Total flow shall be (a) measure continuously, (b) calculated based on the amount of area draining to the outfall, the amount of built-upon (impervious) area, and the total amount of rainfall, or (c) estimated by the measurement of flow at 20-minute intervals during the rainfall event. For this facility, method (b) will be used.

#### 7.3.1 Special Conditions

Some of the noteworthy special conditions associated with General Permit VAR 052303 are as follows:

1. Vehicles and equipment utilized during the industrial activity on a site must be operated and maintained in such a manner as to prevent the potential or actual point source pollution of the surface or groundwaters of the state. Fuels, lubricants, coolants, and hydraulic fluids, or any other petroleum products, shall not be disposed of by discharging on the ground or into surface waters. Spent fluids shall be disposed of in a manner so as not to enter the surface or groundwaters of the state and in accordance with the applicable state and federal disposal regulations. Any spilled fluids shall be cleaned up to the maximum extent practicable and disposed of in a manner so as not to allow their entry into the surface or groundwaters of the state.



2. No sewage shall be discharged from this mineral mining activity except under the provisions of another VPDES permit specifically issued for that purpose.
3. There shall be no chemicals added to the discharge, other than those listed on the owner's approved registration statement, unless prior approval is granted by the director.
4. The permittee shall submit a new registration statement if the mining permit approved by the Division of Mineral Mining (or associated wavered program) is modified or reissued in any way that would affect the outfall location or the characteristics of a discharge covered by this general permit. Government owned and operated mines without mining permits shall submit the registration statement whenever outfall location or characteristics are altered. The new registration statement shall be filed within 30 days of the outfall relocation or change in the characteristics of the discharge.
5. There shall be no discharge of process waste water pollutants from co-located asphalt paving materials options. For the purpose of this special condition, process wastewater pollutants are any pollutants present in water used in asphalt paving materials manufacturing which come into direct contact with any raw materials, intermediate product, by-product or product related to the asphalt paving materials manufacturing process.

#### **7.4 Health and Safety**

Storm water sampling activities may occur when the sampling environment and/or storm water discharges create hazardous conditions. Hazardous conditions associated with sampling include:

- Hazardous weather conditions (i.e. wind, lightning, flooding, etc.)
- Hazards associated with chemicals (i.e. preservatives)
- Biological hazards (i.e. rodents and snakes)
- Physical hazards (i.e. traffic, slippery footing, etc.)

It is essential that sampling personnel be aware of these hazards. Sampling personnel should be trained to evaluate potential hazardous situations and develop ways for handling them. Since sampling hazards can be life threatening, safety must be the highest priority for all personnel.

#### **7.5 Reporting**

Analysis reports for samples analyzed in accordance with the terms of the General Permit shall be submitted to the Division of Water Quality on Discharge Monitoring Report forms provided by DEQ. Submittals shall be received by the Division not later than the 10<sup>th</sup> day of the month after monitoring takes place.



Monitoring reports shall be submitted to the following address:

