



Province of British Columbia  
MINISTRY OF ENERGY, MINES AND  
PETROLEUM RESOURCES  
Mining & Mineral Division  
Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 17803  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 1 RECL: 0  
Stop Work: 0

Inspection Report

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	Pit and proposed expansion.

Persons Contacted

MANAGEMENT Dale Mogielka  
OHS COMMITTEE  
WORKERS

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

INSPECTION ORDERS

On May 12, 2010, Bruce Milligan of the Ministry of Energy, Mines and Petroleum Resources inspected the Westside gravel operation operated by Interoute Construction Limited. The pit is located in Revelstoke, north of Highway 1 on the west side of the Columbia river.

During the inspection the following items of concern were noted and the following orders are written;

SECTION : 6.9.1 Haulage Road Width

The manager shall ensure a berm of at least 3/4 of the height of the largest tire on any vehicle hauling on the road is established, pursuant to section 6.9.1 of the Health Safety and Reclamation Code, to be completed prior to hauling on the road.

MANAGERS RESPONSE OF ACTION TAKEN

DO NOT MODIFY THIS TEXT

All berms on site have been corrected to comply with section 6.9.1

company had a safety meeting to discuss height of berm and maintaining their height and shape.

Enclosed are pictures of corrected berms & copy of safety meeting.

Bruce Milligan

Senior Inspector of Mines, Permitting

2nd Floor, 42 - 8th Avenue South Cranbrook BC V1C 2K3

Address

Date of Inspection: 5/12/2010

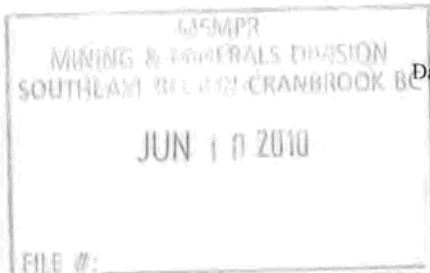
Copies To

B Milligan

Signature - Inspector of Mines

Signature - Manager

corey Rokosh



Dated:

June 4

, 20 10

INSPECTION ORDERS

MANAGERS RESPONSE OF ACTION TAKEN



The proposed new mining area was viewed as well as the exsisting tree buffer.



Looking downstream from the mine access road toward the pit boundary.



Looking upstream , from the downstream boundary, note stockpiles from exsisting pit.

Date of Inspection

5/12/2010

Initials

*EM*

(Inspector)

Initials

*DR*

(Manager)

INSPECTION ORDERS

MANAGERS RESPONSE OF ACTION TAKEN



Looking downstream from the upstream border of the exsisting pit (Coulmbia River tree buffer on left with additional buffer of replanted trees in the foreground).

Date of Inspection

5/12/2010

Initials



(Inspector)

Initials



(Manager)

# HAZARD IDENTIFICATION TAILGATE SAFETY MEETING

CREW <u>Valley Blacktop / H+J Ready mix</u>				DATE <u>June 03/10</u>
JOB LOCATION <u>Revelstoke BC</u>				NO. OF WORKERS
EMERGENCY PHONE NUMBERS <u>911</u>	AMBULANCE / HOSPITAL <u>911</u>	POLICE <u>911</u>	UTILITY COMPANY	FIRE <u>911</u>
FOREMAN		SUPERINTENDENT		JOB NUMBER

POTENTIAL HAZARDS				
<input checked="" type="checkbox"/> Vehicles and Equipment	<input checked="" type="checkbox"/> Trenching / Excavating	<input type="checkbox"/> Fueling Vehicles	<input checked="" type="checkbox"/> Use of Seat Belts	<input type="checkbox"/>
<input checked="" type="checkbox"/> Traffic	<input type="checkbox"/> Ladders	<input type="checkbox"/> Lock-Out Procedure	<input checked="" type="checkbox"/> Working Alone	<input type="checkbox"/>
<input type="checkbox"/> Lighting	<input type="checkbox"/> Power Lines	<input type="checkbox"/> First Aid Training	<input checked="" type="checkbox"/> Working on Hills	<input type="checkbox"/>
<input checked="" type="checkbox"/> PPE	<input type="checkbox"/> Underground Utilities	<input checked="" type="checkbox"/> Waste Disposal	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Hand & Portable Tools	<input type="checkbox"/> Use of Chemicals	<input type="checkbox"/> Emergency Vehicles	<input type="checkbox"/>	<input type="checkbox"/>

## CONTROL MEASURES:

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## TAILGATE SAFETY MEETING TOPICS

Safe Work Practice reviewed: \_\_\_\_\_ Job Procedure reviewed: \_\_\_\_\_

- Height of berms in pit to be at least 3/4 of the height of the largest tire on any vehicle hauling on the road.
- 30 Km speed limit in all pits.
- All personal protective equipment to be worn at all times.
- Seat belts will be worn in all equipment at all times.
- All garbage brought into pits will be taken out of pit and disposed of properly.
- Lock pit gate when not in use.
- Info box installed at the pit with inspection reports.

## PEOPLE ATTENDING

s.22

- 16. \_\_\_\_\_
- 17. \_\_\_\_\_
- 18. \_\_\_\_\_
- 19. \_\_\_\_\_
- 20. \_\_\_\_\_

FOREMAN'S SIGNATURE: \_\_\_\_\_

SUPERVISOR'S SIGNATURE: \_\_\_\_\_

MANAGER'S SIGNATURE: \_\_\_\_\_











Ministry of  
Energy and Mines

Province of British Columbia  
**MINISTRY OF ENERGY AND MINES**  
**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 58476.00  
File: 18080-02-09  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0.0 / 0.0  
Orders H&S: 1 RECL: 1  
Stop Work: 0.00

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Sand and Gravel Pit

**Persons Contacted**

MANAGEMENT	Corey Rokosh
OHS COMMITTEE	0
WORKERS	1

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

On September 22<sup>nd</sup>, 2015 Gerald Crawford and I inspected the Westside Pit, and met the Mine Manager Corey Rokosh in the morning. It was cool, clear and there was dew from the overnight frost, and no wind.

The entrance was well signed and had a gate at the access road. On site the Mine Manager readily produced the MERP, Mines Act Permit, NoW, dust management plan, archeological chance find procedure, and previous orders. This was all posted in a small building next to the weight scale. Our general impression of the site was clean and well organized. The un-mined logged area had been reseeded with grasses and clover. Surrounding the outer edge of the pit, top soil had been stockpiled forming a berm. A new section of the berm with fresh toil soil to the northwest of the pit was steep and had not been seeded. We were informed that this was due to a fire to their dozer, so the final contouring could not be finished at present. Corey Rokosh said this had not been reported as a dangerous occurrence, we told him to report this to Jerry Jewsbury. He will send their

**MANAGERS RESPONSE OF ACTION TAKEN**

A detailed site specific progressive reclamation plan will be submitted by April 30, 2016 and will cover the planned life of the mine.

Nadia Bruemmer

Inspector of Mines, Permitting

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 2015/09/22

Copies To

Signature - Inspector of Mines

Signature - Manager

Dated: Sept 24, 20 15

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>report to Jerry.</p> <p>Crushing and sorting was occurring at the time of the inspection. Corey confirmed they were only working Monday to Friday from 7AM to 5PM, and occasionally only hauling product on Saturdays. Four camper trailers were on site for the crushing personnel, and they were onsite since September 8<sup>th</sup> and would be removed by September 25<sup>th</sup>, when the crushing would cease, and crusher removed from site. The crushing plant was owned by a contractor and does have spray bars on it, however when we were onsite they were not in use, but would be used later on in the day. It was noisy adjacent to the pit berm, but the sound diminished once you stepped away from the berm. There was a small amount of dust coming off some of the stockpiles. I checked the surface of the sand stockpile (finest sorted material onsite) and it had a calcium crust. We discussed keeping the stockpiles within the confines of the pit to reduce dust and noise.</p> <p><b>INSPECTION ORDERS</b></p> <p><b>RECLAMATION PLAN</b></p> <p>The Mine Manager must submit a detailed site specific progressive reclamation plan will be submitted by April 31<sup>st</sup>, 2016. This reclamation plan will cover the planned life of the mine, this will include seeding and erosion control of topsoil.</p> <p><b>REPORTING OF DANGEROUS OCCURENCES</b></p> <p>As per section 1.7.1 (b) and 1.7.3.9 in the Health, Safety and Reclamation Code, the Mine Manager will report the recent fire as a Dangerous Occurrence to the local Health and Safety Inspector, Jerrold Jewsbury by Friday September 25<sup>th</sup>, 2015.</p>	<p>An accident/incident investigation report for the fire of the D-8T dozer was sent to Jerrold Jewsbury on Sept 22, 2015.</p>

Date of Inspection

2015/09/22

Initials



(Inspector)

Initials



(Manager)



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Province of British Columbia  
MINISTRY OF ENERGY, MINES AND  
PETROLEUM RESOURCES

Mining & Mineral Division  
Report of Inspector of Mines  
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Inspection No.: 17803  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 1 RECL: 0  
Stop Work: 0

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Inspection Report

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	Pit and proposed expansion.

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Persons Contacted

MANAGEMENT Dale Mogielka

OHS COMMITTEE

WORKERS

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A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

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INSPECTION ORDERS

On May 12, 2010, Bruce Milligan of the Ministry of Energy, Mines and Petroleum Resources inspected the Westside gravel operation operated by Interoute Construction Limited. The pit is located in Revelstoke, north of Highway 1 on the west side of the Columbia river.

During the inspection the following items of concern were noted and the following orders are written;

SECTION : 6.9.1 Haulage Road Width

The manager shall ensure a berm of at least 3/4 of the height of the largest tire on any vehicle hauling on the road is established, pursuant to section 6.9.1 of the Health Safety and Reclamation Code, to be completed prior to hauling on the road.

MANAGERS RESPONSE OF ACTION TAKEN

*DO NOT MODIFY THIS TEXT*

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Bruce Milligan

Senior Inspector of Mines, Permitting

2nd Floor, 42 - 8th Avenue South Cranbrook BC V1C 2K3

Address

Date of Inspection: 5/12/2010

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

INSPECTION ORDERS

MANAGERS RESPONSE OF ACTION TAKEN



The proposed new mining area was viewed as well as the exsisting tree buffer.



Looking downstream from the mine access road toward the pit boundary.



Looking upstream , from the downstream boundary, note stockpiles from exsisting pit.

*EM*

Date of Inspection

5/12/2010

Initials

\_\_\_\_\_

(Inspector)

Initials

\_\_\_\_\_

(Manager)

INSPECTION ORDERS

MANAGERS RESPONSE OF ACTION TAKEN



Looking downstream from the upstream border of the exsisting pit (Coulmbia River tree buffer on left with additional buffer of replanted trees in the foreground).

Date of Inspection

5/12/2010

Initials

*EM*

(Inspector)

Initials

(Manager)





May 19, 2010

File: 18080-02-02  
Mine No.: 1620313

Cory Rokosh

PO Box 9297  
Revelstoke BC, V0E 3K0

Dear Sir:

**Re: Mine Inspection May 12, 2010**  
**Property: Westside Pit**

Enclosed are two copies of my Inspection Report for the above noted property and date.

Please have this report posted in a conspicuous place on the property accessible to the workers in accordance with Section 30(1) of the Mines Act.

As noted on page one of the report, please fill in the appropriate areas responding to the Inspector's comments, sign and date the first page, initial the subsequent page(s) and return a copy with your comments to the writer.

Yours truly,

---

Bruce Milligan  
Senior Inspector of Mines, Permitting

Enclosures



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Province of British Columbia  
MINISTRY OF ENERGY, MINES AND  
PETROLEUM RESOURCES

Mining & Mineral Division  
Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 18416  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 0 RECL: 0  
Stop Work: 0

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Inspection Report

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	General Observation of the pit.

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Persons Contacted

MANAGEMENT Jordan La Roy

OHS COMMITTEE

WORKERS

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A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

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INSPECTION ORDERS

On August 24<sup>th</sup> 2010 a general observation was conducted by Inspectors Phil Pascuzzi and Steve Rothman. The purpose of this inspection was to see how the cleared area of the pit had been Hydro-Seeded and if it was having an effect on dust control.

At the time of this inspection a water truck was watering the seeded areas. There was some indication of grass starting to grow. It was also observed that road treatment had been applied to the access road and roadways being used by the haul trucks.

For the duration of time spent in the pit, there was no observable air born dust and the Estimator on site was very well aware of their duty to control air born dust.

It was also indicated to the Estimator that he should reduce the overall height of his stock piles to no more than two meters above the reach of the loader being used to load trucks.

No orders were issued during this inspection.

MANAGERS RESPONSE OF ACTION TAKEN

**DO NOT MODIFY THIS TEXT**

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Philip Pascuzzi

Inspector of Mines

2nd floor, 42 - 8th Ave. S. Cranbrook BC V1C 2K3

---

Address

Date of Inspection: 8/24/2010

Copies To

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Signature – Inspector of Mines

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Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN

Date of Inspection

8/24/2010

Initials



(Inspector)

Initials

\_\_\_\_\_

(Manager)



The Best Place on Earth

Province of British Columbia  
**Ministry of Natural Resource  
Operations**

Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 19036  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 5 / 0  
Orders H&S: 2 RECL: 0  
Stop Work: 0

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	Mine site

**Persons Contacted**

MANAGEMENT G. Harris

OHS COMMITTEE

WORKERS

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

On November 5, 2010, B. Milligan and P. Pascuzzi of the Ministry of Energy, Mines and Petroleum Resources inspected the Westside gravel operation operated by Interoute Construction Limited. The pit is located in Revelstoke, north of Highway 1 on the west side of the Columbia River.

Selkirk Paving limited was in the process of setting up the crusher. The plan is to crush product for approximately 6-8 weeks.

During the inspection the following items of concern were noted and the following orders are written;

SECTION : 6.23.4 Surface Mine Faces

The loader parked beside the stockpile appeared to have too short a reach. The manager shall ensure that

**MANAGERS RESPONSE OF ACTION TAKEN**

Bruce Milligan

Senior Inspector of Mines, Permitting

2nd Floor, 42 - 8th Avenue South Cranbrook BC V1C 2K3

Address

Date of Inspection: 11/5/2010

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

no vertical faces exceed two meters above the reach of the loading equipment pursuant to section 6.23.4 of the Health, Safety and Reclamation Code, to be completed immediately.



## SECTION : 4.18.2 Safe Working Load

A lifting device attached to the loaded bucket was observed. When asked, the operator did not know if the device was engineered or what the lifting capacity was. The manager shall have the lifting device removed from service until the unit is certified and has the appropriate load rating installed pursuant to section's 4.18.2 & 4.18.8 of the Health Safety and Reclamation Code.



Date of Inspection

11/5/2010

Initials

(Inspector)

Initials

(Manager)



The Best Place on Earth

Province of British Columbia  
**Ministry of Natural Resource  
Operations**

Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 19997  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 6 / 0  
Orders H&S: 5 RECL: 0  
Stop Work: 0

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**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	Mine site

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**Persons Contacted**

MANAGEMENT G. Harris

OHS COMMITTEE

WORKERS

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A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

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**INSPECTION ORDERS**

On March 14, 2011 B. Milligan and P. Pascuzzi of the Ministry of Energy, Mines and Petroleum Resources inspected the Westside gravel operation operated by Interoute Construction Limited. The pit is located in Revelstoke, north of Highway 1 on the west side of the Columbia River. Selkirk Paving Limited (SPL) was crushing material during the inspection.

During the inspection the following items of concern were noted and the following orders are written;

Orders from inspections at this SPL crusher while operating at other pits included:

SECTION : 4.4.16 Conveyor Belts

January 25, 2011 - *A number of tail pulleys and rollers on conveyors require adequate guarding. The*

**MANAGERS RESPONSE OF ACTION TAKEN**

---

Bruce Milligan

Senior Inspector of Mines, Permitting

2nd Floor, 42 - 8th Avenue South Cranbrook BC V1C 2K3

Address

Date of Inspection: 3/14/2011

Copies To

---

Signature – Inspector of Mines

---

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

*manager employs caution tape as a measure to keep personnel away from the conveyors. In all locations the caution tape was removed. The manager shall not use caution tape as access control in the future. The manager shall ensure that all conveyors are adequately guarded and in compliance with section 4.4.16 of the Health, Safety and Reclamation Code, to be completed before restarting the crusher.*

May 6, 2011

*This is an order from the inspection report that was conducted on this crusher when it was located at the Genelle Pit in Castlegar. "A number of tail pulleys and rollers on conveyors require adequate guarding. The manager employs caution tape as a measure to keep personnel away from the conveyors. In all locations the caution tape was removed. The manager shall not use caution tape as access control in the future. The manager shall ensure that all conveyors are adequately guarded and in compliance with section 4.4.16 of the Health, Safety and Reclamation Code, to be completed before restarting the crusher." Caution tape is still being used to control access. The supervisor was once again instructed that caution tape is not an adequate access control device and that while improvements have been made on many of the conveyors further guarding is required. The supervisor agreed to install adequate guarding while waiting for dust suppression to arrive.*

SPL has employed construction fencing to prevent entry into areas where un-guarded conveyors are located. This fence is opened once the conveyors are locked out. Additionally areas were unguarded. At the time of inspection the fencing was open with the conveyors running. When asked, the supervisor stated that continuous repetitious clean-up was required.

