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March 12, 2019

Ms. Amber Rheubottom
New Mexico Environment Department
Ground Water Quality Bureau – Water Protection Division
Mining Environmental Compliance Section
Harold Runnels Building
1190 Saint Francis Drive
Santa Fe, NM 87502

Subject: Monthly Construction Update, February 2019, in Partial Fulfilment of item #4, "Request for Additional Information and Conditional Approval of Construction Quality Management Plan Phase I Construction, Mt. Taylor Mine Reactivation Rev. 0, 6/15/2018 for Conditions 31 and 32 of Discharge Permit 61"

Dear Ms. Rheubottom,

Rio Grande Resources is pleased to submit the February 2019 Monthly Construction Update, attached with this letter. This Monthly Construction Update is sent as requested in item #4 of the NMED letter dated 9/11/18: Request for Additional Information and Conditional Approval of Construction Quality Management Plan Phase 1 Construction Mt Taylor Mine Reactivation Rev. O, 6/15/2018 for Conditions 31 and 32 of Discharge Permit 61.

If you have any questions, please contact me at (505) 287-7971 or by email at bruce.norquist@ga.com. A hard-copy of this document is also being sent by regular mail.

Sincerely,

A handwritten signature in cursive script that reads "Bruce Norquist".

Bruce Norquist
Facilities Manager, Mt. Taylor Mine
Rio Grande Resources Corporation

CC: David Otori, NMMMD (via email)

This construction update report provides details of construction activities that occurred in January, 2019. It is being prepared and sent as partial fulfillment of the 9/11/18 letter from NMED, "Request for Additional Information and Conditional Approval of Construction Quality Management Plan Phase I Construction Mt Taylor Mine Reactivation Rev 0, 6/15/2018 for Conditions 31 and 32 of Discharge Permit 61." It provides an update of ongoing activities, forecast of future activities and discusses schedule delays and proposed plan changes.

Milestones to the Beginning of February 2019:

- 1) Construction Design Package – Completed 1/18/18
- 2) Contract Bid Award – Awarded 4/11/18, Contractor Selected and Notified
- 3) RGR Preparation Work on the MWTU ponds (1, 2, 3, 4, 5, 6, 7 and 8) – May and June, 2018
 - Removal of Brush
 - Locating buried pipe and utility lines for repair or removal prior to pond excavation
 - Repair of a soil void beneath the overflow structure connecting MWTU ponds 2 and 3
- 4) Construction Contractor Mobilization to Site – Began 5/8/18
- 5) Reshaping of Waste Rock Pile – Began 5/14/18, Completed 7/12/18
- 6) Delivery of HDPE Liner Materials to Site – Completed 6/7/18
- 7) Disposal Cell Floor Clay Liner Construction –
 - Began construction 7/13/18
 - Initial liner floor area 80% completed by 8/1/18
 - Task completion delayed because original clay source was exhausted
 - Work stopped because of lack of clay material and other high priority tasks
 - Additional source of clay liner material identified later
 - Initial liner floor area construction completed 10/22/18
 - The north-east portion remained unlined until this time due to prioritization of construction of the MWTU Pond No.3
 - The disposal cell clay liner remains open and uncompleted because of the need for expansion
- 8) Contaminated Sediment and Soil Placement in Disposal Cell – Began 8/15/18, in-progress
 - This task could not start until a suitable amount of disposal cell floor had been constructed
- 9) South Stormwater Pond Excavation - Excavation began 8/2/18
 - Excavation was 40% complete by 8/13/18
 - The task was stopped at that time in order to prioritize excavation work of MWTU Pond No.3 and the need to control stormwater runoff during the monsoon season
 - Excavation was 100% complete by 10/20/18
 - Completion of the task was delayed due to difficulties in ripping a persistent sandstone lens
 - Completion of the task was also delayed due to the radiological scanning and cleanup verification process
 - Radium soil sampling and analysis required 9 days of time for return of results before work could continue

