Dust Control Plan Atlantic Minerals Limited Lower Cove Quarry



Prepared for: Atlantic Minerals Limited PO Box 160 Corner Brook, NL A2H 6C7

Prepared by: Stantec Consulting Ltd. 102 - 40 Highfield Park Drive Dartmouth NS B3A 0A3 Ph: (902) 468-7777 Fx: (902) 468-9009

File No: 121618352.200.300

April 6, 2016

Revision by	Date



Table of Contents

1.0	INTRODU	CTION	. 1
2.0	SITE LOC	ATION AND CONDITIONS	. 1
3.0	EMISSION	N SOURCES	. 4
4.0	DUST CO	NTROL MEASURES	. 7
4.1	PHASE 1	- INDUSTRY BEST MANAGEMENT PRACTICES (BMPS)	. 8
	4.1.1	Drilling & Blasting	. 8
	4.1.2	Crushing	8
	4.1.3	Screening	8
	4.1.4	Conveying and conveyor iranster Points	
	4.1.5	STOCKPILES	
	4.1.6	Iruck Loading & Unioading	10
	4.1.7	Travel on Uppayed Poads	10
12	4.1.0 PHASE 2		11
4.Z			11
4.0	11743L 3 ·	Crushing	11
	432	Screening	11
	433	Conveying and Conveyor Transfer Points	12
	4.3.4	Stockpilling	12
	4.3.5	Truck Logding and Unlogding	12
	4.3.6	Ship Loading	12
	4.3.7	Travel on Paved Roads	12
4.4	WATER A	VAILABILITY	13
5.0	MONITO	RING SITE METEOROLOGICAL CONDITIONS	13
6.0	RESPONS	IBILITIES, TRAINING AND AWARENESS	15
7.0	RESPONS	E TO COMPLAINTS	16
8.0	CLOSURE		17
9.0	REFERENC	CES	. 1



APPENDIX A

Dust Control Plan



LIST OF FIGURES

Figure 1	Wind Rose, Stephenville, NL (2010 – 2015)	3
Figure 2	Location of Dust Generating Activities	6
Figure 3	Wind Rose Overlay 1	4

LIST OF APPENDICES

APPENDIX A Dust Control Log APPENDIX B Dust Complaint Log



INTRODUCTION April 6, 2016

1.0 INTRODUCTION

Atlantic Minerals Limited (AML) own and operate a limestone and dolomite quarry at Lower Cove in Western NL. A Dust Control Plan has been prepared for the operation of this facility, which includes drilling and blasting, loading and hauling, crushing, screening, conveying, stockpiling, and ship loading as well as travel on unpaved roads. As these activities have the potential to result in large quantities of fugitive dust emissions the need for a plan to implement control measures has been identified by AML.

The objectives of this Dust Control Plan are to:

- Provide an overview of the quarry and processing sites, site meteorological conditions and existing sources of fugitive dust emissions
- Identify best management practices (BMP) that can be implemented on site to mitigate dust emissions
- Identify mechanisms to measure the effectiveness of the BMPs at controlling dust emissions
- List additional control measures (e.g. engineering solutions) that could be investigated and/or implemented in the event that the BMPs do not adequately control on site dust emissions
- Identify those individuals responsible for implementing the Dust Control Plan and employee training requirements
- Provide checklists to be used to monitor and document dust emissions and mitigations on site
- Outline a procedure to be followed in the event that complaints are received.

This Dust Control Plan should be reviewed on an annual basis and updated as necessary.

2.0 SITE LOCATION AND CONDITIONS

The Lower Cove quarry is located along Route 460 between the communities of Lower Cove and Sheaves Cove. The quarry and primary processing are located on the north side of Route 460 and secondary processing on the south side. The limestone and dolomite resources and quarries are located approximately 4 to 5 km north of the primary process area at an elevation approximately 45 to 90 m higher than the primary process area. Activities on the north side of Route 460 include primary crushing, screening and haul truck travel, for the most part, and secondary processing, screening, conveying, stockpiling and ship loading occur on the south



SITE LOCATION AND CONDITIONS April 6, 2016

side. The process areas sit at an elevation roughly 75 – 120 m above sea level, and roughly 60 – 105 m above the nearest communities of Lower Cove and Sheaves Cove.