The inspectors observed a ground worker climbing underneath the frame of the cone crusher to check the water spray system. This action put the employee adjacent to an operating un-guarded conveyor. The ground worker was then observed traveling under the



Date of Inspection

3/14/2011

Initials

(Inspector)

Initials

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

conveyor system.

The fencing solution is not working! **The manager shall ensure that all conveyors are adequately guarded and in compliance with section 4.4.16 of the Health, Safety and Reclamation Code, to be completed within twenty days. Additionally if work is required while the conveyors are in operation, the manager shall develop a procedure for working around moving conveyors and only employees trained in this procedure shall be allowed to work in those areas.**

SECTION : 4.9.4 Vehicle Requirements

The haul truck located at the pit entrance did not have wheel chocks. Additionally the loaders are not equipped with wheel chocks. The manager shall ensure all rubber tired mobile equipment over 7000 kg gross vehicle weight have a minimum of two wheel chocks which shall be used whenever necessary pursuant to section 4.9.4 of the Health Safety and Reclamation Code, to be reviewed with all employees at the mine.



SECTION : 4.4.7 Welding and Burning Equipment

The oxygen acetylene cutting torch was found without guards over the valves and the glass covers were missing on three of the gauges. The manager shall ensure cutting torches are used in compliance with sections 1.9.1 and 4.4.7 of the Health Safety and Reclamation Code, to be completed immediately.

Date of Inspection

3/14/2011

Initials

(Inspector)

Initials

(Manager)



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN



## SECTION : 1.9.1 General Workplace Conditions

Snow accumulations in and around the working areas have created a substantial hazard to slips and falls. The first aid / spill kit shed was not accessible. The manager shall have access to all areas re-established pursuant to section 1.9.1 of the Health Safety and Reclamation Code, to be completed immediately.



Date of Inspection

3/14/2011

Initials

(Inspector)

Initials

(Manager)

**INSPECTION ORDERS**

**MANAGERS RESPONSE OF ACTION TAKEN**

SECTION : 2.2.1      Workplace to Be Hazard Free

The parts van is in need of cleaning. Tracks where the employees had walked on top of the parts were observed. The manager shall have this van cleaned out pursuant to section 2.2.1 of the Health Safety and Reclamation Code, to be completed immediately.



Date of Inspection

3/14/2011

Initials

*EM*

(Inspector)

Initials

(Manager)



Ministry of  
Energy and Mines

Province of British Columbia  
**Ministry of Energy and  
Mines**

**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 26716  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 0 RECL: 0  
Stop Work: 1

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Crusher area

**Persons Contacted**

MANAGEMENT Orlando Dias, Corey Rokosh  
OHS COMMITTEE  
WORKERS Crusher Operator, 2 Loader Operators, Ground Man, Quality Control, Water Truck Driver

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

This report is the result of a follow up inspection conducted at the Westside Pit. The purpose of the inspection was to check on dust conditions in the pit and to make contact with Haley Kuppers, Occupational Health Inspector that was doing area and personal noise and dust sampling.

Upon arriving at the Pit early afternoon the pit appeared to be a bit dustier the previous Monday. The temperature at the time was in the mid 30's and the air was calm.

After approximately 45 minutes of observing the pit from a distance the dust was noticeably on the increase and a closer inspection was conducted.

**MANAGERS RESPONSE OF ACTION TAKEN**

After the meeting with Phil, the guys have become more aware of what needs to take place during dust events, and how serious it is. After installing the radio in the water truck, the driver has

Philip Pascozzi

Inspector of Mines

2nd floor, 42 - 8th Ave. S. Cranbrook BC V1C 2K3

Address

Date of Inspection: 7/18/2013

Copies To

Signature - Inspector of Mines

Signature - Manager

Dated: July 25, 2013

## INSPECTION ORDERS

Although the dust was not seen as leavening the pit area, the majority of the dust was being generated by the product loader travelling down the stock pile ramps.

While observing the water truck, it was noted he was doing the roadways but not the stock pile ramps.

As the dusting continued there appeared to be no immediate action being taken. So the crusher was immediately shut down and a group meeting was held with this Inspector discussing how the Ministry sees the team at the pit managing the dust when it becomes evident.

It was explained that dust had to be controlled at the source and if this could not be achieved then the part of the operation that was causing the dust was to stop until the dust was under control.

It was during this discussion that it was discovered that the water truck driver had no means of communicating with the loader operator while watering in his area. This condition was corrected immediately by giving the water truck driver radio communications.

It was made very clear that it was the responsibility of everyone working in the pit, that when dust was becoming air borne then action had to be taken to correct the problem.

The Mine Manager must ensure that dust is controlled at the source to prevent it from becoming a worker and public health issue.

This concern was discussed with the Mine Manager the following morning with this Inspector and Inspector Kuppers.

Follow up will occur once the final report from Inspector Kuppers is completed.

## MANAGERS RESPONSE OF ACTION TAKEN

Communication with the loader operator. He is constantly watering the ramps and stockpiles which has eliminated dust created by the loader. The crusher operator has since installed a bigger high pressure Pump, and some more nozzles, which has further reduced dust around the crusher.

I inspected the operation on July 23<sup>rd</sup> and no visible dust was apparent.

We will wait for the final report from Haley Kuppers, and then have a discussion on the report. until then we will proceed with controlling dust at the source.

Date of Inspection

7/18/2013

Initials



(Inspector)

Initials



(Manager)



*Meeting Report*

**Mine No** 1620313 **Mine Name** Westside Pit  
**Date** 2014/08/02  
**Inspector** Glen Hendrickson  
**Persons Attending** None

**Nature of Meeting** Site visit to check on orders from previous inspection one week prior.  
No workers were on site and the gate was locked.  
Snow fencing on the crusher had been removed and replaced with old crusher screens.  
Deisel spill appeared to be cleaned up.  
Propane tanks secured to one another but not to anything solid.  
No dust observed.

Glen Hendrickson  
Senior Inspector of Mines - Permitting  
1902 Theatre Road Cranbrook BC V1C 7G1  
Address

Signature - Inspector of Mines

Signature - Manager

Date of Inspection: August 2, 2014

Dated: \_\_\_\_\_, 20\_\_\_\_



Ministry of  
Energy and Mines

Tuesday, May 22, 2012

File: 18080-02-02  
Mine No.: 1620313

Interoute Construction Ltd.  
PO Box 466  
Cranbrook BC, V1C 4H9

Dear Sir:

**Re: Mine Inspection May 16, 2012**  
**Property: Westside Pit**

---

Enclosed is my Inspection Report for the above noted property and date.

Please have this report posted in a conspicuous place on the property accessible to the workers in accordance with Section 30(1) of the Mines Act.

As noted on page one of the report, please fill in the appropriate areas responding to the Inspector's comments, sign and date the first page, initial the subsequent page(s) and return a copy with your comments to the writer.

Yours truly,

---

Jerry Jewsbury  
Inspector of Mines, Health and Safety

Enclosures



Ministry of  
Energy and Mines

Province of British Columbia  
**Ministry of Energy and  
Mines**

Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 23099  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 3 RECL: 0  
Stop Work: 0

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	Pit and stock pile areas

**Persons Contacted**

MANAGEMENT Corey Rokosh

OHS COMMITTEE

WORKERS

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

This Inspection report is the result of a General Health and Safety inspection conducted May 16<sup>th</sup>, 2012 at the H&J Westside Pit @ 16:29

During this inspection I (Jerrold Jewsbury) Health Safety Inspector of Mines was accompanied by Mr. Phil Pascuzzi, Regional Senior Inspector of Mines from the Cranbrook Office.

The regional inspectors were in the Revelstoke area, we saw new dust suppression on the road leading out of the open gate and took a look. Both inspectors left their business cards in the loader cab so that the manager knew we had been around.

**MANAGERS RESPONSE OF ACTION TAKEN**

Jerry Jewsbury

Inspector of Mines, Health and Safety

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 5/16/2012

Copies To Phil Pascuzzi

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

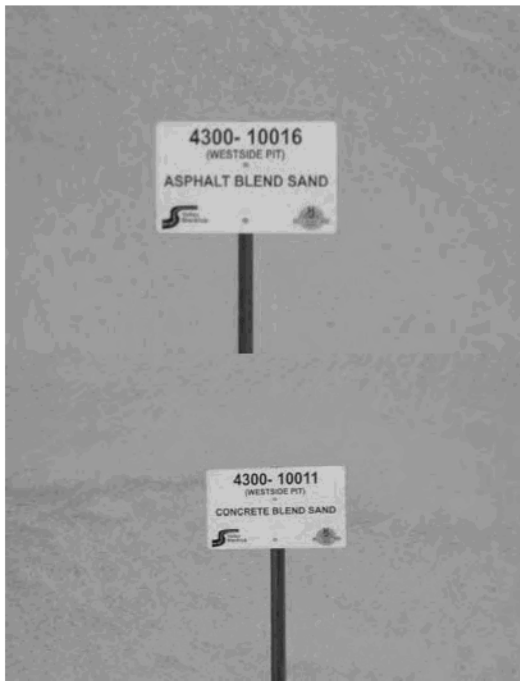
## MANAGERS RESPONSE OF ACTION TAKEN



It was good to see the dust suppression calcium on the roads leading into the pit area as well all the Hydro-seeding that had been done in the surrounding area.

During our short visit and look around your site,

1<sup>st</sup> - It was noted with a South Westerly wind blowing there was allot of dust coming off the concrete blend and asphalt blend piles.



Date of Inspection

5/16/2012

Initials

(Inspector)

Initials

(Manager)



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

**General Mine Rules****6.24.2**

Wherever practicable, water sprays or other dust suppression means and devices shall be used at every dusty place where work is carried out and where it is impractical to do so, personal protective equipment shall be supplied and worn by all persons working in that location.

**Further to this code requirement, it is written in your ICL Operating plan revised September 2010- Page 4;**

**Bullet #7** – Placement of dust control measures on stock piles of sand.

**Bullet # 13** – All personal will be informed on the dust control plan (As seen in the Information box on the pole at the crest of the pit hill).

**Bullet # 15** - The operator shall suppress the fugitive dust created within the operational area of the pit so that the measured value of dust does not exceed 1.7 mg/dm<sup>2</sup>d

**Bullet # 16** – In cases of a wind event or extreme heat and above mentioned measures are not adequate; operations will stop until Interoute has managed the dust effectively.

The manager shall remedy immediately.

2<sup>nd</sup> – It was noted that in certain areas the berm was not of sufficient height to the equipment around the pit.

Date of Inspection

5/16/2012

Initials



(Inspector)

Initials

\_\_\_\_\_

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

**Mine Haul Road Design****Haulage****Road Width**

**6.9.1** The manager shall prepare a plan pursuant to section

10 (1) of the *Mines Act* which

(1) Shows the type and method of construction for haulage roads that are to be constructed at the mine site.

(2) Except for roads constructed prior to 1990, the manager shall ensure that haulage roads are designed, constructed and maintained to provide

(a) a travel width where dual lane traffic exists, of not less than 3 times, or where single lane traffic exists, of not less than 2 times the width of the widest haulage vehicle used on the road, and

(b) a shoulder barrier

(i) at least 3/4 of the height of the largest tire on any vehicle hauling on the road,

(ii) of a construction or a specification that is in general conformance to accepted engineering practice,

(iii) located and maintained along the edge of the haulage road wherever a drop-off greater than 3 m exists, and

(iv) incorporating breaks that do not exceed the width of the blade of the equipment constructing and maintaining the breaks to allow for drainage and snow clearance.

(3) For the purpose of subsection (2) (a), the width of the barrier referred to in subsection (2) (b) shall be excluded from the travel width.

Date of Inspection

5/16/2012

Initials

(Inspector)

Initials

\_\_\_\_\_

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

The manager shall remedy immediately.

**3<sup>rd</sup>** - For the 45 minute duration the inspectors were inspecting the operation, no one was around the area or came back to the operation. The road leading into the pit area was not secured from outside personal and the entrance gate was left open for anyone to enter.



### Securing of Openings

#### 10.6.5

When a mine is closed for an indefinite period, or otherwise left unattended for any length of time, the owner, agent or manager shall take all practicable measures to prevent inadvertent access to mine entrances, pits and openings that are dangerous by reason of their depth or otherwise, by unauthorized persons and ensure that the mine workings and fixtures remain secure.

The manager shall remedy immediately.

SECTION :6.24.2      General Mine Rules

SECTION :6.9.1      Haulage Road Width

SECTION :10.6.5      Securing of Openings

Date of Inspection

5/16/2012

Initials

(Inspector)

Initials

\_\_\_\_\_

(Manager)

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN

Date of Inspection

5/16/2012

Initials

  
\_\_\_\_\_

(Inspector)

Initials

\_\_\_\_\_

(Manager)



Ministry of  
Energy and Mines

Wednesday, July 24, 2013

File: 18080-02-02  
Mine No.: 1620313

Corey Rokosh

PO Box 9297  
Revelstoke BC, V0E 3K0

Dear Sir:

**Re: Mine Inspection July 15, 2013**  
**Property: Westside Pit**

Enclosed are two copies of my Inspection Report for the above noted property and date.

Please have this report posted in a conspicuous place on the property accessible to the workers in accordance with Section 30(1) of the Mines Act.

As noted on page one of the report, please fill in the appropriate areas responding to the Inspector's comments, sign and date the first page, initial the subsequent page(s) and return a copy with your comments to the writer.

Yours truly,

---

Philip Pascuzzi  
Inspector of Mines

Enclosures



Ministry of  
Energy and Mines

# Province of British Columbia Ministry of Energy and Mines

## Report of Inspector of Mines (Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 26698  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 1 RECL: 0  
Stop Work: 0

### Inspection Report

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Gravel Pit

### Persons Contacted

MANAGEMENT Orlando Dias, Corey Rokosh

OHS COMMITTEE

WORKERS

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

### INSPECTION ORDERS

SECTION :1.9.1 General

This Inspection report is the result of a Health and Safety inspection that was conducted July15, 2013 at the Westside Gravel Pit.

The reason for the Inspection was to follow up on a public complainant about dust being created by the crushing operation and migrating to adjacent properties.

At the time of this inspection the temperature was in the high 20's and the air was calm.

The water truck was observed watering roadways and dust control sprays where being used on the conveyor

### MANAGERS RESPONSE OF ACTION TAKEN

Philip Pascuzzi

Inspector of Mines

2nd floor, 42 - 8th Ave. S. Cranbrook BC V1C 2K3

Address

Date of Inspection: 7/15/2013

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

INSPECTION ORDERS

MANAGERS RESPONSE OF ACTION TAKEN



As can be seen from this picture when arriving at the pit there is no dust visible coming from the crushing area.



This picture was taken while a loader was loading a gravel truck and there was no dust being generated for this loading activity.

Date of Inspection

7/15/2013

Initials

(Inspector)

Initials

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN



This picture is overlooking the crusher and a slight haze can be seen coming from around the MF cone crusher. This slight dusting was certainly not migrating from the site but may be a hazard to unprotected workers walking on the ground in this area. This condition needs to be further investigated by Valley Black Top/Selkirk Paving.

Date of Inspection

7/15/2013

Initials

(Inspector)

Initials

(Manager)



INSPECTION ORDERS

MANAGERS RESPONSE OF ACTION TAKEN



This picture is of the discharge end of the manufactured fines conveyor. No visible dust could be seen coming from neither this belt nor any other conveyor discharge that was observed during this inspection.

Date of Inspection

7/15/2013

Initials

(Inspector)

Initials

\_\_\_\_\_

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN



This picture is of the cone crusher for the manufactured fines. This area does produce a small amount of dust which appears to be from the crusher drive motor and belts pulling dust from the crusher. This dust was not of any quantity that would migrate from this local area but could be hazardous to unprotected workers working in this area. Once again this possible worker exposure needs to be evaluated by Valley Black Top/Selkirk Paving.

### Workplace Conditions 1.9.1

The manager shall

- (1) take all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers,
- (2) where practicable, institute controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations, and
- 3) require that persons wear effective personal protective equipment in any situation where control at the source, as required by section 1.9.1(2), is impractical.

Date of Inspection

7/15/2013

Initials

(Inspector)

Initials

(Manager)

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>Pursuant to Section 1.9.1 inclusive, the Manager shall within 60 days of receipt of this report, ensure all aspects of this section are complied with.</p>	

Date of Inspection

7/15/2013

Initials



\_\_\_\_\_  
(Inspector)

Initials

\_\_\_\_\_

(Manager)



Ministry of  
Energy and Mines

Wednesday, July 24, 2013

File: 18080-02-02  
Mine No.: 1620313

Corey Rokosh

PO Box 9297  
Revelstoke BC, V0E 3K0

Dear Sir:

**Re: Mine Inspection July 18, 2013**  
**Property: Westside Pit**

Enclosed are two copies of my Inspection Report for the above noted property and date.

Please have this report posted in a conspicuous place on the property accessible to the workers in accordance with Section 30(1) of the Mines Act.

As noted on page one of the report, please fill in the appropriate areas responding to the Inspector's comments, sign and date the first page, initial the subsequent page(s) and return a copy with your comments to the writer.

