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1. OBJECTIVE

The purpose of this procedure is to ensure that proper control measures to mitigate fugitive dust emissions are implemented in St Marys Cement Charlevoix Plant in order to minimize the impact on the environment, minimize potential nuisance to the community and ensure compliance with environmental legal requirements.

1. REFERENCES

EGLE – Michigan Department of Environment, Great Lakes, and Energy

2. DEFINITIONS

3.1 Applicable Environmental Legislation: Environmental requirements established by EGLE that regulates the operations of St Marys Cement Charlevoix facility.

3.1.1 Adverse effect on the environment could be any of the following:


- Impairment of the quality of the natural environment for any use that can be made of it;
- Injury or damage to property or to plant or animal life;
- Harm or material discomfort to any person;
- An adverse effect on the health of any person;
- Impairment of the safety of any person;
- Rendering any property, plant or animal life unfit for human use;
- Loss of enjoyment of normal use of property;
- Interference with the normal conduct of business.

3.2 Responsibility:

3.2.1 Employee:

- All employees are responsible to comply and follow the requirements of this procedure.
- All employees are responsible for reporting to the Environmental Manager any emission of fugitive dust that causes or is likely to cause an adverse effect on the environment outside the boundaries of St Marys Cement Charlevoix Plant.

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3.2.2 Department Supervisor / Manager:

- All supervisors / Managers are responsible to ensure that the requirements of this procedure are followed within their area of responsibility and corrective actions are taken when deviations are identified.

3.2.3 Environment Manager:

- The Environmental Manager is responsible to ensure that the requirements of this procedure are followed, identify control measures to mitigate fugitive dust and notify St Marys' personnel of applicable legal requirements.

3.2.4 Shipping Operators:

- Shipping Operators are responsible for dock operations and to ensure compliance with legal requirements.
- Shipping Operators are responsible to ensure that the requirements of this procedure are followed within their area of responsibility and corrective actions are taken when deviations are identified.

3. STANDARDIZED ITEMS DESCRIPTION

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4.1 INTRODUCTION

The facility's Fugitive Dust Control Plan (FDCP), first included in permit 700-77A, has been updated at the request of the EGLE. The Plan meets the requirements of the Natural Resources and Environmental Protection Act, Public Act 451 of 1995, Part 55, R 336.1371 and R 336.1372.

St Marys Cement owns and operates a Portland cement manufacturing plant and related quarry at 16000 Bells Bay Road, Charlevoix, Charlevoix Township, and Charlevoix County, Michigan. The property is approximately 1300 acres. A general site map indicating the locations of roads (paved and unpaved), structures, vegetation, material storage piles, and dust control methods is included in Appendix A.

Inherent in the quarrying and manufacturing process are the constant inflow and stockpiling of raw/intermediate materials throughout the property. Specifically, these materials may include, but are not limited to:

Limestone	Bottom Ash
Shale	Slag
Gypsum	Coal
Sand	Aggregates
Iron Ore	Clinker
Mill Scale	Cement Kiln Dust
Pet Coke	Plastic Flakes Fuel


This plan identifies the appropriate fugitive dust control measures for the following sources/activities:

- Quarry Operations
- Loading or unloading of open storage piles
- Transporting of bulk materials
- Outdoor conveying, including transfer points
- Paved and unpaved roads
- Active storage piles
- Inactive storage piles
- Construction, renovation, or demolition activities

4.2 QUARRY OPERATIONS FUGITIVE DUST CONTROL MEASURES

These measures are shown in Table 2.

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4.3 UPPER PLANT OPERATIONS

- Loading and Unloading of Open Storage Piles

The majority of the storage of the raw materials, intermediate materials and final products takes place in enclosed structures. These are shown in Table 1.

Table 1


Material	Storage Facility
Limestone / Shale	A-Frame
Sand	Silo with Fabric Filter on transfer
Clinker	Domes with Fabric Filters
Cement	Finish Silos with Fabric Filters
Bottom Ash	Silo with Fabric Filter
Cement Kiln Dust	Silo with dust removal
Gypsum	A-Frame and silo with Fabric Filter

Outdoor storage is still used for coal, pet coke, bottom ash, sand and, on occasion, for spilled material. The outdoor storage of materials and the fugitive dust control measures are shown in Table 3.