A joint wind speed-frequency diagram (wind rose) for the closest Meteorological Services Canada weather station (Stephenville Airport – approximately 40 km east of the quarry site) is displayed in Figure 1. As illustrated in this figure, the dominant winds blow from the west (15% of the time), west-southwest (14% of the time), east-northeast (14% of the time) and east (11% of the time). The greatest wind speeds (greater than 30 km/hr) tend to occur when winds are blowing from the west and west-southwest; of the 15% of the time that the winds are blowing from the west, 4% are greater than 30 km/hr. The majority of the wind speeds occur between 10 and 30 km/hr.



SITE LOCATION AND CONDITIONS April 6, 2016



Wind Rose for Stephenville

Figure 1 Wind Rose, Stephenville, NL (2010 – 2015)



EMISSION SOURCES April 6, 2016

3.0 EMISSION SOURCES

The Lower Cove Quarry produces approximately 2 to 3 million tonnes of saleable product each year. The facility operates twenty-four hours a day, seven days a week for 8 or 9 months of the year, with limited operations (plant maintenance and ship loading) occurring during 3 or 4 months of the winter. Operations involve drilling and blasting within the limestone and dolomite quarries to extract raw material. Once extracted, the material is loaded, via excavators, and transported via 65, 85 and 100 ton haul trucks approximately four to five kilometers to the primary crusher (jaw crusher). Once the haul trucks reach the primary crusher the extracted material is dumped from the trucks into a bin that feeds the crusher. The material is then crushed and stockpiled above a series of hoppers that feed an underground conveyor system that transports the crushed material through a screen and secondary crushing (cone crusher). From here the material is conveyed via an underground conveyor, under Route 460, where it is further processed and stockpiled.

Once on the south side of the site, the material is further processed via a number of screens and tertiary crushing (impact crushers) and fines crushing (vertical shaft impactor - VSI). The processed material is then stockpiled, via a stacker, near the process area until it is transferred, via haul trucks, to the long term storage stockpiles. The long term storage piles are

Fugitive particulate matter refers to particulate matter that enters the atmosphere without first being directed through a stack or duct designed to direct or control air flow (AWMA 2000). Several size ranges are recognized in regulations regarding particulate releases. TSP, or total suspended particulate matter, is that material that has an aerodynamic size and density such that it remains windborne upon release, rather than settling out quickly due to gravitational settling; that is, the wind turbulence is sufficient to counteract settling velocity. Particulate matter that is less than 10 µm in aerodynamic diameter is capable of entering the human respiratory tract, and is becoming of greater concern to regulators. A finer fraction, PM2.5, which is less than 2.5 µm in diameter can enter the lungs and tends to be trapped. Fugitive particulate matter is often referred to as "dust", although the strict definitions should be used whenever regulatory limits are in discussion.

equipped with hoppers that feed an underground conveyor that in turn transfers material to the ship loader.

During the process of extracting and crushing stone, emission sources are generally categorized as process or fugitive dust sources. Process sources include those where particulate emissions are captured and subsequently controlled. Fugitive dust sources include those that are exposed to the ambient air and re-entrainment of settled particles can occur due to wind or machine movement. Process sources can be considered fugitive dust sources when there is no collection or control means (Australian Government 2014).

Fugitive releases of particulate matter at the Lower Cove Quarry occur from the following activities:



EMISSION SOURCES April 6, 2016

- Drilling and blasting
- Crushing
- Screening
- Conveying and conveyor transfer points
- Stockpiles
- Truck loading and unloading
- Ship loading
- Travel on unpaved roads.

The general locations of these activities are identified in Figure 2.