Yours truly,

---

Philip Pascuzzi  
Inspector of Mines

Enclosures



Ministry of  
Energy and Mines

Province of British Columbia  
**Ministry of Energy and  
Mines**

**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 26716  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 0  
Orders H&S: 0 RECL: 0  
Stop Work: 1

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Crusher area

**Persons Contacted**

MANAGEMENT Orlando Dias, Corey Rokosh  
OHS COMMITTEE  
WORKERS Crusher Operator, 2 Loader Operators, Ground Man, Quality Control, Water Truck Driver

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

This report is the result of a follow up inspection conducted at the Westside Pit. The purpose of the inspection was to check on dust conditions in the pit and to make contact with Haley Koppers, Occupational Health Inspector that was doing area and personal noise and dust sampling.

Upon arriving at the Pit early afternoon the pit appeared to be a bit dustier the previous Monday. The temperature at the time was in the mid 30's and the air was calm.

After approximately 45 minutes of observing the pit from a distance the dust was noticeably on the increase and a closer inspection was conducted.

**MANAGERS RESPONSE OF ACTION TAKEN**

Philip Pascuzzi

Inspector of Mines

2nd floor, 42 - 8th Ave. S. Cranbrook BC V1C 2K3

Address

Date of Inspection: 7/18/2013

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Although the dust was not seen as leavening the pit area, the majority of the dust was being generated by the product loader travelling down the stock pile ramps.

While observing the water truck, it was noted he was doing the roadways but not the stock pile ramps.

As the dusting continued there appeared to be no immediate action being taken. So the crusher was immediately shut down and a group meeting was held with this Inspector discussing how the Ministry sees the team at the pit managing the dust when it becomes evident.

It was explained that dust had to be controlled at the source and if this could not be achieved then the part of the operation that was causing the dust was to stop until the dust was under control.

It was during this discussion that it was discovered that the water truck driver had no means of communicating with the loader operator while watering in his area. This condition was corrected immediately by giving the water truck driver radio communications.

It was made very clear that it was the responsibility of everyone working in the pit, that when dust was becoming air borne then action had to be taken to correct the problem.

The Mine Manager must ensure that dust is controlled at the source to prevent it from becoming a worker and public health issue.

This concern was discussed with the Mine Manager the following morning with this Inspector and Inspector Kupperts.

Follow up will occur once the final report from Inspector Kupperts is completed.

Date of Inspection

7/18/2013

Initials



(Inspector)

Initials

(Manager)



Ministry of  
Energy and Mines

Province of British Columbia  
**MINISTRY OF ENERGY AND MINES**  
**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 27217.  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 6. / 00  
Orders H&S: 2. RECL: 00  
Stop Work: 00

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Crusher plant, mine site perimeter

**Persons Contacted**

MANAGEMENT	Corey Rokosh, Orlando Dias
OHS COMMITTEE	
WORKERS	Mobile crushing crew s.22 Water truck operator

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

On July 18<sup>th</sup> and 19<sup>th</sup>, 2013 a mine inspection was conducted by Haley Koppers, Occupational Health Inspector. The weather conditions on site during these two days were mostly sunny, at approximately 22 degrees centigrade, with some cloudy periods, low/no wind, rain shower occurred on the afternoon of the 19<sup>th</sup>. Work activities on site included a mobile crusher plant, two loaders, a bobcat and a water truck, with a crew of 5 employees. The mine supervisor advised that the mobile crusher plant and crew are only on site for 2 weeks every year, and when they are not crushing, activities from one or two employees include moving stockpiles, filling haul trucks, mine maintenance and berm construction. The purpose of this inspection was to follow up on community complaint issues and to determine the level of exposure related to dust and noise generated from mining activities at Westside Pit, in Revelstoke.

**MANAGERS RESPONSE OF ACTION TAKEN**

Haley Koppers

Inspector of Mines, Occupational Health

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 18/07/2013

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

**Dust Conditions**

During the visit it was observed that visible dust clouds approximately 20-30 metres high occurred for short periods and settled quickly, mainly as a result from loader activity. Evaluation of dust exposure leaving the mine perimeter was done using a real-time aerosol monitor with a size selective impactor that measured particulate matter under 10 micrometers in diameter ( $PM_{10}$ ).  $PM_{10}$  concentration was generally low around the mine perimeter, and ranged from 0.012 to 0.153  $mg/m^3$ . Higher levels were observed when the loader was nearby (dumping at the top of a stockpile), however dust quickly settled to the pit floor when loader was not nearby. Detailed results are available in the appendix of this report.

**Section 1.9.1 (2) Control**, where practicable, institute controls at the source to ensure that workers are not exposed to a level of hazardous dust in excess of the limits prescribed in the code or by an inspector.

- The mobile crusher plant was fitted with 6 water sprays placed at various dusty locations on the equipment, including the cone crusher, transfer points, and stockpile drop points.
- Evaluation of respirable dust exposure around the operating crusher plant was done using a real-time aerosol monitor with a size selective cyclone that measured particulate matter under 4 micrometers in diameter (respirable fraction). The respirable dust concentration ranged from very low (0.03  $mg/m^3$ ) to high (5  $mg/m^3$ ) (Detailed results are available in the appendix of this report). Areas with high dust generation were discussed with the crusher operator, as these are areas which require further dust control. The operator ordered 8 more spray nozzles and hose to add to areas with high dust exposure.
- During the visit, there was no visible dust generated from roads or stockpiles. Discussion with the site supervisor revealed that as part of the site dust control program the main roads are covered in magnesium chloride solution and fine stockpiles are sprayed with dust stop (cornstarch emulsion).
- During the visit there was a full time water truck operator, who worked throughout the day spraying all the main roads, active ramps, active stockpiles, as well as other areas identified as dusty by the crew.
- Discussion with the site supervisor revealed that although the trees and vegetation have been removed from a large portion of the mine property, the area that is not designated as the active pit area has been covered in a vegetation layer, which acts as blanket over the aggregate and eliminates any dust exposure.



Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)



**INSPECTION ORDERS****MANAGERS RESPONSE OF ACTION TAKEN****Noise Conditions**

Noise exposure around the site was measured standing on top of the berm, which was approximately 10 metres high and ran along the east side of the mine. Noise levels at the top of the berm ranged from 60 to 80 dBA (Detailed results are available in the appendix of this report), this noise is able to travel over the berm and will reduce in sound level with distance. The berm acts as a noise barrier, and must be maintained to ensure effectiveness as the mine continues to develop. Noise level behind the berm on the east side of the mine was low at 53 dBA.

**SECTION :2.6.1 Mufflers Required**

- Loader activity on top of stockpiles is a major contributor to noise exposure leaving the perimeter of the mine. This activity occurs during the crushing phase, as the aggregate is moved from the crusher plant and stockpiles are built.
- The loaders (844J Deere & 980H Cat) on site produced noise levels ranging from 72 to 95 dBA.
- As per Section 2.6.1 of the code, any machinery or equipment which, when operating exposes the operator or persons in the vicinity to noise levels in excess of those prescribed in Table 2-2, Part 2, for unprotected ears, shall if practicable, be fitted with a properly maintained muffler or other noise reducing device.

**Conclusions**

The mine supervisor acknowledged that they take all reasonable and practical effort to predict the dust conditions (by using weather monitoring and site visits) and act according to dust conditions on a daily basis. This site has implemented the use of various dust suppression systems, including magnesium chloride application on main roads, dust stop solution on fine stockpiles, water sprays on the crusher plant and a full-time water truck. Westside Pit will continue to receive support and guidance from the Ministry of Energy and Mines to ensure a system is in place to control dust and noise exposure under all operating conditions and adverse weather conditions. Overall, this evaluation demonstrated that Westside Pit is in compliance with the Health, Safety and Reclamation Code for Mines in British Columbia, as well as the conditions in the Amended Mines Act Permit G-4-188, Sand and Gravel Permit Approving Work System and Reclamation Program. During the inspection discussion with the mine supervisor and crusher crew regarding dust control practices lead to further awareness of the importance of the dust control program at Westside Pit.

A final observation during the mine visit worth noting for this evaluation is in regards to other potential dust exposure sources. During the visit, a tour of the surrounding area was done with the mine supervisor that identified other activities and areas that may contribute to community dust exposure. The West property



Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>along the river, where Westside Pit is situated, is a large industrial area, that is occupied by a Quarry (Jake and Jay, who conducts drilling and blasting); City of Revelstoke yard and gravel pit (containing a few stockpiles of sand, and large open pit floor); City Dump (active site with loader, compactor, garbage and commercial trucks); Forestry road (gravel road); as well as another gravel pit (Jake and Jay). On the East side of the river there are residential properties, golf course, other gravel pits (including Riverside Pit and Kelly Pit), and large gravel areas. All of these properties have the potential to generate dust, and therefore any dust that may contribute to community exposure cannot be attributed to one single source.</p>	

Date of Inspection

18/07/2013

Initials



(Inspector)

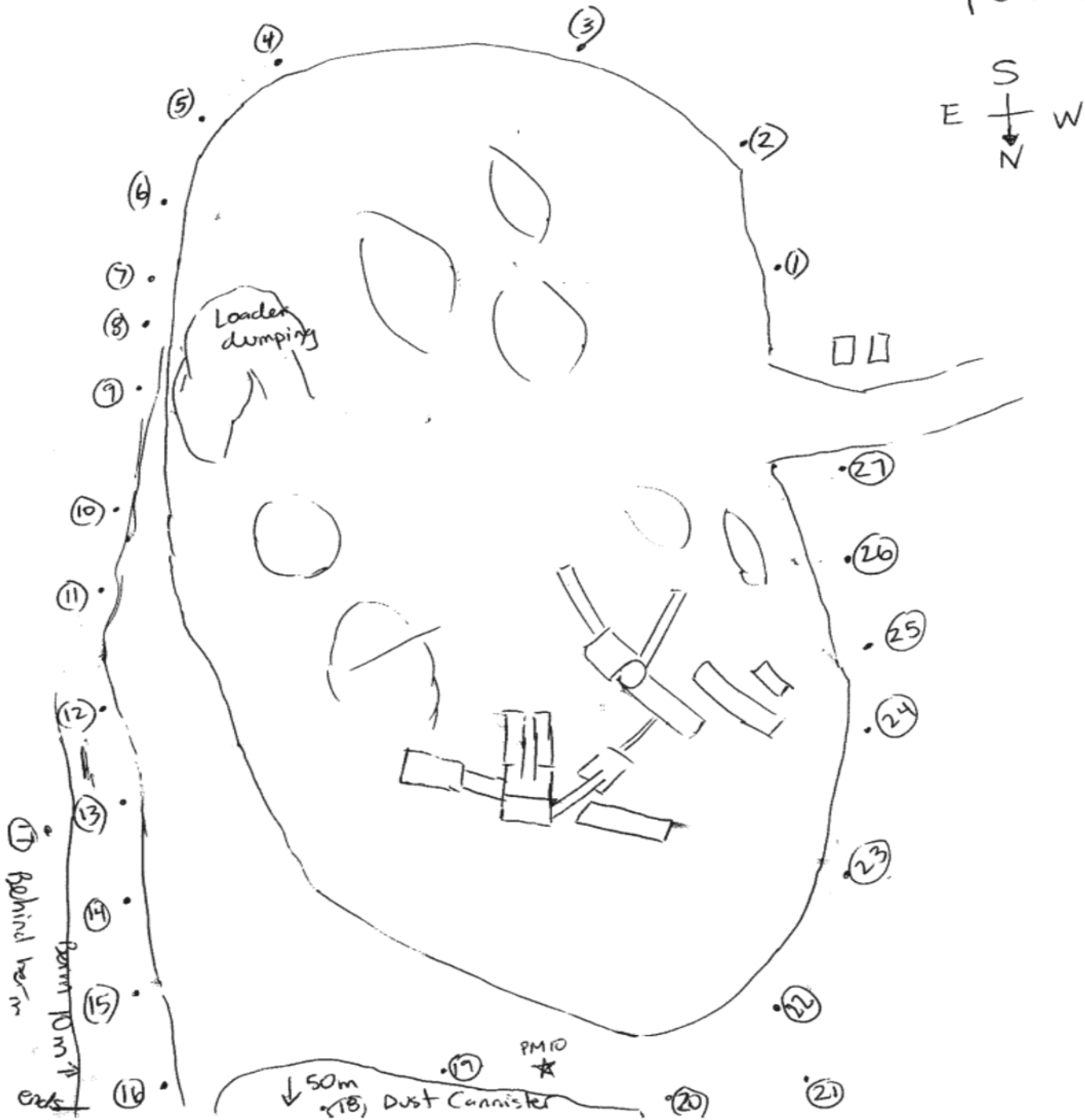
Initials

\_\_\_\_\_

(Manager)

Westside Pit July 18, 2013

Halcy Koppers  
Noise + Dust sample  
location on  
mine perimeter



Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

IK

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Name of Mine: Westside Pit

Date: July 18, 2013

Mine No: 1620313

Weather conditions Sunny, dry, low wind  
\* PM10 (mg/m<sup>3</sup>)

Location	Equipment/ Noise Source	Time	Sound Level (dBA)	Comments
1) Parking area-South pit	Crusher plant (CP) ~100m away	11:00	58.0 *0.016 mg/m <sup>3</sup>	Started side Pack PM10
2) South corner Pit (W)	CP ~150m away stockpiles obstructing path.	11:03	54.1 *0.015	
3) "East end.	" " "	11:06	53.2 *0.016	
4) South-east D. Cannister	CP ~125m away Loader dumping ~50m	11:10	56.5 *0.012	loader dumped x1 (Fine agg.)
5) South-east	CP ~100m	11:13	60.2 *0.013	
6) East side	CP ~90m loader dumping ~40m	11:15	67.0 *0.017	Visible dust when loader dumps on stockpile
7) East side	CP ~80m (No loader)	11:19	63.2 *0.018	
8) East side	CP ~75m stockpile dump-active ~10m	11:22	62.8 *0.014	Back up alarm on loader.
"	Loader dumping on stockpile ~10m	11:25	71.8 *0.015	
9) East side	Loader dumping on stockpile ~5m	11:30	80.8 *0.153	1min dust level reduced 0.015
10) North-east	CP ~50m	11:35	74.9 *0.016	
11) North east	CP ~50m closer to Jaw	11:38	78.1 *0.015	
		11:40	74.3	walking through brush
12) Northeast	CP ~40m	11:44	77.8 *0.016	
13) North east corner	CP ~30m loader feeding Jaw	11:47	78.5 *0.014	

SOUND LEVEL METER Larson Davis Model 831/s/n 0001564CALIBRATED July 18, 2013SAMPLED BY Haley KoppersTSI Side Pak s/n: 10504002  
AM 510 Aerosol Monitor

Zeroed: July 18, 2013

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

IK

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Name of Mine: "

Date: "

Mine No: "

Weather conditions "

Location	Equipment/ Noise Source	Time	Sound Level (dBA)	Comments
14) North east corner	CP ~ 40m loader feeding jaw	11:52	80.1 $\pm$ 0.018	Top berm on perimeter.
15) "	CP ~ 50m "	11:55	74.3 $\pm$ 0.014	Position at perimeter $\pm$ see house through trees.
16) "	CP ~ 75m	12:06	63.4 $\pm$ 0.016	
17) North east behind berm	CP ~ 60m	12:09	53.4 $\pm$ 0.017	
18) Northeast corner Dust canister	CP ~ 125m	12:13	57.6 $\pm$ 0.020	No berm in corner
19) Middle open field	CP ~ 100m	12:17	60.5 $\pm$ 0.023	50m From perimeter.
20) " North west corner	CP ~ 75m	12:19	66.2 $\pm$ 0.018	
21) "	CP ~ 75m	12:22	61.9 $\pm$ 0.035	Visible dust
22) " Behind berm	CP ~ 50m	12:24	70.7 $\pm$ 0.020	loader removing below close to edge
23) NW behind berm	CP ~ 40m	12:27	80.1 $\pm$ 0.017	
24) "	CP ~ 50m	12:31	70.8 $\pm$ 0.018	
25) "	CP ~ 75m	12:32	68.1 $\pm$ 0.016	Loader dumping on stockpile
26) West side pit	CP ~ 100m	12:34	60.1 $\pm$ 0.015	
27) West beside road	CP ~ 125m	12:37	54.2 $\pm$ 0.017	

SOUND LEVEL METER

S/N

CALIBRATED Started: 11:00

SAMPLED BY

Side Pak stopped 12:30  
Test #2

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

IK



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13MINE NAME Westside PitSOUND LEVEL METER Larson Davis Model 831S/N 0001564CALIBRATION July 19/13SAMPLED BY Haley K.