- Transporting Bulk Material
 - The fugitive dust control measures are shown in Table 3.
- Outdoor Conveying
 - The fugitive dust control measures are shown in Table 3.
- Paved and Unpaved Roads
 - The fugitive dust control measures are shown in Table 3.
 - If street sweeper is out of service for 48 hours, SMC will have access to a back-up unit, either by renting or owning the equipment.
- Construction, Renovation and Demolition Activities
 - For demolition activities, SMC will spray all work areas with water or a dust suppressant. Debris, and other piled material will comply with the open storage requirements of this plan.
 - Construction activities will minimize dust emissions by controlling piles, paved and unpaved surface areas around the construction activity consistent with this plan.

4.4 RECORDKEEPING

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The records to be kept are referenced in each applicable table entry and are included in Appendix B. In many circumstances it is not appropriate to have a written record of every activity, such as documentation that every front end loader drop of material being less than three feet. Rather the compliance will be achieved through employee training that is documented and shift supervisor observations, with records of non-compliance with the requirements. Changes to this FDCP can occur at any time if agreed upon by both St Marys Cement and EGLE AQD District Supervisor.

**Table 2
Quarry Operations**

Material Activity /	Fugitive Dust Control Measure	Frequency	Recordkeeping
Rock Drill Use	Use of bag house in good working order to capture dust when drilling.	Whenever rock drill is being used	Record of bag Maintenance, store on site.
Rock Drill Baghouse Emptying	When applicable, wet down materials while being emptied.	Whenever the bag house is being emptied	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Unpaved Roads	Application of water and or chemical dust suppressant	As needed	Documentation of purchase and application, electronically stored on site. Or operational log.
Primary Crusher-Loading	Apply water during dumping of stone generated from blasts that occurred above the water table.	As needed	Operator/ Supervisor Observations.
Primary Crusher-Conveyance to Secondary Crusher	Apply Mo Foam to material leaving crusher	Whenever dry material is being transferred	Shift supervisors daily V.E. Checks of Secondary Crusher Building.
Secondary Crusher	Apply Mo Foam to material leaving crusher	Whenever dry material is being transferred	Shift supervisors daily V.E. Checks of Secondary Crusher Building.
Storage Pile-Creation	Minimize drop height to 3 feet or less.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Storage Pile-Maintenance	Cover or apply dust suppressant when visible dust is leaving pile footprint.	Whenever a pile is created or disturbed	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Storage Pile-Working/Removal	Cover or apply dust suppressant when visible dust is leaving pile footprint.	Whenever a pile is created or disturbed	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Bottom Ash Storage	Water Spray	As needed	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.

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**Table 3
Upper Plant Operations**

Material/ Activity	Fugitive Dust Control Measure	Frequency	Recordkeeping
Coal/ship unloading	Water spray as being unloaded.	Every coal unloading event	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
	Minimize drop height from cantilevered conveyor, target to 2-10 feet.	Every coal unloading event	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Coal Pile Handling	Spraying the working area of the pile with water or dust suppressant.	As needed when fugitive dust is observed at or greater than 10% opacity	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
	Moving coal with front end loader, minimize drop height to 3 feet or less.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Spilled Material and miscellaneous piles	Address potential fugitive dust emissions from spilled material as soon as safely possible by removal, covering or application of dust suppressant.	Every spill exceeding 2.5 cubic yards.	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
	Spilled material that is cleaned up shall be deposited into a building with ventilation and bag house control or a three-sided drop box or wetted when being deposited.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Vacuum Sweeping Truck / Dust Unloading	Material shall be deposited into a building with ventilation and bag house control or a three-sided drop box or wetted when being deposited.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Dust from Clinker Hot Pit	Allow to cool and then transfer to the clinker domes.	Always, excluding a kiln flush	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Transporting of Bulk Materials	All bulk cement truck loads shall be enclosed or tarped when moving on upper plant property.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
	Upon completion of the new truck wash station, all Bulk Cement Trucks leaving the property shall pass through the truck washer.	Whenever the weather permits the operation of the washer	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
	Transfer of material from trucks into open air storage without 3 sided enclosures shall not occur unless wetted when being deposited.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.
Unpaved Roads	Application of water and / or chemical dust suppressant.	As needed	Documentation of purchase and application, electronically stored on site.

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Paved Roads	Vacuum sweeping or watering	Daily except during wet or freezing weather events.	Keep operational log.
Outdoor Conveying	While conveyor is in operation, must have a cover.	Always	Documentation of training, shift supervisor observation and documenting of nonconformance to the required practice.

4. APPENDICES

4.1. APPENDIX A – SITE PLAN (included with procedure file)