As drilling and blasting activities occur within the quarrys, which are located approximately 4 to 5 km north of the processing facilities, these activities are considered low priority and have not be included on Figure 2.

Dust control measures for each dust generating activity are provided in Section 4.0.



EMISSION SOURCES April 6, 2016







Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issu

DUST CONTROL MEASURES April 6, 2016

4.0 DUST CONTROL MEASURES

Major factors affecting the release of fugitive dust emissions include;

- The type of stone being processed (limestone vs. dolomite)
- The size of the material being handled (the fines content)
- The moisture content of the material being handled
- The moisture and silt content of the haul roads
- Climatic conditions (wind speed, wind direction, humidity, rain/wet weather)
- Process throughput (the amount of material processed and/or handled)
- The type of equipment in operation.

Measures for controlling the release of fugitive dust can be broadly divided into the following categories:

- Containment
- Collection
- Suppression

This Dust Control Plan is presented in three phases. Phase 1 consists of the implementation of a number of industry Best Management Practices (BMPs) for each dust generating activity. Once implemented, Phase 1 of the Dust Control Plan should be evaluated to determine whether or not it was effective at reducing on site dust emissions. This performance evaluation makes up Phase 2 of the plan. If it is determined that the BMPs, as implemented during Phase 1, do not adequately control dust emissions from the quarry and related activities, then AML must determine whether the measures are being applied effectively and consistently, or whether additional controls or process revisions are necessary to further mitigate the dust generated on site.

In addition to the phased Dust Control Plan discussed above, quarry personnel should take an adaptive management approach to controlling dust emissions from all quarry operations. Adaptive management is a systematic application of monitoring programs to learn optimum procedures for reducing exposure from air contaminants. For example, dust generation from haul roads is a function of several factors including moisture in the roadway and speed of the vehicle. Through adaptive management, an operator/supervisor can gain immediate reductions in dust emissions through speed reductions, while watering trucks may be deployed as a more long-term control that does not compromise productivity. Adaptive management therefore implies willingness, by quarry personnel, to continually monitor conditions on site and respond in a timely way to changing environmental conditions to achieve control efficiencies. Controls must be implemented as needed, not after complaints and issues have arisen.



DUST CONTROL MEASURES April 6, 2016

4.1 PHASE 1 – INDUSTRY BEST MANAGEMENT PRACTICES (BMPs)

The measures, listed below, should be implemented and enforced on site at all times.

4.1.1 Drilling & Blasting

As discussed in Section 3.0, although drilling and blasting are considered to be a source of fugitive dust emissions, due to the distance of these activities to the nearest communities they are considered to be low priority in terms of requiring additional dust control. AML will continue to use a drill equipped with a cyclone and will water down blasted rock piles before moving the material to reduce dust while trucking and processing.

Good blasting and drilling practices will also be followed when carrying out these activities.

4.1.2 Crushing

Best management practices for controlling fugitive releases of particulate matter from crushing activities should include:

- Limiting the drop height from the exit of a crusher to the receiving conveyor belt
- Installing and operating a water spray/fogging system on the jaw crusher to moisten the raw material and entrap the airborne dust, as the material is being dumped into the primary crusher bin
- General housekeeping whenever possible remove built up dust on and around the crusher
- Adjusting activities when winds are sufficient enough to cause wide spread visible dust emissions
- Operating the Dust Boss (the dust boss is a newly acquired unit that emits a dust trapping mist to mitigate dust emissions) in the vicinity of the VSI.

4.1.3 Screening

Best management practices for controlling fugitive releases of particulate matter from screening should include:

- Operating and maintaining existing water sprays at the screen entry points
- Installing and maintaining hoods on each screen that is not enclosed within a building
- Minimizing drop heights from screens to conveyors, to limit exposure of the processed material to the wind.