- 10) South Stormwater Pond Concrete Structures – 100% complete
 - Run-down chute base – Started 8/20/18, Completed 9/19/18
 - Rundown chute wingwalls were formed and poured by 10/4/18
 - South Force Main pad was formed and poured by 10/4/18
- 11) South Stormwater Pond – Clay Liner and Protective Soil Cover – 100% Complete
 - Construction of 2-ft Clay Liner – began 10/24/18 and completed by 11/19/18
 - Pre-clay liner radiation cleanup verified complete by 10/22/18
 - Placement of 6" protective soil cover began 11/19/18 and completed by 11/27/18
 - Compaction of protective soil completed 12/4/18
 - The SSWP was made functional and ready to receive and store stormwater runoff by 12/5/18
- 12) South Stormwater Pond – Other Construction Completed
 - Placement of Rip-Rap at toe of run-down chute completed by 11/26/18
 - Installation of overflow structure started 11/29/18, finished by 12/21/18
 - Pipe installation started 11/29/18, finished by 11/30/18
 - Formed headwall by 12/20/18
 - Poured headwall by 12/21/18
 - Placed rip-rap at toe of the west slope concrete cloth drainage channel
- 13) New Septic System - Started 7/11/18, 100% Complete 8/7/18
 - Old system deactivated 8/7/18
- 14) Service Road Fill – 100% Completed 8/13/18
- 15) MWTU Pond No.3 Geosynthetic liner Leak Detection Contractor Selected 8/27/18
 - Contractor selection was made at this time in anticipation of the liners of both MWTU ponds No.2 and No.3 being installed by the end of November 2018
- 16) Waste Rock Pile - Placement of Clay Cover Soil / Radon Barrier on Outer-Slopes – 100% complete
 - Began 8/15/18
 - 90% complete by 9/7/18
 - At that time, all of the exposed WRP material on the slope had been covered with clay.
 - Work stopped 9/7/19 to prioritize excavation and construction of the MWTU Pond No.3
 - 99% complete by 11/20/18
 - Restarted task on 11/15/18
 - Started placing remaining 1-ft cover (2nd lift) on the north nose of the WRP on 11/15/18
 - First 1-ft of cover was previously placed by 9/7/18
 - Total thickness was brought to 2-ft by 11/20/18
 - Completed placement of all clay cover soil on the WRP by 11/20/18
 - Stopped at the end of November to work on sub-grade preparation of the MWTU Pond No.3
 - Final compaction of all clay cover soil completed 12/5/18