Virginia Department of Environmental Quality

Water Permits Section

Blue Ridge Regional Office

3019 Peters Creek Road

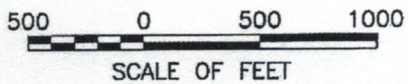
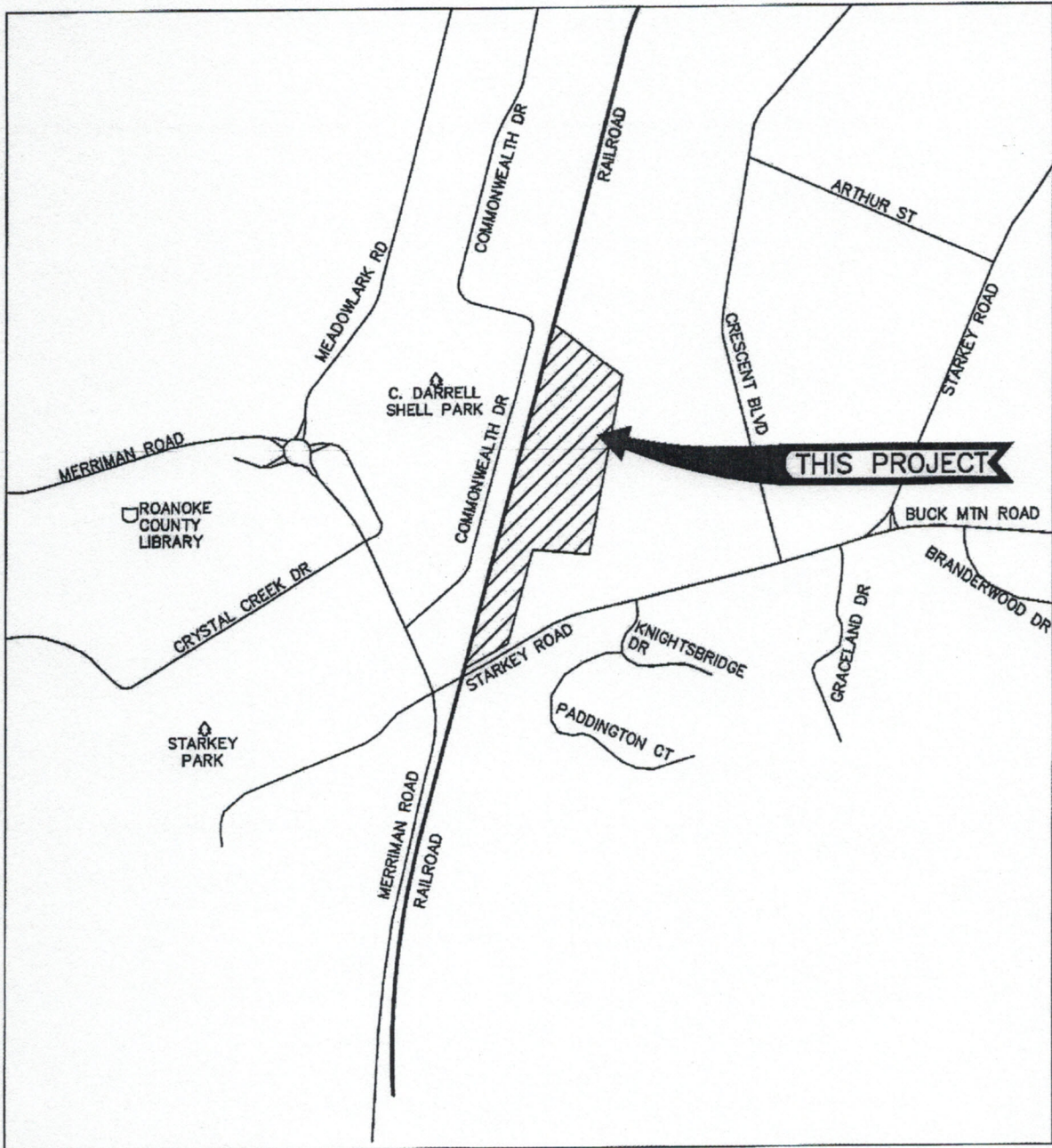
Roanoke, VA 24019