DUST CONTROL MEASURES April 6, 2016

4.1.4 Conveying and conveyor Transfer Points

The following measures should be implemented to reduce the amount of particulate emissions at conveyor transfer points:

- Limiting the drop distance at conveyor transfer points
- Water suppression at conveyor transfer points.

4.1.5 Stockpiles

Releases of fugitive dust from stockpiles can occur through the loading and/or unloading of material into or from a pile and from the erosion of the pile during periods of strong winds. Best management practices that should be implemented to reduce fugitive dust emissions from onsite stockpiles include:

- Reducing the drop height from the stockpile stackers to the top of the stockpiles
- Installing and maintaining dust curtains (i.e. old conveyor belts) around the edge of each stockpile stacker
- Limiting the disturbance of stockpiles during conditions of high wind speeds and when winds are directed towards the nearest communities
- Monitoring long range forecasts to schedule stockpile disturbance activities during lower wind speeds
- Placing temporary stockpiles as so that they are not located within prevailing wind directions
- Applying wet suppression to temporary and long term storage piles during windy and dry periods via the onsite Water Truck
- Utilizing the Dust Boss upwind of the temporary stockpiles, when wind speeds are great enough that wind erosion off the stockpiles is visual or when material is being taken from a stockpile and loaded into a haul truck and wind speeds are in excess of 25 km/hr. This wind speed is provided as a general starting point; if it is determined through implementing this plan that issues do no arise it may be possible to raise it.

4.1.6 Truck Loading & Unloading

Best management practices that should be implemented on site to limit the fugitive release of dust during material handling include:



DUST CONTROL MEASURES April 6, 2016

- Limiting the material drop height when unloading into the primary crusher
- Limiting the material drop height when loading a haul truck with either raw or processed material via a front end loader
- Limiting the amount of material in the haul trucks, as so that it does not go above the tray walls
- Utilizing the Dust Boss upwind of a material handling activity (i.e. loading a haul truck from a stockpile, etc.) when conditions are windy (excess of 25 km/hr see note above) and there is wide spread visible dust emissions from the activity
- Ceasing material handling activities when winds are great enough that the dust boss is not capable of controlling the fugitive emissions from the activity.

4.1.7 Ship Loading

Best management practices that should be implemented to limit the fugitive release of dust during ship loading will include:

- Limiting the drop height between the ship loader and the ship's receiving bin
- Apply dust suppression to the ship loading road when a ship is being loaded
- Monitoring long range forecasts to limit ship loading activities during excessive wind speeds.

4.1.8 Travel on Unpaved Roads

Best management practices for controlling fugitive releases of particulate matter from vehicle and haul truck travel on unpaved roads should include:

- Enforcing haul truck speed limits (50 km/hr) using the GPS systems on each truck, training drivers and posting speed limit signage
- Applying water to the surface of all quarry roads as required. The frequency of application may be increased when non ideal conditions are present (i.e. the ground is dry)
- Applying chlorides (calcium chloride or magnesium chloride) or a commercial binding substance to the quarry haul roads (north of Route 460)
- Use of low silt material, such as washed crusher stone, for road maintenance
- Grading the roads to remove loose materials.



DUST CONTROL MEASURES April 6, 2016

4.2 PHASE 2 – EFFECTIVENESS EVALUATION

The following approach provides a mechanism to evaluate the effectiveness of Phase 1 of the Dust Control Plan at mitigating the dust generated on site:

- 1. Reduction in the number of public complaints pertaining to dust.
- 2. Reduction of visible dust plumes and offsite dust deposition.
- 3. Reduced levels of particulate matter at the facility's property boundary as measured by the facility's ambient air monitoring network.
- 4. A reduction in the number of "dusty" episodes recorded in the Dust Control Logs (refer to Section 6.0).

4.3 PHASE 3 - ADDITIONAL CONTROL MEASURES

As discussed above, if it is determined that the BMPs are not effectively controlling on site dust emissions, AML should consider implementing additional controls.

The following sub-sections list additional dust control measures and/or engineering solutions (by dust generating activity) that could be implemented to further control dust at the Lower Cove quarry, if deemed necessary.

