



Coco Properties Corp.

A Division of the Coco Group

BEST MANAGEMENT PRACTICES PLAN FOR THE CONTROL OF FUGITIVE DUST EMISSIONS

**Site Location:
Elginburg Quarry Operations
2357 Unity Road
Lot 14, Concession 5
City of Kingston, County of Frontenac**

**October 6, 2020
Brian Green, General Manager**



Coco Properties Corporation, a division of the Coco Group
Best Management Practices Plan for the Control of Fugitive Dust Emissions

Revision History

Revision NO.	Date
Cruickshank Construction Limited	December 2013
Coco Properties Corporation, Brian Green, GM	October 6, 2020

Introduction

This Best Management Practices Plan is for the Control of Fugitive Dust (BMP Plan) for Coco Properties Corporation (Coco) Elginburg Quarry, Crushing and Daily Operations. The site is located on Lot 14, Concession 5 City of Kingston, County of Frontenac (Site) and is municipally known as 2357 Unity Road. This document has been prepared in accordance with the MECP standard requirements for a BMP Plan as summarized below:

MECP Standard Requirements for a BMP Plan

A Best Management Practices Plan shall include, but not be limited to:

- (1) Identification of the main sources of fugitive dust emissions such as:
 - (a) On site traffic;*
 - (b) Paved roads/areas;*
 - (c) Un paved roads/areas;*
 - (d) Material stockpiles;*
 - (e) Loading/unloading areas and loading/unloading techniques;*
 - (f) Material spills;*
 - (g) Material conveyance systems;*
 - (h) Drilling and blasting*
 - (i) General work areas.**
- (2) Potential causes for high dust emissions resulting from these sources;*
- (3) Preventative and control measures in place or under development to minimize the likelihood of high dust emissions from the sources of fugitive dust emissions identified above. Details of the preventative and control measures shall include:
 - (a) A description of the control equipment to be installed;*
 - (b) A description of the preventative procedures to be implemented; and/or*
 - (c) The frequency of occurrence of periodic preventative activities, including material application rates, as applicable.**
- (4) An implementation schedule for the Best Management Practices Plan, including training of facility personnel;*
- (5) Inspection and maintenance procedures and verification initiatives to ensure effective implementation of the preventative and control measures; and*
- (6) A list of all Ministry comments received, if any, on the development of the Best Management Practices Plan, and a description of how each Ministry comment was addressed in the Best Management Practices Plan.*

(1) Identification of the Main Sources of Fugitive Dust Emissions

The main sources of dust at this Site are from the following sources:

Main Sources of Fugitive Dust Emissions	
A	On-site Traffic
B	Paved roads / areas
C	Unpaved roads / areas
D	Material Stockpiles - Aggregate
E	Loading / Unloading areas and techniques: <ul style="list-style-type: none"> ➤ Raw material delivery and delivery techniques ➤ Raw material transfer and transfer techniques ➤ Product loading and loading techniques
F	Material spills
G	Material Conveyance Systems - Crushing Plant
H	Drilling and Blasting
I	General work areas (covered in above categories)

(2) Potential Causes for High Dust Emissions Resulting from these Sources

The potential causes for high dust emissions from the above sources are as follows:

Main Source of Fugitive Dust Emissions		Potential Causes of High Dust / Opacity Emissions
A	On-site Traffic	Traffic movement (inbound material delivery; trucks and tankers; front-end loaders; outbound shipping trucks; aggregate haul trucks)
B	Paved Roads / Areas	Accumulated dust from raw material delivery, storage and transfer
C	Unpaved Roads / Areas	Fines generated from equipment used to transfer raw material / product; wind erosion
D	Material Stockpiles - Aggregate	Wind erosion
E	Loading / Unloading areas and techniques: <ul style="list-style-type: none"> ➤ Raw material delivery and delivery techniques ➤ Raw material transfer and transfer techniques ➤ Product loading and loading techniques 	Exposed material drops
F	Material Spills	Raw material drops at a transfer point;
G	Material Conveyance Systems	Wind
H	Exposed openings in the process system	Stockpiles, Material conveyance, production
I	Drilling and Blasting	Explosion, wind
J	General work areas (covered in above categories)	Wind

Note: refer to Figure 1 (Site Layout) in Appendix D for source locations

(3) **Preventative and Control Measures in Place or Under Development to Minimize the Likelihood of High Dust Emissions from the Sources of Fugitive Dust Emissions Identified Above**

A.