- 17) MWTU Pond No. 3 Excavation – Began 9/10/18, 100% Complete by 10/5/18
- Lining of this pond was significantly delayed (1 month +) due to the need to excavate excessive quantities of contaminated soils below the existing pond floor
 - Original estimate of 2,500 cu. yds.; Actually excavated 9,000+ cu. yds. (4 times greater)
 - Final excavation took longer than anticipated because of the need for radium soil sampling and analysis during cleanup instead of reliance on correlated gamma scanning
 - 3 stages of cleanup; each stage of radium soil sampling required a minimum of 9 days for return of results of analyses
 - Correlated gamma scanning results at low radiological levels were not reliable due to area shine effects
- 18) MWTU Pond No. 3 – Backfilling with clean fill material to design grade – 100% completed
- High Priority Task
 - Started 10/29/18, completed 11/6/18
 - The backfilling process contributed to a delay in the liner installation task because of the greater amount of fill needed to reach design grade than previously planned. This fill required more time for compaction. In turn, this delayed start of work on the hydraulic structures, which could not begin until the fill was completed.
 - Radiation cleanup verified complete, approval to backfill received on 10/24/18
- 19) MWTU Pond No. 3 – Repair and Upgrade of Concrete Hydraulic Structures 100% Completed
- All four of the hydraulic structures of Pond 3 were completed by 12/12/18.
 - This date was time-critical because slippage would have increased the risk that the clay sub-liner would not be ready for liner installation (scheduled for 12/17/18).
 - The design for the new concrete structure upgrades was complicated. Each required specialized forming, pouring of concrete and cure time
 - The curbs required imaginative and skilled forming to achieve the design shapes. Form-work was tedious and time-consuming. Water stop materials were sole-sourced and had a long lead time.
 - On average, each piece required 3 to 4 days of work. For the 3 structures, a total of 9 pours was required, amounting to around 32 days of work.
- 20) MWTU Pond 3 - Placement of the 6 in. Clay Sub-liner began 11/27/18; Completed by 12/6/18
- 21) MWTU Pond 3 – Liner Installation – Installation of Liner 100% Completed by 12/26/18
- Finish grading of the 6" clay sub-liner began 12/6/18; 100% Completed by 12/14/18
 - Last-minute rolling of the clay sub-liner surface and final touch-up work were performed on 12/17/18, the same day as the arrival of the liner installation sub-contractor
 - Poor weather conditions slowed the progress of work
 - By end of the day, the liner installer had approved of the clay sub-liner surface.
 - The liner installer arrived on 12/17/18
 - No liner work was performed on the first day.
 - SLS personnel underwent site safety and hazard training
 - RGR's QA/QC inspector arrived on 12/17/18
 - The leak locating service contractor arrived 12/18/18 to perform leak detecting services
 - Stayed through 12/21/18 to complete leak detection services of the secondary liner

- Leak detection contractor would return to test the primary liner once water filling of MWTU Pond No. 3 was complete
 - Actual liner installation work began 12/18/18
 - By end of 12/18/18, one-third of the secondary liner had been installed
 - High winds on 12/19/18 prevented the liner installer from safely installing liner materials
 - Liner installer assisted the primary contractor with installation of the sump and LDSC piping
 - Liner installation proceeded smoothly on 12/20/19
 - By end of the day, the secondary liner was 100% installed
 - Additionally, about 1/3 of the geonet was also installed
 - The finished secondary liner passed the leak detection testing
 - Installation of the geonet had been completed 100% by 12/21/19
 - Installation of the primary liner was about 15% complete by 12/21/19
 - The primary earthwork contractor left the site for the holiday and did not plan to return until 12/26/18
 - Nearly 75% of the primary liner had been installed by the end of 12/22/18
 - Cold and windy weather slowed work on 12/22/18
 - The primary liner was 100% installed by 12/23/18
 - The liner installer left the site for the Christmas holiday
 - The liner installer returned 12/26/18 to finish some minor welding, install vents and instruct the primary contractor on proper backfilling methods of the anchor trenches
 - The liner installer demobilized on 12/27/18
 - Of the 8 task days, actual liner installation required 5.5 full days; liner installation was originally estimated to take 6 days
 - 2 days were lost to weather
 - 1 day was spent with training and site familiarization
- 22) MWTU Pond 3 – Backfilling of Liner Trench – 100% Completed
- Anchor trench backfilling began on 1/9/19
 - Anchor Trench backfilling completed 1/15/19
 - Work delayed from December due to cold weather and associated compaction issues
- 23) MWTU Pond No. 3 Water Filling for Leak Location Survey of Primary Liner
- RGR crews began work on the clean-water delivery system on 12/4/18
 - RGR crews completed the first water delivery system 12/20/18
 - “Notice to Discharge” was sent to NMED 12/21/18
 - RGR began filling of MWTU Pond No.3 on 1/17/19
 - Could not start until after the anchor trench backfilling had been completed
 - By 1/21/19 approximately 300,000 gallons of water had been placed in Pond No.3 from the site water tank; also contained melt water from 2 snow events
 - By 1/22/19 a new delivery pipe was constructed to deliver water from well 8 (Point Lookout well) to Pond No.3
 - A water meter was placed in this delivery pipe system
 - Pumping from well 8 began 1/24/19
 - Approximate pumping rate: 35 gpm
 - Water from well 6 was sampled for water quality on 1/22/19
 - Water from well 8 was sampled for water quality on 1/30/19

