



**Coal Valley Resources Inc. – *Obed Mountain Mine***  
A Subsidiary of WESTMORELAND COAL COMPANY

**Obed Mountain Mine  
Wastewater Release  
Monthly Status Report for April 2014**

**May 7, 2014**

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## **1.0 MONTHLY STATUS REPORT – APRIL 2014**

On November 19, 2013, Alberta Environment and Sustainable Resource Development ("ESRD") issued Environmental Protection Order No. EPO-2013/34-CR, as amended (the "EPO"), to Coal Valley Resources Inc. ("CVRI") and Sherritt International Corporation in respect of the Obed Mountain Mine (the "Mine"). Oversight of the EPO transferred from ESRD to the Alberta Energy Regulator ("AER") in March 2014. CVRI became a subsidiary of Westmoreland Coal Company in April 2014. This Monthly Status Report has been prepared in accordance with clauses 39 and 40 of the EPO, which state the following:

*39. In addition to any other reporting required by this Order, the Parties shall submit to the Director on the first day of each month, commencing on December 1, 2013, a status report in writing that contains a summary of all activities undertaken in accordance with this Order in the previous month, and all activities that are planned for the next month (the "Monthly Status Reports").*

*40. The Monthly Status Reports shall be submitted to the Director until the Director advises otherwise.*

The reporting requirement for this Monthly Status Report was amended in an email from Jim Steele to CVRI dated December 5, 2013, which stated:

*Additionally, ESRD is in agreement with the company's request to adjust the due date for the monthly reports from the first day of the month to "no later than the 7th day of the month following the reporting period".*

## **2.0 EPO ACTIVITIES IN APRIL 2014**

### **2.1 Clause 3 – Immediate and Short-Term Sampling and Monitoring Plan**

CVRI submitted a revised version of the Immediate and Short-Term Sampling and Monitoring Plan on January 23, 2014. Included in the submission was a reply to the second round of ESRD's regulatory feedback. ESRD provided further regulatory feedback on January 31, 2014. CVRI's response, along with an updated plan, was submitted to ESRD on February 3, 2014. CVRI

received ESRD approval of the Immediate and Short-Term Sampling and Monitoring Plan on February 7, 2014. The approval included contingencies and revisions that required the Immediate and Short-Term Sampling and Monitoring Plan to be updated and resubmitted to ESRD by February 14, 2014. The amendments were made and the plan was resubmitted to ESRD on February 14, 2014. As described below, CVRI continues to monitor, collect and report on samples to ESRD on a weekly basis.

### **Surface Water Quality Sampling – April 2014**

- A rigorous surface water sampling program was completed weekly in accordance with the Immediate and Short-Term Sampling and Monitoring Plan (clause 5 of the EPO). The sampling program was completed by CVRI and Backwoods personnel. Training and QA/QC was conducted by Hatfield Consultants to ensure quality standards were being maintained. The sampling program included:
  - Near field surface water quality sampling at APC (Apetowun Creek), ATR-D1 (Downstream Athabasca at entrance of Sundance Provincial Park), ATR-CON (Athabasca River 1.5 km DS of Plante Creek), ATR-PLC (Athabasca River immediately downstream of Plante Creek), ATR-US (Athabasca River Upstream site at bridge), PLC-DS (Plante Creek downstream site) PLC-US (Plante Creek Upstream site), PLC-DS2 (Plante Creek immediately upstream of confluence with Athabasca), ATR-D2 (Athabasca River approximately 31.5 km downstream of its confluence with Plante Creek) until unsafe ice conditions prevented sampling.
- CVRI performed water sampling on the Mine site as required under the Mine's EPEA Approval. Tables 2 and 3 consolidate the requirements under the EPEA approval. This sampling program will run concurrent with the Immediate and Short-Term Sampling and Monitoring Plan summarized below in Section 3.1 EPO Planned Activities for May.