LEFT SIDE

RIGHT SIDE

LOW IDLE  
76 dBAHIGH IDLE  
86 dBALOW IDLE  
81.8 dBAHIGH IDLE  
86.7 dBALOW IDLE  
67 dBAHIGH IDLE  
69 dBA

INSIDE CAB

LOW IDLE  
72.4 dBA

HIGH IDLE  
74 dBA

LOW IDLE  
77.3 dBAHIGH IDLE  
82 dBALOW IDLE  
81 dBAHIGH IDLE  
87 dBALOW IDLE  
89 dBAHIGH IDLE  
95.2 dBAEQUIPMENT TYPE 844J Deere.EQUIPMENT CONDITIONS 2007.10,000 hr☒ WINDOWS / DOORS OPEN / CLOSED☒ SEALS☒ PRESSURIZATION or AC☒ RADIOS (LOW MOD HIGH)HOURS OPERATED PER DAY 10

Task:

COMMENTS

Loader operating  
Feeding crusher.78.3 Feeding crusher.  
↳ Inside cab

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

HK

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13  
 MINE NAME Westside Pit  
 SOUND LEVEL METER Larson Davis Model 831  
 S/N 0001564  
 CALIBRATION July 19/13  
 SAMPLED BY Haley K

LEFT SIDE

RIGHT SIDE

LOW IDLE  
72.4 dBA

HIGH IDLE  
86.3 dBA

LOW IDLE  
77 dBA

HIGH IDLE  
90.2 dBA

LOW IDLE  
59.5 dBA

HIGH IDLE  
72 dBA

LOW IDLE  
73.7 dBA

HIGH IDLE  
88 dBA

LOW IDLE  
76 dBA

HIGH IDLE  
89 dBA

LOW IDLE  
78 dBA

HIGH IDLE  
89 dBA

EQUIPMENT TYPE 980H Cat.  
 EQUIPMENT CONDITIONS ~3 yrs old  
3391 hrs.

☒ WINDOWS / DOORS OPEN / ☒ CLOSED  
☒ SEALS ☒ PRESSURIZATION or AC  
☒ RADIOS (LOW MOD HIGH)

HOURS OPERATED PER DAY 10 hrs.

COMMENTS 73.4 - Dumping + driving  
up hill/stockpile  
ramp  
79. radio. normal level

Task: Operate loader on finished side.  
moving aggregate to stockpiles

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

HK





Ministry of  
Energy and Mines

Province of British Columbia  
**MINISTRY OF ENERGY AND MINES**  
Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 27217,  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 6. / 00  
Orders H&S: 2. RECL: 00  
Stop Work: 00

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Crusher plant, mine site perimeter

**Persons Contacted**

MANAGEMENT	Corey Rokosh, Orlando Dias
OHS COMMITTEE	
WORKERS	Mobile crushing crew s.22 Water truck operator

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

On July 18<sup>th</sup> and 19<sup>th</sup>, 2013 a mine inspection was conducted by Haley Koppers, Occupational Health Inspector. The weather conditions on site during these two days were mostly sunny, at approximately 22 degrees centigrade, with some cloudy periods, low/no wind, rain shower occurred on the afternoon of the 19<sup>th</sup>. Work activities on site included a mobile crusher plant, two loaders, a bobcat and a water truck, with a crew of 5 employees. The mine supervisor advised that the mobile crusher plant and crew are only on site for 2 weeks every year, and when they are not crushing, activities from one or two employees include moving stockpiles, filling haul trucks, mine maintenance and berm construction. The purpose of this inspection was to follow up on community complaint issues and to determine the level of exposure related to dust and noise generated from mining activities at Westside Pit, in Revelstoke.

**MANAGERS RESPONSE OF ACTION TAKEN**

Dust Conditions:  
More water nozzles were ordered and installed around high dust generation areas at the crusher. This proved very effective in mitigating dust at the source.

Haley Koppers

Inspector of Mines, Occupational Health

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 18/07/2013

Copies To

Signature - Inspector of Mines

Signature - Manager

Dated: OCT 4, 20 13

## INSPECTION ORDERS

**Dust Conditions**

During the visit it was observed that visible dust clouds approximately 20-30 metres high occurred for short periods and settled quickly, mainly as a result from loader activity. Evaluation of dust exposure leaving the mine perimeter was done using a real-time aerosol monitor with a size selective impactor that measured particulate matter under 10 micrometers in diameter ( $PM_{10}$ ).  $PM_{10}$  concentration was generally low around the mine perimeter, and ranged from 0.012 to 0.153  $mg/m^3$ . Higher levels were observed when the loader was nearby (dumping at the top of a stockpile), however dust quickly settled to the pit floor when loader was not nearby. Detailed results are available in the appendix of this report.

**Section 1.9.1 (2) Control**, where practicable, institute controls at the source to ensure that workers are not exposed to a level of hazardous dust in excess of the limits prescribed in the code or by an inspector.

- The mobile crusher plant was fitted with 6 water sprays placed at various dusty locations on the equipment, including the cone crusher, transfer points, and stockpile drop points.
- Evaluation of respirable dust exposure around the operating crusher plant was done using a real-time aerosol monitor with a size selective cyclone that measured particulate matter under 4 micrometers in diameter (respirable fraction). The respirable dust concentration ranged from very low (0.03  $mg/m^3$ ) to high (5  $mg/m^3$ ) (Detailed results are available in the appendix of this report). Areas with high dust generation were discussed with the crusher operator, as these are areas which require further dust control. The operator ordered 8 more spray nozzles and hose to add to areas with high dust exposure.
- During the visit, there was no visible dust generated from roads or stockpiles. Discussion with the site supervisor revealed that as part of the site dust control program the main roads are covered in magnesium chloride solution and fine stockpiles are sprayed with dust stop (cornstarch emulsion).
- During the visit there was a full time water truck operator, who worked throughout the day spraying all the main roads, active ramps, active stockpiles, as well as other areas identified as dusty by the crew.
- Discussion with the site supervisor revealed that although the trees and vegetation have been removed from a large portion of the mine property, the area that is not designated as the active pit area has been covered in a vegetation layer, which acts as blanket over the aggregate and eliminates any dust exposure.

## MANAGERS RESPONSE OF ACTION TAKEN

"Dust control"

Roadways will continue to have dust control applied to them. The water truck will be present during crushing operation to water stockpiles and travelled portions in the pit.

"Noise control"

Mufflers will be inspected regularly, and replaced as required, in order to keep loader noise to a minimum.

We will lengthen the berm in a northerly direction along the East Boundary of the Pit to keep noise from leaving the pit area.

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

OR

(Manager)

## INSPECTION ORDERS

## Noise Conditions

Noise exposure around the site was measured standing on top of the berm, which was approximately 10 metres high and ran along the east side of the mine. Noise levels at the top of the berm ranged from 60 to 80 dBA (Detailed results are available in the appendix of this report), this noise is able to travel over the berm and will reduce in sound level with distance. The berm acts as a noise barrier, and must be maintained to ensure effectiveness as the mine continues to develop. Noise level behind the berm on the east side of the mine was low at 53 dBA.

## SECTION :2.6.1 Mufflers Required

- Loader activity on top of stockpiles is a major contributor to noise exposure leaving the perimeter of the mine. This activity occurs during the crushing phase, as the aggregate is moved from the crusher plant and stockpiles are built.
- The loaders (844J Deere & 980H Cat) on site produced noise levels ranging from 72 to 95 dBA.
- As per Section 2.6.1 of the code, any machinery or equipment which, when operating exposes the operator or persons in the vicinity to noise levels in excess of those prescribed in Table 2-2, Part 2, for unprotected ears, shall if practicable, be fitted with a properly maintained muffler or other noise reducing device.

## Conclusions

The mine supervisor acknowledged that they take all reasonable and practical effort to predict the dust conditions (by using weather monitoring and site visits) and act according to dust conditions on a daily basis. This site has implemented the use of various dust suppression systems, including magnesium chloride application on main roads, dust stop solution on fine stockpiles, water sprays on the crusher plant and a full-time water truck. Westside Pit will continue to receive support and guidance from the Ministry of Energy and Mines to ensure a system is in place to control dust and noise exposure under all operating conditions and adverse weather conditions. Overall, this evaluation demonstrated that Westside Pit is in compliance with the Health, Safety and Reclamation Code for Mines in British Columbia, as well as the conditions in the Amended Mines Act Permit G-4-188, Sand and Gravel Permit Approving Work System and Reclamation Program. During the inspection discussion with the mine supervisor and crusher crew regarding dust control practices lead to further awareness of the importance of the dust control program at Westside Pit.

A final observation during the mine visit worth noting for this evaluation is in regards to other potential dust exposure sources. During the visit, a tour of the surrounding area was done with the mine supervisor that identified other activities and areas that may contribute to community dust exposure. The West property

## MANAGERS RESPONSE OF ACTION TAKEN

"Noise control"

Loader operators will be notified to keep the stereo at a moderate level, in order to stay in an acceptable noise level for unprotected ears.

The immediate area around the crushing spread will be deemed a "hearing protection zone". All persons working within this zone will be required to wear hearing protection.

IK

Date of Inspection 18/07/2013

Initials

(Inspector)

Initials

(Manager)

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>along the river, where Westside Pit is situated, is a large industrial area, that is occupied by a Quarry (Jake and Jay, who conducts drilling and blasting); City of Revelstoke yard and gravel pit (containing a few stockpiles of sand, and large open pit floor); City Dump (active site with loader, compactor, garbage and commercial trucks); Forestry road (gravel road); as well as another gravel pit (Jake and Jay). On the East side of the river there are residential properties, golf course, other gravel pits (including Riverside Pit and Kelly Pit), and large gravel areas. All of these properties have the potential to generate dust, and therefore any dust that may contribute to community exposure cannot be attributed to one single source.</p>	

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

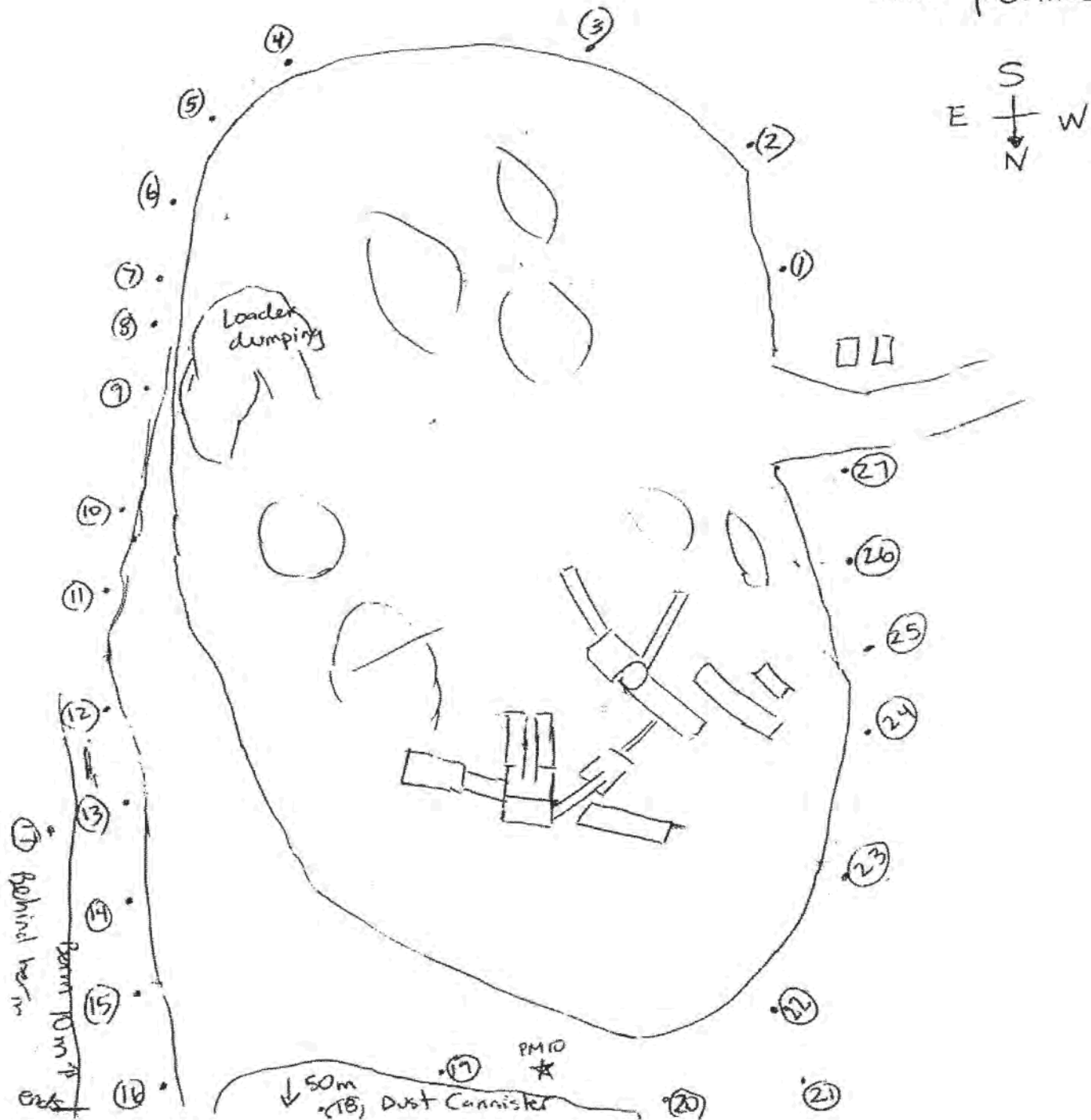
Initials

QR

(Manager)

Westside Pit July 18, 2013

Halay Koppers  
Noise + Dust sample  
location on  
mine perimeter



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Name of Mine: Westside Pit

Date: July 18, 2013

Mine No: 1620313

Weather conditions Sunny, dry, low wind  
\*PM10 (mg/m<sup>3</sup>)

Location	Equipment/ Noise Source	Time	Sound Level (dBA)	Comments
1) Parking area - South pit	Crusher plant (CP) ~ 100m away	11:00	58.0 *0.016 mg/m <sup>3</sup>	Started Side Pack PM10
2) South corner Pit (W)	CP ~ 150m away stockpiles obstructing path.	11:03	54.1 *0.015	
3) " East end.	" " "	11:06	53.2 *0.016	
4) South-east D. Cannister	CP ~ 125m away Loader dumping ~ 50m	11:10	56.5 *0.012	loader dumped x 1 (Fine agg.)
5) South-east	CP ~ 100m	11:13	60.2 *0.013	
6) East side	CP ~ 90m loader dumping ~ 40m	11:15	67.0 *0.017	Visible dust when loader dumps on stockpile
7) East side	CP ~ 80m (No loader)	11:19	63.2 *0.018	
8) East side	CP ~ 75m stockpile dump - active ~ 10m	11:22	62.8 *0.014	Back up alarm on loader.
"	Loader dumping on stockpile ~ 10m	11:25	71.8 *0.015	
9) East side	Loader dumping on stockpile ~ 5m	11:30	80.8 *0.153	1 min dust level reduced 0.015
10) North-east	CP ~ 50m	11:35	74.9 *0.016	
11) North east	CP ~ 50m closer to Jaw	11:38	78.1 *0.015	
12) Northeast	CP ~ 40m	11:40-43		walking through brush
"	"	11:44	77.8 *0.016	
13) North east corner	CP ~ 30m loader Feeding Jaw	11:47	78.5 *0.014	

SOUND LEVEL METER Larson Davis Model 831 s/n 0001564CALIBRATED July 18, 2013SAMPLED BY Haley KoppersTSI Side Pak s/n: 10504002  
AM 510 Aerosol Monitor

Zeroed: July 18, 2013

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Name of Mine: "

Date: "

Mine No: "

Weather conditions "

Location	Equipment/ Noise Source	Time	Sound Level (dBA)	Comments
14) North east corner	CP ~ 40m loader feeding jaw	11:52	80.1 $\pm$ 0.018	Top berm on perimeter.
15) "	CP ~ 50m "	11:55	74.3 $\pm$ 0.014	Position at perimeter $\pm$ see house through trees.
16) "	CP ~ 75m	12:06	63.4 $\pm$ 0.016	
17) North east behind berm	CP ~ 60m	12:09	53.4 $\pm$ 0.017	
18) North east corner Dust cannister	CP ~ 125m	12:13	57.6 $\pm$ 0.020	No berm in corner
19) Middle open field	CP ~ 100m	12:17	60.5 $\pm$ 0.023	50m from perimeter.
20) " North west corner	CP ~ 75m	12:19	66.2 $\pm$ 0.018	
21) "	CP ~ 75m	12:22	61.9 $\pm$ 0.035	Visible dust
22) " Behind berm	CP ~ 50m	12:24	70.7 $\pm$ 0.020	loader remaining below close to edge
23) NW behind berm	CP ~ 40m	12:27	80.1 $\pm$ 0.017	
24) "	CP ~ 50m	12:31	70.8 $\pm$ 0.018	
25) "	CP ~ 75m	12:32	68.1 $\pm$ 0.016	Loader dumping in stockpile
26) West side pit.	CP ~ 100m	12:34	60.1 $\pm$ 0.015	
27) West beside road	CP ~ 125m	12:37	54.2 $\pm$ 0.017	