- 24) MWTU Pond No. 2 Excavation of contaminated sediments – Began 9/19/18; in progress
- 50% Complete by 10/19/18
 - Task was halted due to extremely wet material and the need to fill MWTU Pond No.3
- 25) Stormwater Drainage System – North Alignment
- Began excavation 10/30/18
 - This task was significantly delayed because of a lack of availability of materials
 - Several of the primary manholes had long procurement lead-times
 - North Alignment started with placement of the first Manhole, MH24 by 10/30/18
 - By 11/6/18, 200 ft of pipe and catch basin CB32 had been installed
 - By 11/19/18, 200 ft of pipe and manhole MH25 had been installed
 - By 12/13/18, 270 feet of pipe and manhole MH26 was set in place
 - This manhole tied into the existing site drainage system from the south and was fully connected to the SSWP by 12/18/18
 - By 12/27/18, work had advanced to within 10 feet of manhole MH27
 - By 1/21/19, manhole MH28 had been installed
 - By 1/23/19 the north alignment drainage system was connected and fully functional
 - Trench backfilling completed 1/25/19
- 26) Ore Stockpile Removal
- Began work on defining thickness of the cover soil
 - Started grid-staking the pile on 11/30/18
 - Completed definition auger-drilling at staked locations on 12/21/18
 - RGR in contract negotiations with a licensed receiving facility
 - Contract was written and in review
 - Discussed shipping procedures and handling practices with officials at the licensed receiving facility
 - Talked to potential ore haulers and completed a scope of work for bid proposals
- 27) Primary Contractor Demobilized and Left the Project
- RGR and the primary contractor agreed that the project could not continue with the cold temperatures and snow conditions
 - RGR and the primary contractor mutually agreed to terminate the existing agreement for construction services
 - Terminated agreement 1/31/19 due to constructability issues and weather delays
 - Fully demobilized by 1/31/19
 - Winter weather had caused significant delay and excessive standby
 - Phase I Reactivation work substantially completed at this time
 - Materials were not available on site to begin the south alignment of the Stormwater Drainage System
 - No further contaminated materials could be placed on the disposal cell because of constructability issues
 - Compaction issues associated with cold weather
 - Specifications forbade compaction during freezing temperatures

February 2019 Milestones

1) MWTU Pond No. 3 Water Filling for Leak Location Survey of Primary Liner

RGR crews completed filling of MWTU Pond No. 3 on 2/19/19 for the final leak detection test. Filling was completed approximately 2 weeks ahead of forecast. On 2/26/19, LLSI arrived on site to begin leak detection testing. The test was completed by early afternoon. No leaks were detected; the liner was considered fully commissioned for water storage. The leak test was completed approximately 1 week ahead of forecast.

By end of February, a sump pump was placed in the LDCS pipe. The pump system was undergoing adjustments and function checks by end of month.

2) Storm Drainage System – North Alignment

No work was performed on this task in February due to cold weather. Minor work remains to be performed: ditch dressing and reconstruction of the rundowns. Temporary rundowns are in place.

The north alignment of the stormwater drainage system was commissioned in January. All stormwater runoff is currently being routed to the South Stormwater Pond (SSWP).

3) Ore Stockpile Removal

RGR continued with contract negotiations and reviews with a licensed receiving facility. At the end of February, RGR was awaiting bid responses from four competing ore haulers. Bid responses are due 3/1/19.

4) Disposal Cell Floor Clay Liner Construction –

In February, RGR dressed the contaminated materials on the disposal cell to eliminate the existing constructability issues. The stacked material was spread into a 10" lift, which aided drying and brought conditions to specifications. Attempts were made to compact the lift, but cold weather prevented this work from being completed. Once compacted, the disposal cell will be ready to receive additional materials as the project continues.

