

Report of Inspector of Mines - Reclamation

Issued pursuant to Section 15 of the Mines Act

Mine Name/Number	Willow Creek Mine 0900118	Visit Date	2019-07-15
Type of Mining	CS. COAL - SURFACE	Location	
Latitude/Longitude	55.61984, -122.22384	Northing/Easting/Zone	548881, 6164043, 10U
Manager	Dudley Miller	Permittee	Conuma Coal Resources Limited
Phone Numbers	(250) 242 3764	Address	PO Box 2140 Tumbler Ridge BC V0C 2W0
Email			

Inspector Sean Shaw, INSPECTOR **Accompanying Inspector** Kris Bailey, Inspector;

Address 350-1011 4th Avenue
Prince George, B.C. V2L 3H9

In Attendance

Copies to Hermanus Henning, Chief Inspector
Lowell Constable, A/Director of Technical Operations, MMO
Brenda Bailey, A/Manager, Permitting and Geoscience, MMO
Heather Narynski, A/Manager, Geotechnical Engineering, MMO
Jennifer McConnachie, Manager, Reclamation, MMO
Kris Bailey, Health and Safety Inspector

The Mine Manager is required to provide a written response within 15 days of receiving the inspection report. The Manager's response must outline the remedial steps taken by a specified date and the work still outstanding. A copy must be provided to the inspector, and in the case of health and safety matters, the occupational health and safety committee and the local union. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

Introduction

An inspection of Willow Creek Mine was conducted on July 15, 2019, by Sean Shaw, Geoscience Inspector. Concurrently, an inspection was conducted by Kristopher Bailey (Health and Safety Inspector). A Health and Safety inspection report will be issued under separate cover.

The following representatives from Conuma Coal Resources Ltd. (Conuma) accompanied Inspectors: Dickson Atuke (Environmental Manager), Ian Squair (Engineer Manager) Allen Baron (Senior Mine Engineer) and Candice Schmidt (OHSC Representative). Dudley Miller (Mine Manager) attended the opening and close-out meetings. [REDACTED] (Environmental Sampler) and [REDACTED] (Environmental Technician) joined for a portion of the inspection.

Access to the site is from Highway 97, approximately 45 km southwest of Chetwynd, BC. The weather conditions during the inspection were partly sunny and approximately 20 C. The pre- and post-inspection meetings were held in Conuma's operations centre, located approximately 1 km from the mine site. The pre-inspection meeting started at 10:00 am and the inspection closed at 3:00 pm.

The purpose of the inspection was to assess the status of the site from an environmental perspective, gain an understanding of the current progress of the mine plan implementation and visit areas of the site currently subjects of

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amendment applications. The following site facilities were included in the inspection tour:

- 4N1 Pit
- 4N2 Pit
- North Waste Rock Dump
- 760 Dump CCR Encapsulation Area
- Proposed 4N1 Pit Haul Road Location
- North Pond
- X Pond
- South Pond
- WC5 Sampling Location
- FCCR CCR Pile
- Coal Stockpile Area

Area Inspected 1: Active Mining Areas (4N1/4N2 Pits, North Waste Rock Dump)

Latitude/Longitude:

Northing/Easting/Zone:

Active mining was occurring in the 4N1 and 4N2 Pits. The 4N1 Pit is currently being mined at the 686 m elevation and will be mined down to approximately 578 m over the next two to three years. The 4N2 pit will eventually be connected to the 4N1 Pit at approximately the 750 m elevation.

Waste rock was being hauled and placed near the 1140 m elevation of the North Waste Rock Dump. The proposed 760 Dump Coarse Coal Reject (CCR) Encapsulation area was observed from an adjacent bench. Site staff provided a general overview of the proposed mine plan amendment, which is currently being reviewed by EMPR.

Coal was being actively hauled from the Brule Mine by dump trucks along the Falling Creek Connector Road, at a rate of approximately 9,000 tonnes per day. Coal from both mines was being actively stockpiled adjacent to the Mill.

Area Inspected Attachments:



Photo 1 - Active mining in the 4N2 Pit (middle right) and 4N1 Pit (middle left),

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viewed from the North Waste Rock dump looking northeast.

Area Inspected 2: Proposed 4N1 Pit Haul Road

Latitude/Longitude:

Northing/Easting/Zone:

The proposed 4N1 Pit Haul Road was observed from the western point where it would be tied into the existing road. Site staff gave an overview of its general alignment to the Inspector.

A discussion of the importance of a Sediment and Erosion Control Plan to address the installation and operation of the road, in the absence of a runoff collection ditch adjacent to the roadway was discussed during the inspection. Conuma is currently clarifying the long-term plan with the proposed road. It is currently approved as a temporary road that would need to be removed before the end of operations.

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Photo 2 - Proposed 4N1 Pit haul road area looking east. The existing east/west diversion ditch conveys water from the pit the North Pond.

Area Inspected 3: North Pond

Latitude/Longitude:

Northing/Easting/Zone:

The North Pond was observed from the outlet located on the western edge. A propane cannon was placed nearby, one of two in use, in an attempt to keep birds from using the pond. Site staff indicated that a plan is being developed to dredge the pond in 2019 or 2020, which will require equipment that can access the pond without damaging the liner. No issues with the North Pond were identified during the inspection.

Area Inspected 4: X Pond

Latitude/Longitude:

Northing/Easting/Zone:

An overview of the water management associated with X Pond was provided by site staff. The ponds catchment area includes the northside of the 7P Dump and the South Waste Rock Dump. The pond discharges to Tributary 1 and is observed to flow year round.

A significant build up of sediment was observed adjacent to the pond inlet. Site staff indicated that attempts in 2018 to dredge the pond proved ineffective. A second attempt to dredge the pond will be undertaken later in 2019.

During the inspection, a collection of old pipes were observed between the road and the sampling point. One of the pipes extended down the slope of the X Pond discharge point, terminating within the bed of the waterway approximately 5 m down gradient. During the close-out meeting, site staff indicated the the pipes would be removed within the next week.

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Photo 3 - The outlet of X Pond. Samples are collected from the foot bridge.

Area Inspected 5: South Pond

Latitude/Longitude:

Northing/Easting/Zone:

The inflow and outflow areas of the South Pond were observed. Site staff indicated that the pond berms would be raised by approximately 0.5 m to the permitted maximum height, based on the recommendation of the Engineer of Record. The invert elevation of the outflow would remain unchanged as a result of this work.

Area Inspected 6: FCCR CCR Pile

Latitude/Longitude:

Northing/Easting/Zone:

The inspector discussed the continued non-compliance associated with the FCCR Coarse Coal Reject (CCR) pile with site staff. It is understood the Conuma intends to submit a permit amendment application within the next few months to address the outstanding 2017 Geoscience Inspection Order. EMPRs expectation is that the application will include the permanent disposal of the CCR material such that the long-term loadings risk to the environment is adequately addressed.

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Photo 4 - The FCCR CCR Pile looking west from the top of the pile.

Closure

You are reminded that, as per Section 15(6) of the Mines Act, your response is required within 15 days of receiving this report. In addition, Section 30 (1) of the Mines Act requires this Inspection Report to be posted in a conspicuous location at the mine site for 30 days.

Please feel free to contact the undersigned with any questions or comments.

Received by _____ on _____
[Mine Manager Name, Title] [Date]

Signature: _____