SOUND LEVEL METER

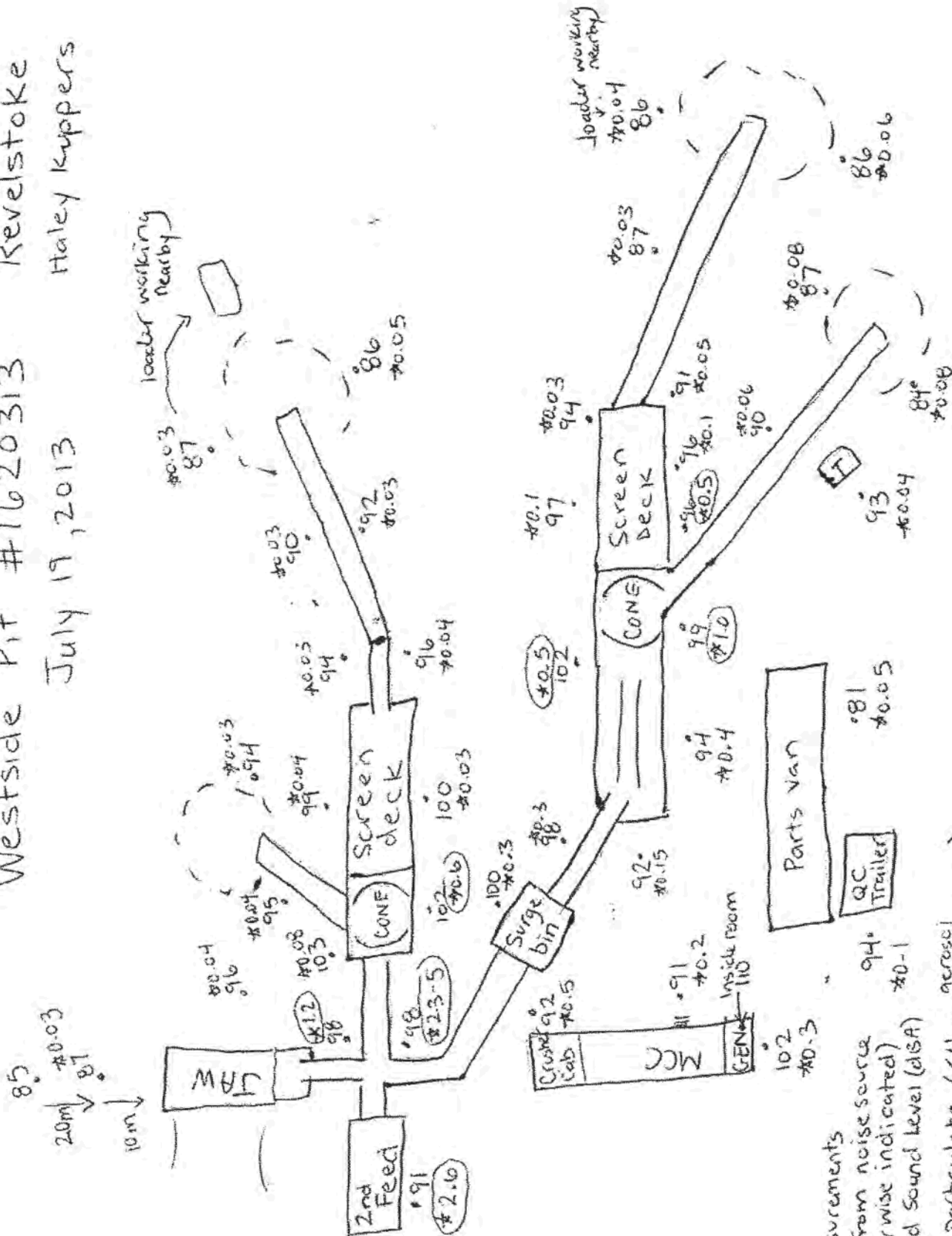
S/N

CALIBRATED Started: 11:00

SAMPLED BY

Side Pak stopped 12:38  
Test #2

Westside Pit #1620313 Revelstoke  
July 19, 2013 Haley Kuypers



Noise measurements taken from noise source unless otherwise indicated)  
A-Weighted Sound Level (dBA)  
Respirable particulate (<4µm size diameter) measured using real-time aerosol monitor w/cyclone



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13MINE NAME Westside PitSOUND LEVEL METER Larson Davis Model 831S/N 0001564CALIBRATION July 19/13SAMPLED BY Haley K.

LEFT SIDE

RIGHT SIDE

LOW IDLE  
76 dBA

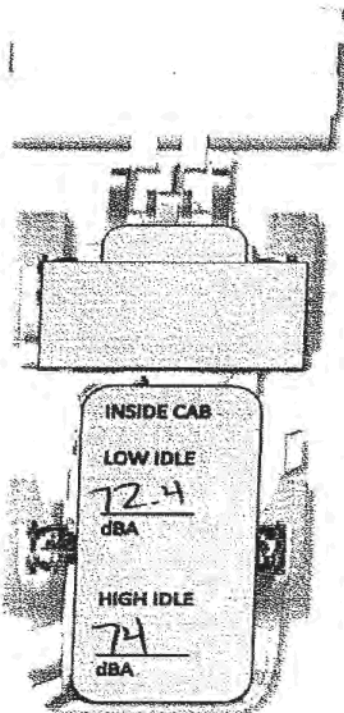
HIGH IDLE  
86 dBA

1m

LOW IDLE  
81.8 dBA

HIGH IDLE  
86.7 dBA

1m



LOW IDLE  
89 dBA

1m

HIGH IDLE  
95.2 dBA

LOW IDLE  
77.3 dBA

HIGH IDLE  
82 dBA

1m

LOW IDLE  
81 dBA

HIGH IDLE  
87 dBA

1m

EQUIPMENT TYPE 844J DeereEQUIPMENT CONDITIONS 2007.10,000 hr☒ WINDOWS / DOORS OPEN / CLOSED☒ SEALS☒ PRESSURIZATION or AC☒ RADIOS (LOW MOD HIGH)HOURS OPERATED PER DAY 10

Task:

COMMENTS

Loader operating  
Feeding crusher78.3 Feeding crusher  
↳ Inside cab

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

CA

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13MINE NAME Westside PitSOUND LEVEL METER Larson Davis Model 831S/N 0001564CALIBRATION July 19/13SAMPLED BY Haley K LEFT SIDE |

LOW IDLE

59.5 dBA

HIGH IDLE

72 dBA

1m

RIGHT SIDE

LOW IDLE

72.4 dBA

HIGH IDLE

86.3 dBA

1m

LOW IDLE

77 dBA

HIGH IDLE

90.2 dBA

1m

INSIDE CAB

LOW IDLE

62.4 dBA

HIGH IDLE

69 dBA

LOW IDLE

73.7 dBA

HIGH IDLE

88 dBA

1m

LOW IDLE

76 dBA

HIGH IDLE

89 dBA

1m

LOW IDLE

78 dBA

1m

HIGH IDLE

89 dBAEQUIPMENT TYPE 980H Cat.EQUIPMENT CONDITIONS ~3 yrs old3391 hrs.☒ WINDOWS / DOORS OPEN ☒ CLOSED☒ SEALS☒ RADIOS (LOW ☒ HIGH) ☒ PRESSURIZATION or ACHOURS OPERATED PER DAY 10 hrs.

COMMENTS

73.4 - Dumping + driving up hill/stockpile ramp79. radio. normal level

Task:

Operate loader on finished side. moving aggregate to stockpiles

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)



Ministry of  
Energy and Mines

September 23, 2013

File: 18080-02-02  
Mine No.: 1620313

Interoute Construction Ltd. dba Valley B  
PO Box 9297  
Revelstoke BC, V0E 3K0

Dear Sir:

**Re: Mine Inspection July 18, 2013**  
**Property: Westside Pit**

---

Enclosed are two copies of my Inspection Report for the above noted property and date.

Please have this report posted in a conspicuous place on the property accessible to the workers in accordance with Section 30(1) of the Mines Act.

As noted on page one of the report, please fill in the appropriate areas responding to the Inspector's comments, sign and date the first page, initial the subsequent page(s) and return a copy with your comments to the writer.

Yours truly,



---

Haley Kuppers  
Inspector of Mines, Occupational Health

Enclosures



Ministry of  
Energy and Mines

**Province of British Columbia**  
**MINISTRY OF ENERGY AND MINES**  
**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 27236.  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 6. / 00  
Orders H&S: 3. RECL: 00  
Stop Work: 00

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Crusher plant, mine site perimeter

**Persons Contacted**

MANAGEMENT Corey Rokosh, Orlando Dias

OHS COMMITTEE

WORKERS Mobile crushing crew: s.22 . Water truck operator

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

On July 18<sup>th</sup> and 19<sup>th</sup>, 2013 a mine inspection was conducted by Haley Koppers, Occupational Health Inspector. The weather conditions on site during these two days were mostly sunny, at approximately 22 degrees centigrade, with some cloudy periods, low/no wind, rain shower occurred on the afternoon of the 19<sup>th</sup>. Work activities on site included a mobile crusher plant, two loaders, a bobcat and a water truck, with a crew of 5 employees. The mine supervisor advised that the mobile crusher plant and crew are only on site for 2 weeks every year, and when they are not crushing, activities from one or two employees include moving stockpiles, filling haul trucks, mine maintenance and berm construction. The purpose of this inspection report is to provide results of the personal silica and noise monitoring that was carried out on the crusher crew during the mine inspection. Results of occupational exposure for respirable crystalline silica and noise were analyzed in accordance with the Health, Safety and Reclamation Code (HSRC) for Mines in British Columbia.

**MANAGERS RESPONSE OF ACTION TAKEN**

Haley Koppers

Inspector of Mines, Occupational Health

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 18/07/2013

Copies To Phil Pascuzzi, Sr. Inspector of Mines– Health & Safety

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Sampling methods include: *Respirable Dust*, A Nylon Cyclone and filter cassette assembly was used with a flow rate of 1.7 L/min and analysed using gravimetric analysis and x-ray diffraction. *Noise*, A personal noise dosimeter was used and the microphone was placed in the employees' hearing zone. Noise and dust surveys were performed around operating equipment (detailed results are available in the appendix).

## SECTION :2.1.1 Maximum Allowable Exposures

As per Section 2.1.1, employees shall not be exposed to airborne concentrations of chemical agents or noise in excess of the levels specified in Table 2-1 and 2-2.

Sampling results for respirable crystalline silica (quartz) indicate that 3 out of 4 employees sampled were above the HSRC for Mines occupational exposure limit of 0.1 mg/m<sup>3</sup>.

Mine Name: Westside Pit			Date: 18/19-Jul-13	Weather: Sunny, low wind, dry conditions (mild rain few days before) Temp: 22-28°C			
Employee Name	Occupation	Work area	Run Time (min)	Respirable Dust			Task Description
				Total (mg/m <sup>3</sup> )	Quartz (mg/m <sup>3</sup> )	Quartz %	
s.22	Groundperson	Outside plant area, Bobcat	524	1.29	<b>0.61</b>	47	Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment
	Quality Control	Outside plant area, QC trailer	435	0.47	<b>0.2</b>	42	Collect sample under belt and stockpile; used shaker and various equipment; 4-5hr outside; worked in QC trailer (no ventilation/filtration); total of 17 samples performed
	Loader Operator	980H Cat (enclosed system)	497	0.12	0.05	38	Operated loader (10hrs) on finished side, moving aggregate to stockpiles
	Groundperson	Outside plant area, Bobcat	282	1.16	<b>0.5</b>	43	July 19th. Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment. Sampled for morning only (~5 hrs)

Sampling results for noise indicate that 3 out of 7 employees sampled have exposure levels that exceed the maximum permissible noise exposure (84 dBA 10hr shift) for unprotected ears on a daily basis as set out in the HSRC.

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Mine Name: Westside Pit #1620313			Date: 18/19-Jul-13	Weather: Sunny, low wind, dry conditions (mild rain few days before) Temp: 22-28°C			
Employee Name	Occupation	Work area	Run Time (min)	Sample Results		Noise Exposure limit	Task Description
				Leq (dBA)	Dose %		
s.22	Groundperson	Outside plant area, Bobcat	524	94	863	84 dBA 10-hr TWA	Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment
	Quality Control	Outside plant area, QC trailer	440	83	56		Collect samples under belt and stockpile; used shaker and various equipment; 4-5hr outside; worked in QC trailer (no ventilation/filtration); total of 17 samples performed
	Loader Operator	980H Cat (enclosed system), finished end	500	84	90		Operated loader (10hrs) on finished side, moving aggregate to stockpiles
	Crusher Operator	Crusher control booth	503	79	29		Worked in crusher control booth all day, A/C, good seals, dirty/dusty floors and desk
	Loader Operator	844 J Deere	491	80	29		Operated loader (10hrs), feeding crusher plant
	Quality Control	Outside plant area, QC trailer	303	83	43		July 19: Collect samples under belt and stockpile, half time spent outside, worked in QC trailer
	Groundperson	Outside plant area, Bobcat	280	97	870		July 19: Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment

Sources of noise that may have contributed to overexposures include:

- Working in close proximity to the crusher plant or other equipment
- Working inside QC trailer with equipment running
- Operating equipment with stereo

## SECTION :1.8.7 Hearing Protection

The manager shall, where practical, institute controls at the source to ensure that workers are not exposed to hazardous noise levels. As per section 1.8.7, where noise levels exceed the requirements of Table 2-2, Part 2, persons shall wear hearing protectors which are selected, maintained and used in accordance with CSA Standard Z94.2-94 "Hearing Protectors". The manager shall ensure that employees with exposures that exceed the permissible noise limit wear their hearing protection properly for the entire duration of the shift and minimize the frequency with which it is removed.

Noise conditions on site were assessed using a sound level meter and detailed field notes of the sound level are included in the appendix of this report. Sound level around the crusher plant ranged from 80-103 dBA. Some locations with increased sound pressure level (>85 dBA) are hazardous to unprotected ears. Areas in the work place that are sources of employee exposure shall be either controlled at the source or designated "Hearing Protection Zone", in which employers require employee compliance of hearing protector use. During the inspection hearing protection was only worn by the ground-person and quality control technician.



Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>SECTION :1.9.1      General</p> <p>The respirable dust survey around the crusher plant demonstrated high exposure areas (see appendix for detailed results). As per Section 1.9.1(1) of the code, the manager shall take all reasonable and practical measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers. At the time of the inspection the mobile crusher plant was fitted with 6 water sprays placed at various dusty locations on the equipment, including the cone crusher, transfer points, and stockpile drop points. The crusher operator reported that he ordered 8 more spray nozzles and hose on the day of the inspection, to add to areas with high dust exposure.</p> <p>The exposure sampling indicates high exposure risk to airborne respirable crystalline silica for ground-person and quality control technician. As per Section 1.9.1(3), occupations that have overexposures or employees working in close proximity to the crusher plant area are required to wear effective respiratory protection if exposure levels cannot be controlled at the source.</p>	

Date of Inspection

18/07/2013

Initials



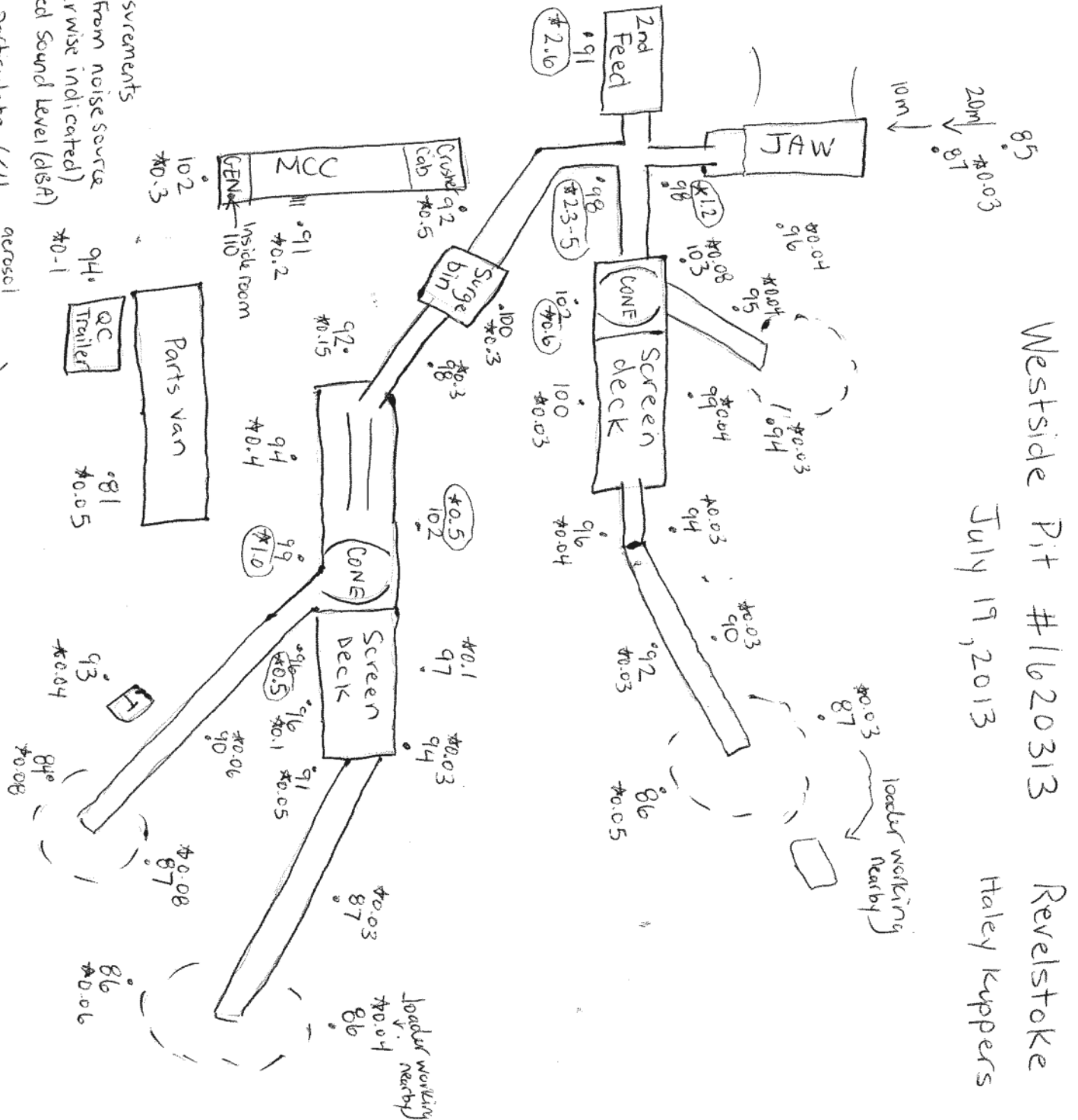
(Inspector)

Initials

\_\_\_\_\_

(Manager)

- Noise measurements taken 5m from noise source (unless otherwise indicated)
- A-weighted Sound level (dBA)
- \* Respirable particulate (<4µm size diameter) - measured using real-time aerosol monitor w/cyclone



Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

\_\_\_\_\_

(Manager)



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13MINE NAME Westside PitSOUND LEVEL METER Larson Davis Model 831S/N 0001564CALIBRATION July 19/13SAMPLED BY Haley K.