Plans were made to expand the disposal cell liner. As Phase I construction activities progress toward completion, expansion of the disposal cell liner area will become necessary to accommodate all remaining contaminated soils. The majority of these soils are expected to come from excavation of MWTU ponds 1, 4, 5, 6, 7, 8, the ore pad and the ore pad runoff pond. Based on experiences with excavating MWTU Pond No.3, it is expected that the estimated volume of remaining contaminated soils could be tripled.

The initial Phase I plans for the disposal cell clay liner accounted for expansion by leaving the configurations of the north and east cell berms undefined. Currently, the disposal cell clay liner remains open and uncompleted because of the need for expansion. At this time, the liner for the expanded floor has not been constructed. Neither has the north or east berms of the cell been constructed. Additionally, the south cell berm will have to be extended to meet the east berm before the disposal cell can be closed. The final configuration of the disposal cell cannot be determined until the full extent of remaining contaminated soils is known.

Expansion is a certainty. Available disposal cell capacity is nearly consumed. Much of this capacity was consumed by the placement of contaminated soils excavated solely from MWTU Pond No.3. The amount of these soils were 3 to 4 times the originally estimated amount.

5) RGR Continuation of Phase I Construction Activities

RGR performed road maintenance and dressing of the north alignment of the Stormwater Drainage system. RGR also attempted to work on the disposal cell and haul materials from MWTU Pond No.2. Much of RGR's focus was on filling MWTU Pond No.3 and installing the sump pump.

Because of cold weather throughout February, progress of the Phase I construction project was minimal. RGR prepared bids and wrote purchase orders for upcoming work. Several suitable contractors were contacted in anticipation of resumption of work in the spring construction season.

Forecasted Activities

1) MWTU Pond No. 3

- Complete all preparations to store contaminated water in MWTU Pond No.3

2) South Stormwater Pond

- Complete installation of the concrete cloth drainage channel – anticipated end of March
 - Weather dependent, waiting for ground to thaw before concrete cloth can be placed

3) Surface Water Drainage System

- South Alignment
 - Anticipated to start in early April 2019
 - Waiting for ground to thaw and arrival of warmer temperatures for material compaction
 - Awaiting arrival of manhole structures

4) Disposal Cell Expansion and Continued Filling

- Plans are in place for the expansion
- Construction of additional disposal cell liner will occur as needed concurrent with excavation of the MWTU ponds
- Expansion work will resume in May 2019
- Anticipate resolving disposal cell constructability issues mid to late March 2019. Spreading of the existing material on the disposal cell into a 10" lift was completed in February. Currently, RGR has rented a wheeled compactor and will complete compaction per specifications by mid to late March 2019

5) MWTU Pond No. 2 Excavation, Reshaping and Liner Installation

- Pond No.2 excavation work will resume once the constructability issues of the disposal cell are corrected. RGR anticipates restarting excavation work by late March 2019.
 - RGR has repackaged the remaining MWTU Pond No.2 work and is preparing to issue contractor bids. Bids will be sent out in April. Full-scale work is anticipated to restart in May 2019. RGR will continue excavating contaminated materials until such a time as a contractor is hired.