<b>Table 2: Obed Sampling and Monitoring Requirements During Pumping Operations</b>			
<u>Location</u>	<u>Requirements</u>	<u>Frequency</u>	<u>Notes</u>
Oldman Creek (OMC)	NTU, pH	2X/Day U/S and D/S while pumping	TSS samples collected when NTU>50
	Water Chemistry	1X/ week	
Baseline Creek (BLC)	NTU, pH	2X/Day D/S while pumping	TSS Samples collected when NTU>50
	Water Chemistry	1X/ week	
Pump Discharges	NTU, pH, Flow, Volume	Every 6 hours while pumping	Includes: MTP, ELP1, Pond 5. TSS samples are collected when NTU>50

<b>Table 3: Obed Regular On-Site Sampling and Monitoring Operations</b>			
<u>Location</u>	<u>Classification</u>	<u>Frequency</u>	<u>Requirements</u>
East Limb Pond 1 (ELP1)	Major Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates
East Limb Pond 2 (ELP2)	Major Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates
South Plateau Pond 1 (SPP1)	Major Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates
South Plateau Pond 2 (SPP2)	Major Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates
South Plateau Pond 3 (SPP3)	Major Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates
Main Tailing Pond (MTP)	Major Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates Monthly Water Chemistry
Pond 5	Minor Pond	Daily	3X/week for pH, TSS Daily for NTU Bi-weekly for Nitrates
Load-Out Settling Pond 2 (LSP2)	Minor Pond	Weekly	1X/week for pH, TSS, NTU Monthly for nitrates
Load-Out Settling Pond 3 (LSP3)	Minor Pond	Weekly	1X/week for pH, TSS, NTU Monthly for nitrates

## **2.2 Clauses 6-8 – Solids Recovery Plan**

The Solids Recovery Plan was first submitted to ESRD on November 29, 2013. CVRI submitted a revised version of the Solids Recovery Plan and a response to ESRD's regulatory feedback on January 29, 2014. ESRD provided a second round of regulatory feedback on January 31, 2014. CVRI's response, along with an updated Solids Recovery Plan, was submitted to ESRD on February 3, 2014. As requested, the February 3, 2014 submission of the Solids Recovery Plan included an additional soils table in Excel format. CVRI received ESRD approval of the Solids Recovery Plan on February 7, 2014. The approval of the Solids Recovery Plan included contingencies and revisions that required the Solids Recovery Plan to be updated and resubmitted to ESRD by February 14, 2014. The amended Solids Recovery Plan was resubmitted to ESRD on February 14, 2014.

CVRI has received feedback from the Department of Fisheries and Oceans ("DFO") and ESRD's Fisheries biologist identifying concerns related to sediment trap design, effectiveness of the traps and a contingency plan if the sediment traps are deemed to not be effective. The response was due March 10, 2014. CVRI submitted the additional information to ESRD and DFO on March 10, 2014 no additional concerns were raised by ESRD or DFO and approval to construct the the Sediment Traps was received pending approval under the Water Act. CVRI received approval under the *Water Act* on March 10, 2014, to construct the sediment traps as outlined in the approved Solids Recovery Plan.

The sediment traps are now completed and operational. The maintenance, inspection and operation plan for the sediment traps will be submitted to the AER on May 16, 2014.

## **2.3 Clause 15 – Interim Report**

As required under the EPO, CVRI submitted an interim report on visual observations and data recorded and collected, including preliminary data interpretations and conclusions (the "Interim Impacts Report"), regarding the impacts to receptors and habitats from the release of Mine wastewater as identified during implementation of the Impacts Assessment Plan. The Interim Impacts Report was submitted on January 17, 2014.

## **2.4 Clauses 11, 17 and 22**

CVRI developed and submitted a combined report on December 13, 2013 that responded to clauses 11, 17 and 22 of the EPO. ESRD provided comments on the combined report on February 10, 2014. The regulatory comments provided by ESRD requested that the Impact Assessment Plan, the Long-Term Sampling and Monitoring Plan and the Wildlife Mitigation Plan be resubmitted as individual plans by February 28, 2014.

On February 20, 2014, CVRI requested a seven day extension to the submission deadline to ensure the documents submitted met the individual plan requirements. The extension was granted by ESRD and the individual plans were submitted to ESRD on March 7, 2014.