Figure 1

Site Location Map







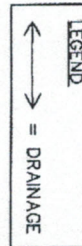
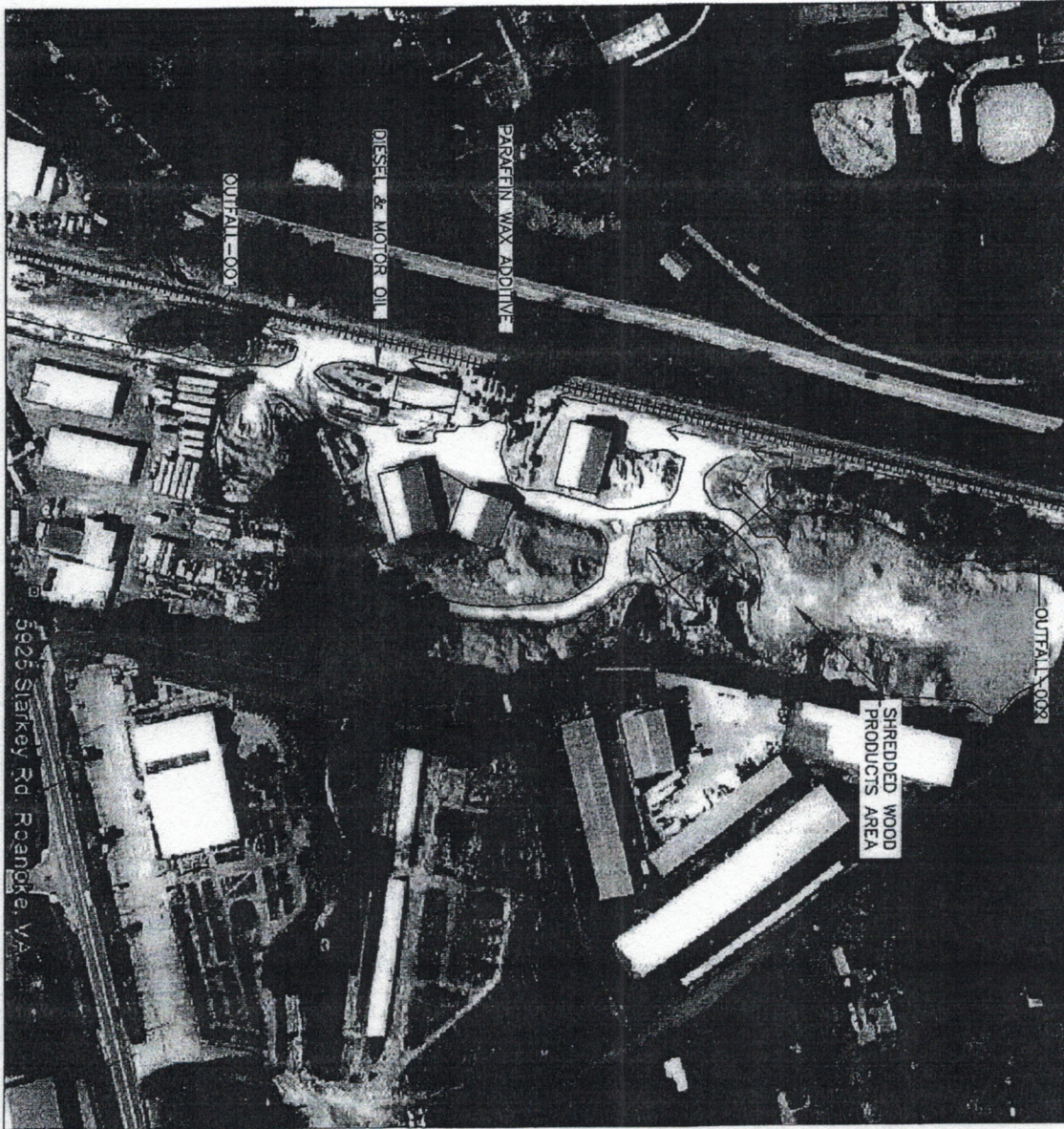
 NORTH	 <b>RACEY</b> ENGINEERING <small>312 WEST MAIN ST. - P.O. BOX 387          LURAY, VA 22833          PH: (540) 743-9227 - FAX: (540) 743-6118</small>	SITE LOCATION MAP STARKEY QUARRY DIV. OF ROCKYDALE QUARRIES CORP. ROANOKE, VIRGINIA	NO SCALE
			NOVEMBER, 2015
			FIGURE 1 - STARKEY



Figure 2

Site Map







# Appendix B

## Incident Reports



# Appendix C

## Inspection Reports / Annual Compliance Reports



# Appendix D

## Storm Water Sampling Data



# Appendix E

## Oil Pollution Prevention Regulation

(40CFR Part 112)



# Appendix G

## SWPPP Inspection Forms



# Appendix H

## SPCC Inspection Forms



# Appendix I

## Employee Training