- Liner installation currently projected as late-June 2019, depending on success of radiological cleanup efforts, unfavorable weather and overall project plan adjustments. This projected date is based on previous experience with Pond No.3
- 6) Removal of Contaminated Sediments from MWTU ponds 1 and 4 through 8
- Anticipated start 2nd quarter 2019, after MWTU Pond No. 2 is excavated
 - May be worked concurrently with Pond No.2 to ensure contractor has a sufficient work load while waiting on radiological sampling results
- 7) Ore Stockpile Removal – anticipated start 2nd Quarter 2019
- This task is scheduled to proceed in 2nd quarter 2019, once contracts and preparations are in place
 - After discussion with MMD and NMED in July 2018, the task of removing low-grade-ore and ore pad materials was deleted from the Phase I implementation plan. Under the Phase I plan the low-grade ore material would have been temporarily placed in the disposal cell. While deleted from the Phase I implementation plan, RGR has committed to removing the low-grade ore materials from the site and shipping to a licensed receiver.
- 8) Connection to Surface Water Drains (Stage 2 Abatement Plan, well waters)
- Installation of connecting piping is in progress
 - Anticipate completing in May 2019
 - Conduct pipe pressure testing – early June 2019
 - Activation of pumping system will not occur until approval obtained
 - As a temporary measure, all evacuated well water can be trucked to MWTU Pond No.3 once it is commissioned
- 9) Award new Phase I work contracts with new contractors
- RGR will continue project work in-house as weather permits through the remainder of the winter / spring seasons until contractors are hired
 - Anticipated to restart work in March 2019, depending on weather
 - RGR to arrange remaining Phase I work into smaller bid packages
 - Take advantage of multiple small work areas with multiple small contractors
 - Submit bid packages for awarding in April; restart construction work in May
 - Anticipated restart of main Phase I tasks in April 2019 dependent on weather conditions.
 - RGR has begun re-bidding the work in smaller, more manageable tasks
 - RGR may decide to postpone the work until spring when weather is more conducive to construction
- 10) Completion of major Phase I activities appears to be 3rd quarter 2019

Critical Path Items – Construction to begin as soon as weather conditions allow (early 2nd quarter 2019)

- 1) Completion of South Storm Drain System – anticipated to re-start in April. Currently on hold due to cold weather and lack of contractor and materials
- 2) Re-start excavation work of MWTU Pond No. 2
- 3) Expand the disposal cell (construct additional clay liner floor area)
 - a. Expansion is necessary to accommodate excess contaminated materials from MWTU Ponds 1, 2, 4 through 8 and the ore pad and ore pad evaporation pond

Plan Changes

No new variances issued in February 2019

Drawing Variances

VARIANCE #	Drawing			Variance Subject	Date
	Sheet #	Drawing #	Title		
2018-5	ST2, 5,7, 9, 10, 11	See Tables 2018-5.1 and -5.2, GS00-GC130, 132, 133, 134	Storm Manholes	Constructibility issues of the reinforced concrete storm manholes - design diameters not large enough to accept drain pipe sizes. STMH20-23, 27, 28, 29; MH01-04	7/23/18
2018-6	ST19A	GS00-GC119-02	Force Main North Plan View	concrete valve vault, elbow, and coordinates	9/14/18
	ST19B	GS00-GC120-02		concrete valve vault, elbow, coordinates, elevat	
	ST20	GS00-GC121-02		elbow, elevations	
2018-8	SW00	GSSW-GC01-01	South Storm Water Pond and Waste Rock Pile-Cover Sheet and Key Drawing	deletion of reference to ore storage	9/19/18
	SW02	GSSW-CS504-01	Waste Rock Pile and Disposal Cell Survey Layout and Control Points	deletion of reference to ore storage	
	SW03	GSSW-CB101-01	South Storm Water Pond and Waste Rock Pile-Site Plan	deletion of reference to ore storage	
	SW06A	GSSW-CB104-01	South Storm Water Pond and Waste Rock Pile-Site Plan	deletion of reference to ore storage	
	SW06B	GSSW-CB105-01	Waste Rock Pile and Disposal Cell Earthwork and Grading Plan - South	deletion of reference to ore storage	
2018-11	MW02	MW00-CX501-00	Pond Liner Details	Delete seaming of geomembranes edges in the anchor trench, extend geomembrane to the top of the outer trench wall.	12/21/2018