ON-SITE TRAFFIC

- Traffic speed on-site is generally limited to 30 km/hr; Traffic speed may be reduced during extended dry periods, and
- Truck and loader travel distances will be limited as appropriate (i.e. shortest routes).

B. **PAVED ROADS AND AREAS**

- Main traffic routes on the upper quarry level are paved.
- Paved roads and areas are monitored (visual inspection) regularly throughout the day, with particular attention to entrances / exits and frequently travelled areas; and
- As monitoring requires, paved roads and areas may require water to be applied as deemed appropriate, based on the Quarry Manager or Quarry Manager's designates observations of overall conditions.

C. **UNPAVED ROADS AND AREAS**

- Unpaved roads and areas are monitored (daily visual inspection) throughout the day; and
- As monitoring requires, unpaved roads and areas may be watered or may have calcium (or approved equal) applied if deemed appropriate¹, based on the Quarry Manager or Quarry Manager's designates observations of overall conditions.

D. **MATERIAL STOCKPILES AGGREGATES**

- Stockpiles will be created to minimize handling of material, drop points will be minimized.
- Aggregate stockpiles are monitored by the Quarry Manager for dust emissions

E. LOADING / UNLOADING AREAS, LOADING / UNLOADING TECHNIQUES

- Aggregates may be unloaded at the base of the free-standing stockpile or onto the stockpile via a ramp.
- Raw materials are slowly unloaded in a controlled manner;
- A loader may be required to handle the delivered aggregate to place in the stockpile. When this is required, handling of the materials will be kept to a minimum and drop points will be minimized and controlled.

F. MATERIAL SPILLS

Significant material spills are not expected. Minor spillage from the front-end loader and conveyor may occur.

- Aggregate Material
 - The front-end loader working areas will be monitored (visual inspection) throughout the day, with particular attention to aggregate material spillage; and
 - Spilled aggregate material will be clean-up as quickly as possible.

G. MATERIAL CONVEYANCE SYSTEMS

CRUSHING

Dust sources include:

- Blast rock dumping into primary crusher hopper
- Screen plant emissions
- Material drop at transfer points
- Transfer drops to temporary or permanent stockpile locations

- Water spray will be used at all appropriate transfer points as practical and when required for dust suppression.

H. Drilling and Blasting

- **The drilling equipment employs vacuum systems for collection of the drilling dust and as such, the operation produces very little if any fugitive dust**

- **The blasting operation pulverizes rock into smaller particles and as such, creates a dust plume on detonation. Blasting is typically carried out on clear days of no to light winds, and as such, dust should settle within the quarry footprint.**

(4) An Implementation Schedule for the Best Management Practices Plan, including Training of Facility Personnel

The Best Management Plan, is effective immediately.

Employee personnel assigned to either the Quarry or Crushing Operations will be trained on the BMP Plan by their respective Site Managers. All new staff assigned will be trained at their hiring and employee personnel will review the training annually.

(See Appendix B).

(5) Inspection and Maintenance Procedures and Monitoring Initiatives to Ensure Effective Implementation of the Preventative and Control Measures

The effective implementation of the BMP Plan will be the responsibility of the Quarry Manager.

The Manager will monitor the on-going performance of the BMP Plan on a regular basis. As necessary specific incidents or improvement recommendations will be assessed.

On an annual basis the Managers will evaluate the overall performance of the BMP Plan. As required, the BMP Plan and record keeping procedures will be updated to reflect Coco's continuous improvement objective.

(6) A list of all Ministry Comments Received, if any, on the Development of the Best Management Practices Plan, and a Description of how each Ministry Comment was Addressed in the Best Management Practices Plan

A list of all MOE comments received pertaining to the BMP Plan, and as necessary, how each comment has been / will be addressed is attached as Appendix C.

APPENDIX A
DOCUMENTATION REQUIREMENTS / RECORD RETENTION

Documentation Requirements

MECP Standard Requirements for a BMP Plan

The company shall record, in a logbook, each time a specific preventative and control measure described in the Best Management Practices Plan is implemented. The company shall record as a minimum:

- (1) The date when each emission control measure is installed, including a description of the control measure.*
- (2) The date when each new preventative measure or operating procedure to minimize emission is implemented, including a description of the preventative measure or operating procedure.*
- (3) The date, time of commencement, and time of completion of each periodic activity conducted to minimize emissions, including a description of the preventative measure/procedure and the name of the individual performing the periodic activity.*

- **Dust Control Log**

Fugitive Dust Control Log will be structured as a series of chapters and tables to facilitate record keeping, as follows:

(1) - Daily Inspections for Quarry dust control.