CVRI submitted the Long-Term Sampling and Monitoring Plan, Wildlife Mitigation Plan and Impact Assessment Plan to ESRD on March 7, 2014. Supplementary Information Requests ("SIRs") were received from ESRD on March 25, 2014, with a response deadline of April 3, 2014. CVRI compiled the SIR responses and submitted the updated plans to the AER on April 3, 2014. No comments or feedback have been received as of May 7, 2014.

## **2.5 Clause 34 – Waste Management Plan**

On December 24, 2013, CVRI submitted a revision to the November 29, 2013 Waste Management Plan. The revision was completed based on feedback provided by ESRD. CVRI submitted a response to ESRD's regulatory feedback concerning the original version of the Waste Management Plan on December 24, 2013.

CVRI received approval of the Waste Management Plan on February 11, 2014. Included in the ESRD approval of the Waste Management Plan was a request to respond to outstanding questions and resubmit the plan by February 14, 2014. CVRI addressed the concerns and resubmitted the plan.

CVRI has collected and disposed of 3638 m<sup>3</sup> of recovered sediment to date. Based on field estimates, approximately 10% of the calculated volume is composed of ice and regional material

not associated with the deposited sediment. This information continues to be reported in the weekly EPO summaries.

## **2.6 Clause 37 - Wastewater Management Plan**

On December 23, 2013, CVRI submitted a revision to the November 29, 2013 Wastewater Management Plan. The revision was completed based on feedback provided by ESRD. CVRI submitted a response to ESRD's regulatory feedback concerning the original version of Wastewater Management Plan on December 23, 2013.

CVRI received approval for the Wastewater Management Plan on February 11, 2014. Included in the approval was a request to update ESRD as to the expected completion of the Medium Term Plan. CVRI provided an update to ESRD and submitted the Medium Term Plan (clause 37 of the EPO) to ESRD on February 28, 2014.

In accordance with the Medium Term Plan, CVRI completed the following submissions:

1. Geotechnical Information – March 17, 2014;
2. Causation Report and required data – March 18, 2014;
3. Application under the *Water Act* to Construct Red/Green Pit Dam, March 26, 2014;
4. Application under the *Coal Conservation Act* ("CCA") to Amend Licence C 2009-1 (Red/Green Pit Dam), March 26, 2014; and
5. Red/Green Perimeter Assessment Report March 31, 2014.

CVRI received SIRS from the AER under the CCA and Water Act to construct the Red/Green Pit Dam. CVRI is currently developing its response and plans to have the response submitted to the AER by May 16, 2014. A response deadline was not provided in the April 17, 2014 SIR communication.



### 3.0 PLANNED EPO ACTIVITIES FOR MAY 2014

#### 3.1 EPO Activities for MAY 2014

The following section outlines EPO activities that are planned for the month of May 2014:

##### EPO Submissions

- CVRI will be submitting the Impact and Remediation Plan to the AER as prescribed by the EPO.

##### Sediment Recovery

- Approval for the Sediment Recovery Plan was received and CVRI will continue with sediment recovery activities as outlined in the approved plan.
- CVRI will implement monitoring and inspections related to the sediment trap operation. A *Water Act* application will be submitted to the AER to allow CVRI to maintain and repair the sediment Traps during the RAP; notification of in stream activity will be provided to via a *Water Act* Code of Practice.
- CVRI has submitted a reporting strategy to the AER. The reporting strategy is outlined Section 3.2 Summary Reporting Table.

##### Surface Water Quality Sampling

In accordance with the Immediate and Short-Term Sampling and Monitoring Plan, CVRI will be initiating the following sampling and monitoring plan in May 2014.