LEFT SIDE

RIGHT SIDE

LOW IDLE  
76 dBAHIGH IDLE  
86 dBALOW IDLE  
81.8 dBAHIGH IDLE  
86.7 dBALOW IDLE  
67 dBAHIGH IDLE  
69 dBA

INSIDE CAB

LOW IDLE  
72.4 dBAHIGH IDLE  
74 dBALOW IDLE  
77.3 dBAHIGH IDLE  
82 dBALOW IDLE  
81 dBAHIGH IDLE  
87 dBALOW IDLE  
89 dBAHIGH IDLE  
95.2 dBAEQUIPMENT TYPE 844J Deere.EQUIPMENT CONDITIONS 2007.  
10,000 hr
☒ WINDOWS / DOORS OPEN / CLOSED  
☒ SEALS ☐ PRESSURIZATION or AC  
☒ RADIOS (LOW MOD HIGH)
HOURS OPERATED PER DAY 10

Task:

COMMENTS Loader operating  
Feeding crusher.78.3 Feeding crusher.  
↳ Inside cab

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13  
 MINE NAME Westside Pit  
 SOUND LEVEL METER Larson Davis Model 831  
 S/N 0001564  
 CALIBRATION July 19/13  
 SAMPLED BY Haley K

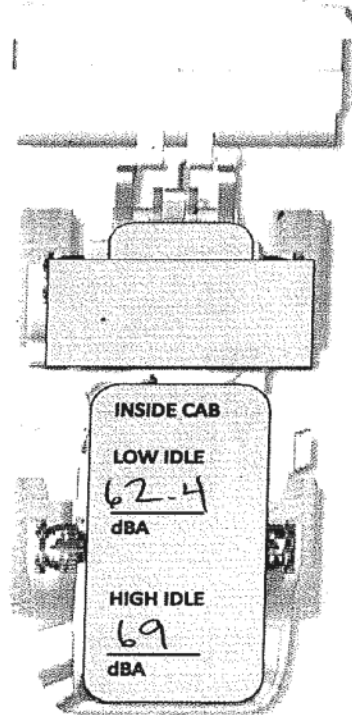
LEFT SIDE

RIGHT SIDE

LOW IDLE  
72.4 dBA  
 HIGH IDLE  
86.3 dBA

LOW IDLE  
77 dBA  
 HIGH IDLE  
90.2 dBA

LOW IDLE  
59.5 dBA  
 HIGH IDLE  
72 dBA



LOW IDLE  
73.7 dBA  
 HIGH IDLE  
88 dBA

LOW IDLE  
76 dBA  
 HIGH IDLE  
89 dBA

LOW IDLE  
78 dBA  
 HIGH IDLE  
89 dBA

EQUIPMENT TYPE 980H. Cat.  
 EQUIPMENT CONDITIONS ~3 yrs old  
3391 hrs.

☒ WINDOWS / DOORS OPEN / ☒ CLOSED  
☒ SEALS ☒ PRESSURIZATION or AC  
☒ RADIOS ( LOW MOD HIGH )

HOURS OPERATED PER DAY 10 hrs.

COMMENTS 73.4 - Dumping + driving up hit/stockpile ramp  
79. radio. normal level

Task: Operate loader on finished side. moving aggregate to stockpiles

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

(Manager)



Ministry of  
Energy and Mines

Province of British Columbia  
**MINISTRY OF ENERGY AND MINES**  
Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 27236.  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 6. / 00  
Orders H&S: 3. RECL: 00  
Stop Work: 00

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Crusher plant, mine site perimeter

**Persons Contacted**

MANAGEMENT	Corey Rokosh, Orlando Dias
OHS COMMITTEE	
WORKERS	Mobile crushing crew: s.22 Water truck operator

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

On July 18<sup>th</sup> and 19<sup>th</sup>, 2013 a mine inspection was conducted by Haley Koppers, Occupational Health Inspector. The weather conditions on site during these two days were mostly sunny, at approximately 22 degrees centigrade, with some cloudy periods, low/no wind, rain shower occurred on the afternoon of the 19<sup>th</sup>. Work activities on site included a mobile crusher plant, two loaders, a bobcat and a water truck, with a crew of 5 employees. The mine supervisor advised that the mobile crusher plant and crew are only on site for 2 weeks every year, and when they are not crushing, activities from one or two employees include moving stockpiles, filling haul trucks, mine maintenance and berm construction. The purpose of this inspection report is to provide results of the personal silica and noise monitoring that was carried out on the crusher crew during the mine inspection. Results of occupational exposure for respirable crystalline silica and noise were analyzed in accordance with the Health, Safety and Reclamation Code (HSRC) for Mines in British Columbia.

**MANAGERS RESPONSE OF ACTION TAKEN**

*Dust Control*  
*More water nozzles were ordered and installed around high dust generation areas at the crusher. This proved very effective in mitigating dust at the source.*

Haley Koppers

Inspector of Mines, Occupational Health

1902 Theatre Road Cranbrook BC V1C 7G1

Address

*Haley Koppers*

Signature - Inspector of Mines

*[Signature]*  
Signature - Manager

Date of Inspection: 18/07/2013

Dated: OCT 4, 20 13

Copies To Phil Pascuzzi, Sr. Inspector of Mines- Health & Safety

## INSPECTION ORDERS

Sampling methods include: *Respirable Dust*, A Nylon Cyclone and filter cassette assembly was used with a flow rate of 1.7 L/min and analysed using gravimetric analysis and x-ray diffraction. *Noise*, A personal noise dosimeter was used and the microphone was placed in the employees' hearing zone. Noise and dust surveys were performed around operating equipment (detailed results are available in the appendix).

## SECTION :2.1.1 Maximum Allowable Exposures

As per Section 2.1.1, employees shall not be exposed to airborne concentrations of chemical agents or noise in excess of the levels specified in Table 2-1 and 2-2.

Sampling results for respirable crystalline silica (quartz) indicate that 3 out of 4 employees sampled were above the HSRC for Mines occupational exposure limit of  $0.1 \text{ mg/m}^3$ .

## MANAGERS RESPONSE OF ACTION TAKEN

"Dust Control"  
Road ways will continue to have dust control applied to them. The water truck will be present during crushing operation to water stockpiles and travelled portions in the pit.

Mine Name: Westside Pit			Date: 18/19-Jul-13	Weather: Sunny, low wind, dry conditions (mild rain few days before) Temp: 22-28°C			
Employee Name	Occupation	Work area	Run Time (min)	Respirable Dust			Task Description
				Total ( $\text{mg/m}^3$ )	Quartz ( $\text{mg/m}^3$ )	Quartz %	
s.22	Groundperson	Outside plant area, Bobcat	524	1.29	0.61	47	Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment
	Quality Control	Outside plant area, QC trailer	435	0.47	0.2	42	Collect sample under belt and stockpile; used shaker and various equipment; 4-5hr outside; worked in QC trailer (no ventilation/filtration); total of 17 samples performed
	Loader Operator	980H Cat (enclosed system)	497	0.12	0.05	38	Operated loader (10hrs) on finished side, moving aggregate to stockpiles
	Groundperson	Outside plant area, Bobcat	282	1.16	0.5	43	July 19th. Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment. Sampled for morning only (~5 hrs)

Sampling results for noise indicate that 3 out of 7 employees sampled have exposure levels that exceed the maximum permissible noise exposure (84 dBA 10hr shift) for unprotected ears on a daily basis as set out in the HSRC.

"Dust Control"  
Loaders will be operated with doors closed, and the cabs will be regularly maintained.  
The lab will be regularly maintained to mitigate airborne dust

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

CJ

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

Mine Name: Westside Pit #1620313			Date: 18/19-Jul-13	Weather: Sunny, low wind, dry conditions (mild rain few days before) Temp: 22-28°C			
Employee Name	Occupation	Work area	Run Time (min)	Sample Results		Noise Exposure limit	Task Description
				Leq (dBA)	Dose %		
s.22	Groundperson	Outside plant area, Bobcat	524	94	863	84 dBA 10-hr TWA	Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment
	Quality Control	Outside plant area, QC trailer	440	83	56		Collect samples under belt and stockpile; used shaker and various equipment; 4-5hr outside; worked in QC trailer (no ventilation/filtration); total of 17 samples performed
	Loader Operator	980H Cat (enclosed system), finished end	500	84	90		Operated loader (10hrs) on finished side, moving aggregate to stockpiles
	Crusher Operator	Crusher control booth	503	79	29		Worked in crusher control booth all day, A/C, good seals, dirty/dusty floors and desk
	Loader Operator	844 J Deere	491	80	29		Operated loader (10hrs), feeding crusher plant
	Quality Control	Outside plant area, QC trailer	303	83	43		July 19: Collect samples under belt and stockpile, half time spent outside, worked in QC trailer
	Groundperson	Outside plant area, Bobcat	280	97	870		July 19: Operated bobcat (open cab) 2hrs; clean-up and maintenance of crusher plant; working close to operating equipment

Sources of noise that may have contributed to overexposures include:

- Working in close proximity to the crusher plant or other equipment
- Working inside QC trailer with equipment running
- Operating equipment with stereo

## SECTION :1.8.7 Hearing Protection

The manager shall, where practical, institute controls at the source to ensure that workers are not exposed to hazardous noise levels. As per section 1.8.7, where noise levels exceed the requirements of Table 2-2, Part 2, persons shall wear hearing protectors which are selected, maintained and used in accordance with CSA Standard Z94.2-94 "Hearing Protectors". The manager shall ensure that employees with exposures that exceed the permissible noise limit wear their hearing protection properly for the entire duration of the shift and minimize the frequency with which it is removed.

Noise conditions on site were assessed using a sound level meter and detailed field notes of the sound level are included in the appendix of this report. Sound level around the crusher plant ranged from 80-103 dBA. Some locations with increased sound pressure level (>85 dBA) are hazardous to unprotected ears. Areas in the work place that are sources of employee exposure shall be either controlled at the source or designated "Hearing Protection Zone", in which employers require employee compliance of hearing protector use. During the inspection hearing protection was only worn by the ground-person and quality control technician.

*"Noise control"*  
Mufflers will be inspected regularly and replaced as required, in order to keep loader noise to a minimum.

The berm will be lengthened in a northerly direction along the East boundary of the pit to keep noise from leaving the pit area.

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

Q

(Manager)

## INSPECTION ORDERS

## SECTION : 1.9.1 General

The respirable dust survey around the crusher plant demonstrated high exposure areas (see appendix for detailed results). As per Section 1.9.1(1) of the code, the manager shall take all reasonable and practical measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers. At the time of the inspection the mobile crusher plant was fitted with 6 water sprays placed at various dusty locations on the equipment, including the cone crusher, transfer points, and stockpile drop points. The crusher operator reported that he ordered 8 more spray nozzles and hose on the day of the inspection, to add to areas with high dust exposure.

The exposure sampling indicates high exposure risk to airborne respirable crystalline silica for ground-person and quality control technician. As per Section 1.9.1(3), occupations that have overexposures or employees working in close proximity to the crusher plant area are required to wear effective respiratory protection if exposure levels cannot be controlled at the source.

## MANAGERS RESPONSE OF ACTION TAKEN

*"Noise Control"*

*Loader operators will be notified to keep the stereo at a moderate level, in order to stay at an acceptable noise level for unprotected ears.*

*"Noise Control"*

*The immediate area around the crushing spread will be deemed a "hearing protection zone". All persons working within this zone will be required to wear hearing protection.*

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

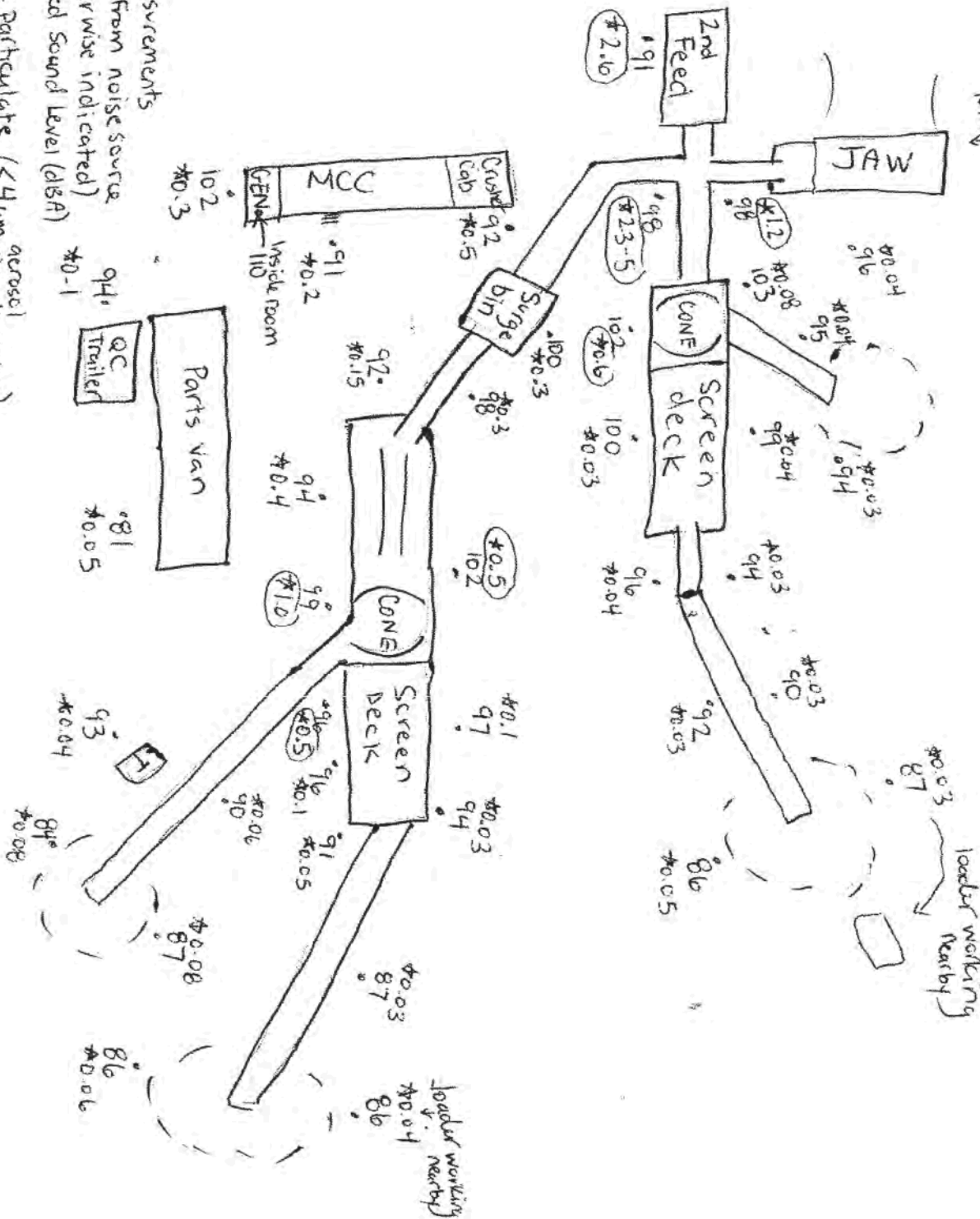
Initials

CA

(Manager)



- Noise measurements taken 5m from noise source (unless otherwise indicated)
- A-weighted sound level (dBA)
- \* Respirable particulate (<4µm size diameter) - measured using real-time aerosol monitor w/cyclone



Westside Pit #1620313  
 July 19, 2013  
 Haley Koppers

Date of Inspection

18/07/2013

Initials

(Inspector)

Initials

(Manager)

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13MINE NAME Westside PitSOUND LEVEL METER Larson Davis Model 831S/N 0001564CALIBRATION July 19/13SAMPLED BY Haley K.