The main sources of fugitive emissions will be visually inspected at least once per operating day or as required based on conditions.

The main sources include:

- Paved roads / areas;
- Unpaved roads / areas;
- Aggregate stockpiles; and
- Loading / unloading areas.

Daily observations of fugitive emissions and any immediate corrective actions necessary will be recorded (see Appendix E Forms). The forms will record the observation data, mitigation measures put in place and timelines.

(2) – Periodic Activities

Coco or a contractor will apply dust controls periodically during Site operations. Periodic activities such as sweeping, flushing and watering will be recorded by the Quarry Manager. See Appendix E Forms.

(3) – Fugitive Dust Incidents and Suggestions for Improvement

This chapter is included to assist the Manager with identifying and developing continuous improvement initiatives with respect to fugitive dust. Data from Chapter 1 and Chapter 2 will be used to facilitate this activity.

Specific dust issues or complaints shall be thoroughly investigated and detailed on the “Incident Form, as required”.

Fugitive dust incidents and suggestions for improvement will be reviewed regularly and corrective and/or preventive measures will be implemented on an as required or permanent basis as appropriate for the situation.

(4) – Installation of New or Improved Control Measures; and New or Improved Preventative Measures / Operating Procedures

Based on the actions presented in (3) and (4) will document the installation of any new or improved control measures; and / or new or improved preventative measures / operating procedures.

RECORD RETENTION

MECP Standard Requirements for a BMP Plan

The company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this certificate, and make these records available for review by staff of the Ministry upon request, including:

- *The logbook, which contains all records on the preventative and control measures in place and implemented for each source of fugitive dust emissions identified in the Best Management Practices Plan.*

Coco will retain the Fugitive Dust Control Log book on-site for a minimum of 2 years.

APPENDIX B
TRAINING

Coco Properties Corporation
Best Management Practices Plan for the Control of Fugitive Dust Emissions

- **Training Focus**

Training will focus on the requirement of personnel to:

VISUALLY MONITOR FOR HIGH DUST EMISSIONS (AND AS NECESSARY REPORT TO THE MANAGER) THROUGHOUT THEIR WORK SHIFT.

- **Training Materials**

Training materials will include:

- **BMP Plan**
 - ✓ Overview and Importance
 - ✓ Responsibilities
 - ✓ Fugitive Dust Prevention and Control Measures
 - ✓ Reporting Fugitive Dust Events
 - ✓ Periodic and annual review of the BMP

- **Forms and Checklists**
 - ✓ Visual Observation Forms
 - ✓ Periodic Check Lists
 - ✓ Fugitive Dust Incident / Improvement Suggestions

- **Staff Training Records**

Staff training will be recorded and stored by Human Resources and Health and Safety

APPENDIX C
MINISTRY COMMENTS

Coco Properties Corporation
Best Management Practices Plan for the Control of Fugitive Dust Emissions

Table C.1 – Ministry Comments

Date	Ministry Comment Received	Description of How the Comment was Addressed in the BMP Plan

APPENDIX D

FIGURE

Appendix D

Figure 1: Site Layout – ARA Licence 2901



APPENDIX E
FORMS

Table A.1.1 – Daily Observations / Corrective Actions

TIME: _____ DATE: _____	NAME: _____
Average Daily Production Rate (t/hr) : _____ Start-Up Time: _____ Shut-Down Time: _____	Additional Comments: _____ _____ _____
PAVED ROADS / AREAS / ENTRANCE: Condition: _____ _____ _____	Corrective Action: YES NO <p align="right">If yes:</p> _____ _____
UNPAVED ROADS / AREAS: Condition: _____ _____ _____	Corrective Action: YES NO <p align="right">If yes:</p> _____ _____
STOCKPILES: Condition: _____ _____ _____ Aggregate stockpile height ≤ 6 m? <p align="center">YES NO</p> OR Aggregate stockpile below enclosure walls/berms? <p align="center">YES NO</p>	Corrective Action: YES NO <p align="right">If yes:</p> _____ _____ _____ _____ _____ _____ _____ _____ _____
LOADING / UNLOADING AREAS: (Specify Operation) Condition: _____ _____ _____	Corrective Action: YES NO <p align="right">If yes:</p> _____ _____ _____
SUGGESTIONS: (optional)	