4.3.1 Crushing

- 1. Investigate installing and operating fine water spray/fogging systems on each crusher to moisten the material as it enters and/or as it exits the crusher.
- 2. Investigate the use of wetting agents in the fine water sprays/fogging systems, to minimize the addition of moisture and therefore equipment maintenance/downtime.
- 3. Investigate installing a baghouse (or other particulate collection systems) on the jaw, cone and/or vertical shaft impactor (VSI).
- 4. Investigate enclosing the VSI in a building.

4.3.2 Screening

- 1. Investigate installing water sprays/fogging systems on those screens that are not already equipped with them and develop a protocol for when they should be operated.
- 2. Investigate the use of wetting agents in the water sprays/fogging systems.
- 3. Investigate adding curtains at the transfer points from the screens to the receiving conveyors or installing chutes.



DUST CONTROL MEASURES April 6, 2016

4.3.3 Conveying and Conveyor Transfer Points

- 1. Investigate installing water mist/fog sprays (with or without wetting agents) at known problem areas (dusty transfer points).
- 2. Investigate installing enclosed chutes at conveyor transfer points.
- 3. Investigate covering the conveyor and enclosing all transfer points

4.3.4 Stockpiling

- 1. Investigate installing water mist sprays or fog nozzles on all remaining stockpile stackers. These water sprays could be set-up to be controlled and triggered by pre-determined weather conditions.
- 2. Investigate using the Dust Boss to control wind erosion from the long term storage piles (dependent on the size of the piles).
- 3. Investigate installing Rain Birds to suppress wind erosion of the long term storage piles.
- 4. Investigate covering the long term storage piles.
- 5. Investigate installing wind barriers/berms around temporary fines piles and long term storage piles (i.e. snow fencing), to reduce the speed of the wind travelling across the site.
- 6. Investigate using foaming or crusting agents on the long term storage piles that will not have an effect on the chemical makeup of the product.

4.3.5 Truck Loading and Unloading

1. Investigate installing additional conveyor belt systems to limit the need for material handling and truck loading in the process area, south of Route 460.

4.3.6 Ship Loading

1. Investigate installing water mist spray/fog nozzles at the end of the telescopic chute on the ship loader.

4.3.7 Travel on Paved Roads

- 1. Enforce the speed limit on the haul road at 50 km/hr or lower if required during problematic weather or dry conditions.
- 2. Ongoing consideration will be given to other road surface options.



MONITORING SITE METEOROLOGICAL CONDITIONS April 6, 2016

4.4 WATER AVAILABILITY

As a number of identified dust control measures involve the use of water, as a dust suppressant, AML must ensure that water is available for these operations at all times during the operation year.

AML will also evaluate the need for additional water feed points in process areas, as needed to implement the Dust Control Plan as described above, as a component of the facility's Site Water Review Study.

5.0 MONITORING SITE METEOROLOGICAL CONDITIONS

Local meteorological conditions can have a major effect on the amount and extent of release of fugitive dust emissions from a site. As displayed by the Wind Rose in Figure 1, the dominant winds in this area blow from the west, west-southwest, east-northeast and east. By overlapping this image with aerial photography of the quarry and surrounding areas, it is clearly evident that there is high potential for fugitive dust emissions to be carried off site towards the surrounding communities (see Figure 3). Therefore, to be pro-active in reducing the generation of onsite dust and potential off site releases of particulate matter, site managers, supervisors and operators will frequently review and monitor weather forecasts and on site meteorological conditions and respond accordingly.

The nearest weather station to the Lower Cove Quarry is at the Stephenville Airport (approximately 40 km away). AML has recently installed a weather station at its ship loading facility to assist in the determination of wind speed, wind direction and temperature. To help accurately predict on site weather conditions, required when making operational decisions, AML have retained StormGeo (previously called Impact Weather) on a trial basis. StormGeo provides support to companies and businesses that require detailed information regarding on site meteorological conditions to support weather sensitive operations. In addition to aiding in the decision making pertaining to the ships, the data available from StormGeo will be used to assist with the implementation of the Dust Control Plan.