LOW IDLE

67 dBA

HIGH IDLE

69 dBA

1m

LEFT SIDE

RIGHT SIDE

LOW IDLE

76 dBA

HIGH IDLE

86 dBA

1m

LOW IDLE

81.8 dBA

HIGH IDLE

86.7 dBA

1m

INSIDE CAB

LOW IDLE

72.4 dBA

HIGH IDLE

74 dBA

LOW IDLE

77.3 dBA

HIGH IDLE

82 dBA

1m

LOW IDLE

81 dBA

HIGH IDLE

87 dBA

1m

LOW IDLE

89 dBA

1m

HIGH IDLE

95.2 dBAEQUIPMENT TYPE 844J DeereEQUIPMENT CONDITIONS 200710,000 hr☒ WINDOWS / DOORS OPEN / CLOSED☒ SEALS☒ PRESSURIZATION or AC☒ RADIOS (LOW) MOD HIGH)HOURS OPERATED PER DAY 10

Task:

COMMENTS

Loader operating  
Feeding crusher78.3 Feeding crusher  
↳ Inside cab

Date of Inspection

18/07/2013

Initials

IK

(Inspector)

Initials

CR

(Manager)



## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

DATE July 19/13MINE NAME Westside PitSOUND LEVEL METER Larson Davis Model 831S/N 0001564CALIBRATION July 19/13SAMPLED BY Haley K

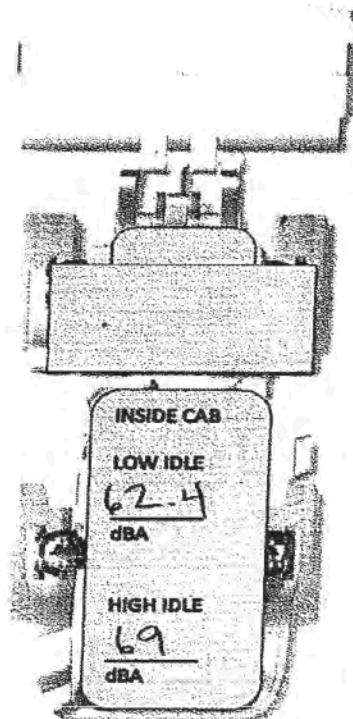
LEFT SIDE

RIGHT SIDE

LOW IDLE  
72.4 dBA  
HIGH IDLE  
86.3 dBA

LOW IDLE  
77 dBA  
HIGH IDLE  
90.2 dBA

LOW IDLE  
59.5 dBA  
HIGH IDLE  
72 dBA



LOW IDLE  
78 dBA  
HIGH IDLE  
89 dBA

EQUIPMENT TYPE 980H Cat.EQUIPMENT CONDITIONS ~3 yrs old  
3391 hrs.

☒ WINDOWS / DOORS OPEN ☒ CLOSED  
☒ SEALS ☒ PRESSURIZATION or AC  
☒ RADIOS (LOW ☒ MOD ☒ HIGH)

HOURS OPERATED PER DAY 10 hrs.

COMMENTS 73.4 - Dumping + driving up hill/stockpile ramp  
79. radio. normal level

Task: Operate loader on Finished side. moving aggregate to stockpiles

Date of Inspection

18/07/2013

Initials

HK

(Inspector)

Initials

QR

(Manager)



Ministry of  
Energy and Mines

Thursday, August 21, 2014

File: 18080-02-XX  
Mine No.: 1620313

Corey Rokosh

PO Box 9297  
Revelstoke BC, V0E 3K0

Dear Sir:

**Re: Mine Inspection August 14, 2014**  
**Property: Westside Pit**

Enclosed are two copies of my Inspection Report for the above noted property and date.

Please have this report posted in a conspicuous place on the property accessible to the workers in accordance with Section 30(1) of the Mines Act.

As noted on page one of the report, please fill in the appropriate areas responding to the Inspector's comments, sign and date the first page, initial the subsequent page(s) and return a copy with your comments to the writer.

Yours truly,

---

Rory Cumming  
Inspector of Mines, Electrical

Enclosures



Ministry of  
Energy and Mines

# Province of British Columbia Ministry of Energy and Mines

## Report of Inspector of Mines (Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 39097  
File: 18080-02-XX  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 5 / 0  
Orders H&S: 6 RECL: 0  
Stop Work: 0

### Inspection Report

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Pit, Power van, crusher equipment

### Persons Contacted

MANAGEMENT

OHS COMMITTEE

WORKERS s.22

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

### INSPECTION ORDERS

Inspections were conducted on August 14, 2014 by Rory Cumming, Inspector of Mines-Electrical, and s.22  
s.22 The following orders were written pursuant to 5.1.1 of the Health, Safety and Reclamation Code:

#### 4.2.1 Mine plans, M421 Use of electricity in mines

##### 4.2.1.1

Each mine in which electricity is used shall have a plan or single-line diagram showing the

(a) relative location of all fixed electrical distribution equipment;

(b) routes, properly noted and referenced, of all fixed power distribution feeders; and

(c) rating of all fixed electrical distribution equipment.

##### 4.2.1.2

The plans and diagrams specified in Clause 4.2.1.1 shall be regularly reviewed and updated at a frequency not less

### MANAGERS RESPONSE OF ACTION TAKEN

Rory Cumming

Inspector of Mines, Electrical

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Signature – Inspector of Mines

Signature – Manager

Date of Inspection: 8/14/2014

Copies To Jerrold Jewsbury

Dated: \_\_\_\_\_, 20\_\_\_\_

## INSPECTION ORDERS

## MANAGERS RESPONSE OF ACTION TAKEN

than that required by the authority having jurisdiction.

**Note:** *Where the authority having jurisdiction does not specify a frequency for review and updating, plans and diagrams should be reviewed and updated at least annually and after any significant change to the electrical system.*

During the inspection it was noted that a single-line drawing was not posted in electrical rooms. The manager shall produce up-to-date engineered drawings that satisfy this code within 21 days.

#### **4.3.3.3 Protection of cables, M421-11 Use of electricity in mines**

##### **4.3.3.3.1**

Cables shall be routed to avoid damage. For surface applications, cables shall be kept visible by being mounted on suitable markers at regular intervals throughout the cable route. In surface applications or wet environments, cable couplers shall be suitably supported off the ground (or mine floor) and at an elevation to prevent the ingress of moisture.

During the inspection it was noted that the power cables were poorly routed. The manager shall immediately route all power cables to avoid workers walking on them, rock fall, water and vibration in order to avoid damage.

#### **5.4.2.2 Locking and Tagging M421-11, Use of electricity in Mines**

Each circuit operating at a voltage exceeding 300 V, or each motor circuit fed from a service panel at a voltage exceeding 100 V, shall provide for locking and tagging of the disconnecting means.

During the inspection it was noted that the generator did not have a lock-out means.

The manager shall immediately provide a means to lock out the main switch at the generator.

#### **4.11 Lock-Out Procedures, Health, Safety and Reclamation Code**

##### **4.11.1**

(1) The manager shall develop a lock-out procedure which includes but, is not limited to, the requirements of section 4.11.2 to section 4.11.7 inclusive, and he shall ensure that all persons required to lock-out machinery or equipment are adequately trained in the procedure and that a written copy of it is made available to them.

During the inspection it was noted that a lock-out policy

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>was not posted and lock-out tags were not found. The manager shall immediately comply with the <u>full</u> requirements of 4.11.</p> <p><b>4.4.2 Quick-connect cable couplers</b></p> <p><b>4.4.2.1</b></p> <p>A quick-connect coupler used to join portable power cables or a cable and a flange-mount receptacle, operating at a voltage exceeding 150 V to ground, shall have</p> <ul style="list-style-type: none"> <li>(a) a mechanical fastening arrangement to join the coupler, with a tensile strength greater than that of the portable power cable;</li> <li>(b) strain-relief devices suitable for the intended portable power cable;</li> <li>(c) a means to prevent the ingress of moisture;</li> <li>(d) a means to mechanically lock the coupler where the circuit voltage exceeds 750 V;</li> <li>(e) a pin arrangement such that the <ul style="list-style-type: none"> <li>(i) ground conductor makes before and breaks after the phase conductors; and</li> <li>(ii) ground-check circuit makes after and breaks before the phase conductors; and</li> </ul> </li> <li>(f) ground-fault protection and ground-conductor monitoring at the source of supply.</li> </ul> <p><b>4.4.2.2</b></p> <p>Notwithstanding Clause 4.4.2.1, if a disconnect switch is mechanically or electrically interlocked with a receptacle for a portable power cable plug, and if quick-connect couplers are not used downstream, ground-fault protection and ground-conductor monitoring shall not be required.</p> <p>During the inspection it was noted that there were quick-connect couplers used on power cable connecting the trailer. The manager shall remove all quick-connect couplers that do not comply with this code within 7 days.</p> <p><b>4.3.3 Portable power cables (usage), M421, Use of Electricity in Mines</b></p> <p><b>4.3.3.1 Cable fittings</b></p> <p>Cables shall enter metal frames of motors, splice boxes, and electric compartments only through acceptable termination fittings. Portable power cables shall be secured to machines to protect the cables from damage and prevent strain on the electrical connections.</p> <p>During an inspection of the power van junction boxes for the cone motors and other equipment, it was noted that power cables were consistently poorly terminated. The manager shall have all cable properly terminated, complete with cable connectors, within 7 days.</p>	

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN

## Hendrickson, Glen MEM:EX

---

**From:** Hendrickson, Glen MEM:EX  
**Sent:** Tuesday, August 26, 2014 9:47 PM  
**To:** 'crokosh@valleyblacktop.ca'  
**Subject:** Inspection Report  
**Attachments:** 39556\_Inspection\_Report.doc

Corey,

Please find the attached inspection report from my inspection of the Westside Pit, Saturday August 23<sup>rd</sup> 2014. You can use the word document to add your comments and provide your response to me within 15 days as required by the code.

Regards,  
Glen



Ministry of  
Energy and Mines

Province of British Columbia  
**MINISTRY OF ENERGY AND MINES**  
**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 39556  
File: 18080-02-09  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 5  
Orders H&S: 4 RECL: 1  
Stop Work: 0

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**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Pit, crusher, conveyors, stockpiles

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**Persons Contacted**

MANAGEMENT

OHS COMMITTEE

WORKERS s.22

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A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

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**INSPECTION ORDERS**

The author, Glen Hendrickson visited the Westside Pit with the intention of observing dust conditions in response to public complaints. The conditions were mostly sunny and 24 degrees centigrade with light wind from the West. The roads were noted to be wet. Dusty conditions were not noted.

An inspection of the stockpiles revealed that several of the marked stockpiles were treated with a binder that has created a crust on the stockpiles that is limiting entrainment of dust. There was one active stockpile that was not treated and minor amounts of dust were being produced in oversteepened sections where raveling was occurring.

The plant was not active during the inspection and no loading or hauling of gravel was occurring during the time of the inspection. During the inspection the crusher was down for maintenance on the cone crusher.

**MANAGERS RESPONSE OF ACTION TAKEN**

---

Glen Hendrickson

Senior Inspector of Mines - Permitting

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 8/23/2014

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_



INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>The following contraventions of the code were noted:</p> <p>SECTION :4.4.7 (2) (A) Un-secured gas cylinders were noted. All gas cylinders not in use shall be secured in an upright position immediately.</p> <p>SECTION :4.11.2 (1) While maintenance on the cone crusher was ongoing it was noted that the main power source was off but not locked and tagged out. The Manager shall ensure that all staff are trained on the use of the posted lockout procedure and that this procedure is followed. (immediately)</p> <p>SECTION :4.4.2      Moving Parts of Machinery It was noted that several pinch points were not effectively guarded. Snow fencing is not considered to be an effective guard. The Manager shall ensure that effective guards are installed within <b>seven days</b> as per 4.4.2.</p> <p>SECTION :1.8.2      Worker's Responsibility It was noted that several employees were not wearing personal protective equipment (hard hats and safety glasses). Later in the inspection it was noticed that hard hats were in use, it is the responsibility of each worker to ensure they wear appropriate PPE.</p> <p>SECTION :2.3.7      Spills A deisel spill was noted at the enviro-tank. Though spill pads were down, the spill had not been treated. The Manager shall ensure spills are cleaned up as soon as possible and contaminated material taken off site for proper disposal immediately.</p>	

Date of Inspection

8/23/2014

Initials



(Inspector)

Initials



(Manager)



Ministry of  
Energy and Mines

**Province of British Columbia**  
**MINISTRY OF ENERGY AND MINES**  
**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 39556  
File: 18080-02-09  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0 / 5  
Orders H&S: 4 RECL: 1  
Stop Work: 0

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Pit, crusher, conveyors, stockpiles

**Persons Contacted**

MANAGEMENT

OHS COMMITTEE

WORKERS s.22

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

The author, Glen Hendrickson visited the Westside Pit with the intention of observing dust conditions in response to public complaints. The conditions were mostly sunny and 24 degrees centigrade with light wind from the West. The roads were noted to be wet. Dusty conditions were not noted.

An inspection of the stockpiles revealed that several of the marked stockpiles were treated with a binder that has created a crust on the stockpiles that is limiting entrainment of dust. There was one active stockpile that was not treated and minor amounts of dust were being produced in oversteepened sections where raveling was occurring.

The plant was not active during the inspection and no loading or hauling of gravel was occurring during the time of the inspection. During the inspection the crusher was down for maintenance on the cone crusher.

**MANAGERS RESPONSE OF ACTION TAKEN**

Glen Hendrickson

Senior Inspector of Mines - Permitting

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 8/23/2014

Copies To

Signature - Inspector of Mines

Signature - Manager

Dated: Sept. 03, 20 14

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>The following contraventions of the code were noted:</p> <p>SECTION :4.4.7 (2) (A) Un-secured gas cylinders were noted. All gas cylinders not in use shall be secured in an upright position immediately.</p> <p>SECTION :4.11.2 (1) While maintenance on the cone crusher was ongoing it was noted that the main power source was off but not locked and tagged out. The Manager shall ensure that all staff are trained on the use of the posted lockout procedure and that this procedure is followed. (immediately)</p> <p>SECTION :4.4.2 Moving Parts of Machinery It was noted that several pinch points were not effectively guarded. Snow fencing is not considered to be an effective guard. The Manager shall ensure that effective guards are installed within <b>seven days</b> as per 4.4.2.</p> <p>SECTION :1.8.2 Worker's Responsibility It was noted that several employees were not wearing personal protective equipment (hard hats and safety glasses). Later in the inspection it was noticed that hard hats were in use, it is the responsibility of each worker to ensure they wear appropriate PPE.</p> <p>SECTION :2.3.7 Spills A deisel spill was noted at the enviro-tank. Though spill pads were down, the spill had not been treated. The Manager shall ensure spills are cleaned up as soon as possible and contaminated material taken off site for proper disposal immediately.</p>	<p><i>All unused gas cylinders have been secured in the upright position.</i></p> <p><i>The posted lockout procedure was reviewed at the next tailgate meeting and will continue to be followed and enforced.</i></p> <p>The snow fencing has been removed and replaced with proper free standing metal fencing to ensure all pinch points are guarded effectively.</p> <p>The crew has been reminded that there are no exceptions when it comes to proper ppe. This issue was also focused on by the crushing foreman at the next tailgate meeting.</p> <p>The contaminated material has been cleaned up and all future spills will be treated in a quick and effective manner.</p>

Date of Inspection

8/23/2014

Initials

(Inspector)

Initials

CR

(Manager)



Ministry of  
Energy and Mines

**Province of British Columbia**  
**MINISTRY OF ENERGY AND MINES**  
**Report of Inspector of Mines**  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 58476.00  
File: 18080-02-09  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 0.0 / 0.0  
Orders H&S: 1 RECL: 1  
Stop Work: 0.00

### Inspection Report

NAME OF MINE	Westside Pit	LOCALITY	
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Sand and Gravel Pit

### Persons Contacted

MANAGEMENT	Corey Rokosh
OHS COMMITTEE	0
WORKERS	1

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

### MANAGERS RESPONSE OF ACTION TAKEN

On September 22<sup>nd</sup>, 2015 Gerald Crawford and I inspected the Westside Pit, and met the Mine Manager Corey Rokosh in the morning. It was cool, clear and there was dew from the overnight frost, and no wind.