Table 1 Obed Water Sampling and Monitoring Program						
Site Name	Watercourse	UTM		Data Collection Frequency		
		Easting	Northing	Water	Data Sonde	Water Sediment Toxicity
<b>Near-Field Sample Sites<sup>1</sup></b>						
APC –US <sup>3</sup>	Apetowun	470657	5937715			May, July and Sept
APC	Apetowun	472400	5938941		15-min <sup>2</sup>	May, July and Sept
APC-DS <sup>3</sup>	Apetowun	477133	5943213			
PLC-US	Plante	482483	5945393		15-min <sup>2</sup>	
PLC-DS	Plante	483639	5942193	2 x weekly	15-min <sup>2</sup>	May, July and Sept
ATR-US	Athabasca	476280	5931218		15-min <sup>2</sup>	May, July and Sept
ATR –PLC	Athabasca	485385	5940747		15-min <sup>2</sup>	

ATR-D1	Athabasca	478576	5950378			May, July and Sept
ATR-D2	Athabasca	489498	5965837		15-min <sup>2</sup>	
<b>Far-Field Sample Sites<sup>1</sup></b>						
ATR-WD1	Athabasca	660944	6028061			
ATR-FF2 <sup>3</sup>	Athabasca	605947	6002848			
ATR-FF3 <sup>3</sup>	Athabasca	564752	6003585			
ATR-AD1	Athabasca	658459	6025745	Monthly		
ATR-FF5	Athabasca	475330	6286105			
ATR-FF6	Athabasca	463203	6332042			
ATR-FF7	Athabasca	470022	6463222			

<sup>1</sup> Additional sampling sites may be added once ice-off occurs and impacted areas become more visible.

<sup>2</sup> Continuous sampling at a logging interval of one sample per 15 minutes.

<sup>3</sup> Water and sediment will only be collected from these sites in March and September congruently with benthic invertebrate sampling.

### Terrestrial Assessment

Wildlife monitoring will continue via daily observations and with the assistance of 8 active in-field wildlife cameras. The data is collected on a monthly basis and will be included in the Wildlife Mitigation Plan, and Progression Reports.

## 3.2 REPORTING STRATEGY

**Table 2 Obed Reporting Program May 2014-April 2015**

Report Type	EPO Clause	Submission Frequency	Description
Action Summary	Clause 21	Weekly - Thursdays	Details the weekly action related to operations and EPO related activities.
Monthly Update	Clause 39	Monthly - on or before the 7 <sup>th</sup> day of each month	A status report in writing that contains a summary of all activities undertaken in accordance with the EPO in the previous month, and all activities that are planned for the next month.

Impacts Report	Clause 15	May 16, 2014	A report of all data collected (including references to data collection locations), and all conclusions regarding the impacts to the receptors and habitats as identified during implementation of the Impact Assessment Plan (the "Impacts Report"). See EPO Amendment 1 for date change.
Remediation Plan	Clause 27	May 16, 2014	A detailed remediation plan – See EPO Amendment 1 for date change.
Progression Report	Related to: Clauses 15 and 27	August 16, 2014	Provide scheduled data updates and proposed modifications to EPO Plans submitted under Clauses 15 and 27. SIR response period 30 days.
Progression Report	Related to: Clause 15 and 27	October 16, 2014	Provide scheduled data updates and proposed modifications to EPO Plans submitted under Clauses 15 and 27. SIR response period 30 days.
Progression Report	Related to: Clause 15 and 27	December 16, 2014	Provide scheduled data updates and proposed modifications to EPO Plans submitted under Clauses 15 and 27. SIR response period 30 days.
Progression Report	Related to: Clause 15 and 27	February 16, 2015	Provide scheduled data updates and proposed modifications to EPO Plans submitted under Clauses 15 and 27. SIR response period 30 days.
Impacts Plan	Clause 15	April 1, 2015	Amendments to May 16, 2014 submission based upon data collected in the 2014/2015 season.
Remediation Plan	Clause 27	April 1, 2015	Amendments to May 16, 2014 submission based upon data collected in the 2014/2015 season.

#### 4.0 CLOSING

CVRI continues to work with the AER to mitigate any effects of the incident. These operations will continue to progress and adapt as conditions change and practices are refined. The

submission of regularly scheduled progress reports and defined response periods will allow for CVRI and the AER to continue to communicate in a clear and effective manner until submission of the final Impact and Reclamation Reports are submitted.