On a daily basis, Plant Control Operators will monitor the meteorological conditions for that day. The data obtained will be used to determine the frequency of dust suppression required for that operating day, as well as where to limit operations and whether or not operations in certain areas should cease due to excessive wind speeds in a direction orientated towards a nearby community. Long range forecasts will also be monitored to assist with scheduling of quarry activities.



MONITORING SITE METEOROLOGICAL CONDITIONS April 6, 2016



Figure 3 Wind Rose Overlay



RESPONSIBILITIES, TRAINING AND AWARENESS April 6, 2016

6.0 **RESPONSIBILITIES, TRAINING AND AWARENESS**

The quarry General Manager should be responsible for ensuring that the Dust Control Plan is applied on site and that the contents of the plan have been communicated to all quarry employees. As part of the communication process a training program may be developed and implemented to educate and instruct all quarry employees on the operational control procedures that are to be implemented to reduce dust emissions. Once trained, employees should be aware of how their daily duties could result in dust emissions and what they could do to reduce these emissions. As well, all site employees have the responsibility of being aware of dust emissions and should communicate "dusty" operations to the Process Supervisor. The Process Supervisor should work with the Plant Control Operator, Plant Engineers and/or General Manager to implement controls to mitigate dust emissions and to minimize their potential of being transported offsite.

Quarry supervisors, operators and managers should implement the following:

- 1. On a daily basis the **Process Supervisor** should perform the following tasks:
 - Conduct documented visual inspections (refer to Appendix A), at least twice per shift, of each dust generating activity and initiate dust control measures as required by implementing those measures listed in Section 4.0.
- 2. On a daily basis the **Plant Control Operator** should:
 - Monitor site activities for "dusty" operations from the control room and cameras (when installed and operating)
 - Monitor weather forecasts (using StormGeo) and implement additional dust control measures during times of increased wind speed, when the wind is orientated towards a nearby community and during times of low ground moisture (dry periods).
- 3. The General Manager should be responsible for, as stated above:
 - Enforcing the Dust Control Plan on site
 - Training of all employees
 - Assisting Process Supervisors and Plant Control Operators with implementing the Dust Control Plan
 - Responding to dust related complaints (refer to Section 7.0).

During the daily visual inspections, Process Supervisors will complete an inspection checklist for each dust generating activity. These checklists will form the basis of the facilities Dust Control Log and a copy is provided in Appendix A.



RESPONSE TO COMPLAINTS April 6, 2016

7.0 **RESPONSE TO COMPLAINTS**

In the event that a dust complaint is received the quarry General Manager should do the following:

- Record the date and time the complaint was received and details pertaining to the complaint on the Complaint Log Form in Appendix B
- Notify the local Newfoundland and Labrador Department of Environment and Conservation (NLDOEC) representative
- Investigate the complaint by reviewing the facilities Dust Control Logs and conducting a site survey of the potential sources of dust contributing to the complaint
- Document the results of this survey
- Document current weather conditions and the weather conditions and site activities occurring during the time the complaint was made.

If it is determined that quarry operations are not the cause of the dust complaint, this along with reasoning shall be communicated to NLDOEC. If it is determined that the quarry operations are the source of the complaint, then the following actions will be taken:

- 1. The General Manager shall ensure that all dust control measures as cited in this Dust Control Plan are being implemented on site.
- 2. If it is determined that the Dust Control Plan is being followed, then it will be reviewed and updated to adequately resolve the issue resulting in the dust complaint.
- 3. If it is determined that additional controls would not adequately resolve the issue, then the operation resulting in the complaint should cease until weather conditions permit otherwise.