The entrance was well signed and had a gate at the access road. On site the Mine Manager readily produced the MERP, Mines Act Permit, NoW, dust management plan, archeological chance find procedure, and previous orders. This was all posted in a small building next to the weight scale. Our general impression of the site was clean and well organized. The un-mined logged area had been reseeded with grasses and clover. Surrounding the outer edge of the pit, top soil had been stockpiled forming a berm. A new section of the berm with fresh toil soil to the northwest of the pit was steep and had not been seeded. We were informed that this was due to a fire to their dozer, so the final contouring could not be finished at present. Corey Rokosh said this had not been reported as a dangerous occurrence, we told him to report this to Jerry Jewsbury. He will send their

Nadia Bruemmer

Inspector of Mines, Permitting

1902 Theatre Road Cranbrook BC V1C 7G1

Address

Date of Inspection: 2015/09/22

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>report to Jerry.</p> <p>Crushing and sorting was occurring at the time of the inspection. Corey confirmed they were only working Monday to Friday from 7AM to 5PM, and occasionally only hauling product on Saturdays. Four camper trailers were on site for the crushing personnel, and they were onsite since September 8<sup>th</sup> and would be removed by September 25<sup>th</sup>, when the crushing would cease, and crusher removed from site. The crushing plant was owned by a contractor and does have spray bars on it, however when we were onsite they were not in use, but would be used later on in the day. It was noisy adjacent to the pit berm, but the sound diminished once you stepped away from the berm. There was a small amount of dust coming off some of the stockpiles. I checked the surface of the sand stockpile (finest sorted material onsite) and it had a calcium crust. We discussed keeping the stockpiles within the confines of the pit to reduce dust and noise.</p> <p><b>INSPECTION ORDERS</b></p> <p><b>RECLAMATION PLAN</b></p> <p>The Mine Manager must submit a detailed site specific progressive reclamation plan will be submitted by April 31<sup>st</sup>, 2016. This reclamation plan will cover the planned life of the mine, this will include seeding and erosion control of topsoil.</p> <p><b>REPORTING OF DANGEROUS OCCURENCES</b></p> <p>As per section 1.7.1 (b) and 1.7.3.9 in the Health, Safety and Reclamation Code, the Mine Manager will report the recent fire as a Dangerous Occurrence to the local Health and Safety Inspector, Jerrold Jewsbury by Friday September 25<sup>th</sup>, 2015.</p>	

Date of Inspection

2015/09/22

Initials



(Inspector)

Initials

\_\_\_\_\_

(Manager)

## Respirable Crystalline Silica (Quartz)

Silica is the basic component of sand and rock, and the most abundant type of crystalline silica is quartz. Mining activities such as crushing, loading, hauling, drilling, dumping rock, dry sweeping or pressurized air blowing, as well as environments associated with jobs such as ground-person, maintenance or quality control, may place workers at risk of exposure to silica dust. Silicosis is a disease caused by the prolonged breathing of crystalline silica dust. Fine particles are inhaled and become deposited in the lungs causing thickening and scarring of the lung tissue, which restricts the lungs' ability to extract oxygen from the air. Damage can be permanent and symptoms of the disease may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- **Chronic silicosis**—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations
- **Accelerated silicosis**—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations
- **Acute silicosis**—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, a worker may experience: **Shortness of breath, severe cough, weakness**

Symptoms can worsen over time and can lead to death. Exposure to crystalline silica has also been linked to lung cancer, kidney disease, reduced lung function, and other disorders. Illnesses associated with silicosis can be prevented by controlling workers' exposure to dust containing crystalline silica.

The Health, Safety and Reclamation Code for Mines in B.C. has an occupational exposure limit of 0.1 milligrams per cubic metre ( $\text{mg}/\text{m}^3$ ), which is the maximum amount of crystalline silica to which workers may be exposed during an eight-hour work shift. Current exposure guidelines adopted by ACGIH® and WorkSafe BC use an exposure limit of 0.025  $\text{mg}/\text{m}^3$  (8-hour TWA) for crystalline silica. Crystalline silica is also classified as a human carcinogen; therefore exposures must be kept as low as reasonably achievable.

## Method

Personal exposure monitoring for crystalline silica can be performed by measuring the respirable fraction of dust (particles with a diameter less than 4 micrometers) in an employee's breathing zone for the duration of a full-shift. The sampling train should be made up of a size selective cyclone and filter cassette assembly connected to a personal sampling pump that draws air through the sampling head at a steady flow rate. The filter cassette is then analyzed using gravimetric analysis to determine the respirable particulate concentration, and x-ray diffraction for respirable quartz concentration. Employees should be interviewed at the end of shift to characterize their daily tasks, equipment used, dust sources, respiratory protection use, including any controls in place to reduce dust exposure. Personal tasks and exposure characteristics are important for interpretation and analysis of the data.

## Recommendations

Job tasks should be designed in a manner that minimizes dust exposure. Applying water with water trucks or filled loader buckets during dry, hot, dusty conditions will help suppress dust; this is especially important in areas with high activity (main roads) and where employees are working. Field sprinklers and long range hoses (fire hose) can also be used in areas requiring dust suppression. It is also possible to prevent airborne dust through applying a dust suppression chemical spray where appropriate. Vehicle cabs are effective at reducing dust exposure, however it is important cabs are regularly maintained and have working A/C, good seals, cab pressurization and filtration, and are operated with doors/windows closed.

## Respiratory Protection Program

Respiratory Protection Program should meet the requirements of *CSA Standard Z94.4.11 Selection, Use and Care of Respirators*, including:

- Statement of purpose, roles and responsibilities of individuals administering the program
- Hazard assessment
- Selection of appropriate respiratory protection
- Respirator fit-testing

- Training for respirator wearers, including proper use of respirators, as well as inspection, maintenance, cleaning and storage of respirators
- Medical assessment of respirator wearers
- Respirator program evaluation
- Record keeping of respirator program documentation (e.g., fit tests, training records, hazard assessments)

## Noise Exposure

Noise is a serious hazard in many workplaces. Excessive noise over time may cause permanent hearing loss in workers. Exposure to high levels of noise in the workplace, may also create physical and psychological stress, reduce productivity, interfere with communication, and contribute to accidents and injuries by making it difficult to hear moving equipment, other workers, and warning signals. The maximum permissible noise exposure limits refer to sound pressure levels and durations of exposure that represent conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse effect on their ability to hear and understand normal speech. The HSRC occupational noise limit for an 8 hour shift is 85 dBA, and 84 dBA for a 10 hour shift (HSRC Part 2: Table 2-2).

*Data interpretation definitions:* Sample result in Leq is the equivalent steady sound level of a noise energy-averaged over the sampling period. Noise dose is a value relative to 100% (of an “acceptable” amount of noise; a dose >100% exceeds the permissible limits) for the work shift (10-hours).

## Methods

Personal exposure monitoring for noise can be performed using personal noise dosimeters. A microphone is placed in the workers hearing zone and worn for the duration of a full shift. Equipment should be calibrated prior to starting and stopping the sample. Employees should be interviewed at the end of shift to characterize their daily tasks, equipment used, noise sources, hearing protection use, including any controls in place to reduce noise exposure.



## Recommendations

A hearing conservation program with all its elements should be in place when workers are exposed to noise at or above the maximum permissible noise exposure limit. A hearing conservation program is a systematic multi-element plan designed to protect workers' hearing, and should include the following elements:

### 1. Engineering and administrative noise control

- Engineering noise-control measures should be implemented to reduce worker noise exposures to below regulated limits, and to promote acoustical conditions consistent with worker safety, comfort and efficiency.
- Administrative noise-control measures comprise purchasing quieter equipment (replace obsolete equipment with quieter models), and the reassignment of work tasks to reduce the time spent in noisy work positions.

### 2. Worker education

- Workers, supervisors and management must be educated about noise.
- Promote an understanding of noise in the workplace, the associated risk of hearing loss, the company hearing conservation program, and the responsibilities of all involved.
- Information on the performance, use and limitations of hearing protectors should be included.
- Education should be updated periodically.

### 3. Hearing protection

- If engineering and administrative controls are not adequate, hearing protection may be necessary.
- The protection required by each worker must be carefully assessed for appropriateness.
- All employees should be trained on the fit, care and use of the hearing protection, as well as be informed of the importance of wearing the hearing protectors in the work place. It is especially important to train employees on proper fit of hearing protection. Hearing protection has a noise reduction rating (NRR) that applies only when properly

fitted (ex. Ear plugs fully inserted into ear canal). Without a proper fit, ears may not be protected against high noise levels.

4. Audiometric monitoring

- As per the HSRC, noise-exposed workers shall be offered the opportunity to undergo audiometric testing
- Results of audiometric monitoring are confidential and will be discussed with a medical professional if there is a concern

5. Sound survey: comprehensive survey of the noise exposures of workers and of workplace noise levels.

- Determine risky job categories, which workers require protection and the amount of protection.
- Identify areas where noise levels may result in speech communication problems, danger due to inaudibility or warning signals, etc.
- Identify dominant sources and determine the acoustical characteristics of the noise in preparation for engineering controls.
- Sound surveys should be repeated periodically (eg annually) or whenever changes to the workplace suggest engineering and administrative controls and hearing protection requirements should be reviewed.

**Table 2-3**

<b>Maximum Equivalent Noise Level, dBA</b>	<b>Required Rating of Hearing Protector</b>	
	<b>Class A, B or C †</b>	<b>NRR ‡</b>
Leq less than 85 dBA	None required	None required
Leq up to 89 dBA	Class C	up to 16
Leq up to 95 dBA	Class B	at least 17
Leq up to 105 dBA	Class A	at least 24
Leq up to 110 dBA	Class A plug plus Class A or B muff	At least 24 plug ins At least 17 muff
Leq more than 100 dBA	As above, with limited exposure	As above, with limited exposure

† Canadian Standards Association standard Z94.2-94.

‡ Noise Reduction Rating (NRR) subject to Canadian Standards Association standard Z94.2-94 frequency requirements.

Thank you for your participation in this assessment, please share report with all employees.

Feel free to contact me for further information, or if you have any questions or concerns.

Sincerely,

Haley Kuppers, M.Sc.

Inspector of Mines, Occupational Health Specialist

Ministry of Energy and Mines

1810 Blanshard Street, Victoria, B.C. V8W 9N3

Phone: 250-387-4808 | Cell: 778-677-0624 | Fax: 250-952-0491

Email: [haley.kuppers@gov.bc.ca](mailto:haley.kuppers@gov.bc.ca) | Website: [www.em.gov.bc.ca](http://www.em.gov.bc.ca)



Province of British Columbia  
**Ministry of Natural Resource  
Operations**

Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 19997  
File: 18080-02-02  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 6 / 0  
Orders H&S: 5 RECL: 0  
Stop Work: 0

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd.	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Roy Rokosh	AREAS INSPECTED	Mine site

**Persons Contacted**

MANAGEMENT G. Harris

OHS COMMITTEE

WORKERS

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

SECTION :4.4.16	Conveyor Belts
SECTION :4.4.9	Lifting Devices
SECTION :4.4.7	Welding and Burning Equipment
SECTION :1.9.1	General
SECTION :2.2.1	Workplace to Be Hazard Free

**MANAGERS RESPONSE OF ACTION TAKEN**

*DO NOT MODIFY THIS TEXT*

Bruce Milligan

Senior Inspector of Mines, Permitting

2nd Floor, 42 - 8th Avenue South Cranbrook BC V1C 2K3

Address

Date of Inspection: 3/14/2011

Copies To

Signature – Inspector of Mines

Signature – Manager

Dated: \_\_\_\_\_, 20\_\_\_\_



Ministry of  
Energy and Mines

Province of British Columbia  
**Ministry of Energy  
and Mines**  
Report of Inspector of Mines  
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.: 39097  
File: 18080-02-XX  
Mine No.: 1620313  
Permit No.: G-4-188  
Emp/Cont: 5 / 0  
Orders H&S: 6 RECL: 0  
Stop Work: 0

**Inspection Report**

NAME OF MINE	Westside Pit	LOCALITY	51.022, -118.221 Revelstoke
OWNER/OPERATOR	Interoute Construction Ltd. dba Valley Blacktop	ADDRESS	PO Box 9297 Revelstoke BC V0E 3K0
MANAGER	Corey Rokosh	AREAS INSPECTED	Pit, Power van, crusher equipment

**Persons Contacted**

MANAGEMENT

OHS COMMITTEE

WORKERS s.22

A copy has been forwarded to the Joint Occupational and Safety Committee and the union as applicable. The Mine manager shall complete the right hand column noting specific corrective actions taken by a specified date, and return a copy to the Inspector within 15 days of receiving the report. Further the manager shall post a copy to the bulletin board, to be replaced by a copy showing the manager's response. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

**INSPECTION ORDERS**

Inspections were conducted on August 14, 2014 by Rory Cumming, Inspector of Mines-Electrical, and s.22  
s.22 The following orders were written pursuant to 5.1.1 of the Health, Safety and Reclamation Code:

**4.2.1 Mine plans, M421 Use of electricity in mines**

**4.2.1.1**

Each mine in which electricity is used shall have a plan or single-line diagram showing the

- (a) relative location of all fixed electrical distribution equipment;
- (b) routes, properly noted and referenced, of all fixed power distribution feeders; and
- (c) rating of all fixed electrical distribution equipment.

**4.2.1.2**

The plans and diagrams specified in Clause 4.2.1.1 shall be regularly reviewed and updated at a frequency not less

**MANAGERS RESPONSE OF ACTION TAKEN**

Rory Cumming

Inspector of Mines, Electrical

1902 Theatre Road Cranbrook BC VIC 7G1

Address

Date of Inspection: 8/14/2014

Copies To Jerrold Jewsbury

Signature - Inspector of Mines

Signature - Manager

Dated: August 26, 20 14

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>than that required by the authority having jurisdiction.  <b>Note:</b> <i>Where the authority having jurisdiction does not specify a frequency for review and updating, plans and diagrams should be reviewed and updated at least annually and after any significant change to the electrical system.</i></p>	
<p>During the inspection it was noted that a single-line drawing was not posted in electrical rooms. The manager shall produce up-to-date engineered drawings that satisfy this code within 21 days.</p>	<p><i>Single Line diagram to be drawn and posted in electrical room by September 11, 2014</i></p>
<p><b>4.3.3.3 Protection of cables, M421-11 Use of electricity in mines</b></p>	
<p><b>4.3.3.3.1</b>  Cables shall be routed to avoid damage. For surface applications, cables shall be kept visible by being mounted on suitable markers at regular intervals throughout the cable route. In surface applications or wet environments, cable couplers shall be suitably supported off the ground (or mine floor) and at an elevation to prevent the ingress of moisture.</p>	
<p>During the inspection it was noted that the power cables were poorly routed. The manager shall immediately route all power cables to avoid workers walking on them, rock fall, water and vibration in order to avoid damage.</p>	<p>Power Cables were rerouted August 14<sup>th</sup>, 2014 to ensure no contact with workers, rock fall, water, or vibration. Rubber was added where crossing was required and dunnage was put underneath to make sure no water contact.</p>
<p><b>5.4.2.2 Locking and Tagging M421-11, Use of electricity in Mines</b></p>	
<p>Each circuit operating at a voltage exceeding 300 V, or each motor circuit fed from a service panel at a voltage exceeding 100 V, shall provide for locking and tagging of the disconnecting means.</p>	
<p>During the inspection it was noted that the generator did not have a lock-out means.  The manager shall immediately provide a means to lock out the main switch at the generator.</p>	<p>A mechanical lock out system will be mounted on main breaker by August 29th.</p>
<p><b>4.11 Lock-Out Procedures, Health, Safety and Reclamation Code</b></p>	
<p><b>4.11.1</b>  (1) The manager shall develop a lock-out procedure which includes but, is not limited to, the requirements of section 4.11.2 to section 4.11.7 inclusive, and he shall ensure that all persons required to lock-out machinery or equipment are adequately trained in the procedure and that a written copy of it is made available to them.</p>	<p>A lock out procedure specifically for liner and jaw plate changes has been created to supplement the company standard lock out tag out procedures. These procedures will be posted by August 28, 2014. New locks and keys have been purchased.</p>
<p>During the inspection it was noted that a lock-out policy</p>	

Date of Inspection

8/14/2014

Initials

(Inspector)

Initials

CR

(Manager)

INSPECTION ORDERS	MANAGERS RESPONSE OF ACTION TAKEN
<p>was not posted and lock-out tags were not found. The manager shall immediately comply with the <u>full</u> requirements of 4.11.</p> <p><b>4.4.2 Quick-connect cable couplers</b></p> <p><b>4.4.2.1</b></p> <p>A quick-connect coupler used to join portable power cables or a cable and a flange-mount receptacle, operating at a voltage exceeding 150 V to ground, shall have</p> <ul style="list-style-type: none"> <li>(a) a mechanical fastening arrangement to join the coupler, with a tensile strength greater than that of the portable power cable;</li> <li>(b) strain-relief devices suitable for the intended portable power cable;</li> <li>(c) a means to prevent the ingress of moisture;</li> <li>(d) a means to mechanically lock the coupler where the circuit voltage exceeds 750 V;</li> <li>(e) a pin arrangement such that the             <ul style="list-style-type: none"> <li>(i) ground conductor makes before and breaks after the phase conductors; and</li> <li>(ii) ground-check circuit makes after and breaks before the phase conductors; and</li> </ul> </li> <li>(f) ground-fault protection and ground-conductor monitoring at the source of supply.</li> </ul> <p><b>4.4.2.2</b></p> <p>Notwithstanding Clause 4.4.2.1, if a disconnect switch is mechanically or electrically interlocked with a receptacle for a portable power cable plug, and if quick-connect couplers are not used downstream, ground-fault protection and ground-conductor monitoring shall not be required.</p> <p>During the inspection it was noted that there were quick-connect couplers used on power cable connecting the trailer. The manager shall remove all quick-connect couplers that do not comply with this code within 7 days.</p> <p><b>4.3.3 Portable power cables (usage), M421, Use of Electricity in Mines</b></p> <p><b>4.3.3.1 Cable fittings</b></p> <p>Cables shall enter metal frames of motors, splice boxes, and electric compartments only through acceptable termination fittings. Portable power cables shall be secured to machines to protect the cables from damage and prevent strain on the electrical connections.</p> <p>During an inspection of the power van junction boxes for the cone motors and other equipment, it was noted that power cables were consistently poorly terminated. The manager shall have all cable properly terminated, complete with cable connectors, within 7 days.</p>	<p>Locking collars have been inspected and will be replaced where they have been deemed to be unsatisfactory.</p> <p>Power cables that were determined to be poorly terminated and will be outfitted with extra support by August 28, 2014 to ensure reduced strain on the terminal hardware.</p>

Date of Inspection

8/14/2014

Initials

(Inspector)

Initials



(Manager)

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