All complaints received, investigation results, and outcomes should be documented and records kept for a reasonable period of time (three to five years). On an annual basis, any source identified for multiple exceedances of acceptable emissions shall be assessed for further dust control measures (i.e. engineering controls).



CLOSURE April 6, 2016

8.0 CLOSURE

This document was prepared by Gillian Hatcher, M.A.Sc, and was reviewed by John Walker, PhD and Wayne Tucker, MEDes (ES). If you have any questions regarding the contents of this report, or require any additional information, please do not hesitate to contact the undersigned.

STANTEC CONSULTING LTD.

Bithartatche

Gillian Hatcher, MASc Atmospheric Scientist Tel: (902) 468-7777

panto

John Walker, PhD Senior Associate Tel: (902) 468-0442



REFERENCES April 6, 2016

9.0 **REFERENCES**

Australian Government, Department of Environment. 2014. National Pollutant Inventory Emissions Estimation Technique Manual for Mining and Processing of Non-Metallic Minerals, Version 2.1.

Air and Waste Management Association. 2000. Air Pollution Control Engineering.



APPENDIX A DUST CONTROL LOG



Daily Dust Control Log

Name			_				Date	
			-					
Crushing				-				
	Time of		la Duct Control	Deduce deep helekt	Cont	rol Method Applied		
Crusher	Day	General Observations	Needed?	when dumping into Jaw Crusher bin	Moisten material before crushing	Operate Dust Boss Unit in vicinity of the VSI	Limit drop height to receiving conveyor	Comments
	-							
Canaaning								
Screening	r -				Cont	rol Method Applied		
	Time of		Is Dust Control		com	for method Applied		
Screen	Day	General Observations	Needed?	Turn on water sprays	Ensure hood (cover) is on screen	Limit drop height to receiving conveyor		Comments
	 							
	+							
Conveying and Cor	I Ivevor Tra	nsfer Points	1		ļ	ļ	ļ	
conveying and COI					Cont	rol Method Applied		
Conveyor ID	Time of Day	General Observations	Is Dust Control Needed?	Turn on water suppression	Limit drop heights at conveyor transfer points			Comments
a								
Stockpiles					Cont	rol Mothod Applied		
Stockpile ID	Time of Day	General Observations	Is Dust Control Needed?	Limit drop height	Dust curtains in place	Apply dust suppression	Activate Dust Boss	Comments
-								
	1							
Material Loading a	nd Unload	ling						
					Cont	rol Method Applied		
Location	Time of Day	General Observations	Is Dust Control Needed?	Limit material drop heights	Limit amount of material in trucks	Activate Dust Boss	Limit material handling during excessive wind speeds	Comments
	<u> </u>							
	1							
	<u> </u>							
Ship Loading			•				1	1
					Cont	rol Method Applied		
Ship Loader	Time of Day	General Observations	Is Dust Control Needed?	Apply dust suppression to Ship Loading Road	Limit drop height	Limit ship loading activities during excessive wind speeds		Comments
	I							
	 							
Travel on Unnavod	Roads		I	l	I	l	l	l
	noaus				Cont	rol Method Applied		
Road Section	Time of Day	General Observations	Is Dust Control Needed?	Enforce haul truck speed limit of 50 km/hr	Apply dust suppression	Grade roads	Reduce haul truck speed limit to 30 km/hr	Comments
	l							
	 							
	<u> </u>							
L	1		1	1	1	1	1	1

APPENDIX B DUST COMPLAINT LOG



Dust Complaint Form

AML Personnel: _____

Complaint Information

Date Complaint Received	
Time of Call	
Complainant Name	
Complainant Address	
Complainant Contact Number	

Regulator Notification

Was NLDOEC Notified (yes or no)	
Date and Time	

Incident Information

Date of Potential Dust Incident	
Time of Potential Dust Incident	
Description of the Incident	
Operations at Time of Incident	
Meteorological Conditions at Time of	
Incident	
Was the Dust Control Log Reviewed?	
(yes or no)	

Investigation Outcome

|--|