Construction Specification Variances

VARIANCE #	Specification		Section		Approval	
	Number	Title	Number	Title	By	Date
2018-1	MW-CB01-00	EARTHWORK FOR POND CONSTRUCTION	2.2.1	Waste Pile Slopes	A.K. Kuhn	6/7/2018
2018-2	MW-CB01-00	EARTHWORK FOR POND CONSTRUCTION	2.2.2	Mine Debris Pit	A.K. Kuhn	6/7/2018
2018-3	MW-CB01-00	EARTHWORK FOR POND CONSTRUCTION	2.2.3	Disposal Cell on the Waste Pile	A.K. Kuhn	6/8/2018
2018-4	MW-CB01-00	EARTHWORK FOR POND CONSTRUCTION	2.2.4 (new)	Shaft Muck Excavation, Placement and Compaction	A.K. Kuhn	6/8/2018
2018-7	GS-GC02-00	DRAINAGE AND HYDRAULIC CONTROL STRUCTURES, Rev	2.7	Manholes, Catch Basins, and Vaults	A.K. Kuhn	9/14/18
2018-9	MW-CB01-00	EARTHWORK FOR POND CONSTRUCTION	2.2.3	Disposal Cell on the Waste Pile	A.K. Kuhn	10/15/2018
2018-10	MW-CX01-00	INSTALLATION OF GEOMEMBRANE POND LINERS	2.5	Mechanical Connections	A. K. Kuhn	11/21/2018
			3.11	Rub Sheets at Inflow Points	A. K. Kuhn	11/21/2018
			Also Drawing Sheet HY-18, Note 7		A. K. Kuhn	11/21/2018

Anticipated Delays and Changes to Project Schedule

General Comments:

Prior to February, delays have been primarily caused by winter weather, excessive quantities of contaminated materials encountered during excavation and related radiological clean-up efforts. The radiological clean-up efforts significantly increased task duration because of long analyses time and a need to switch from simpler gamma scanning techniques to more involved and time-consuming radium soil sampling.

Phase I work tasks have generally been delayed due to:

- Excavation of excessive amounts of contaminated materials in MWTU Pond 3
- In-field radiological measurements heavily influenced by “shine”
- Need for radium soil sampling (long analyses time) instead of fast continuous gamma scanning during cleanup efforts
- Excavation of excessive quantities of WRP material during WRP reshaping
- Excessive mine debris requiring extra effort to sort and dispose
- Winter weather conditions

Project delays have also arisen because of a lack of resources committed to the project by the contractor:

- Equipment and manpower
- Management of the procurement process
- Sub-contractor coordination

RGR is in the process of repackaging the remaining work and re-bidding work tasks as smaller stand-alone projects. Based on project experience, task completion rates would be improved with multiple contractors on site, each performing a different task. This option will depend on finding suitable contractors willing to meet RGR’s qualifications.

Specific Comments:

- 1) Change: MWTU Pond No. 3 was the first MWTU pond to be lined, instead of MWTU Pond No.2
 - It was initially believed that both MWTU Ponds 2 and 3 could be lined by the 12/1/18 deadline
 - This belief changed when it became apparent that the contractor was unable to mobilize sufficient resources to complete excavation, backfilling and lining of more than 1 pond by the deadline
 - Because of heavy monsoonal rains in August and September 2018, control of stormwater would become problematic if MWTU Pond No.2 was taken offline
 - Plans were put in place to line one MWTU pond (Pond No. 3)
 - In September, the contractor indicated that they could finish one pond by mid to late November, ahead of the deadline
 - This was dependent on weather; temperatures would need to be above freezing for compaction of materials and moisture could not be on the liner geomembranes during installation. There was a physical need to get the liner installed before winter weather set in.
 - A decision was made to prioritize the completion of MWTU Pond No.3 to meet the deadlines
- 2) Delay: Ability to line a single MWTU Pond (Pond No.3) by the deadline of 12/1/18 was impacted for the following reasons:
 - Schedule slip first began with the excavation process of MWTU Pond No.3
 - Schedule slip occurred when excessive quantities of contaminated materials were encountered, this significantly lengthened excavation time and ultimately contributed to pushing back the liner installation task into late December
 - Schedule slip increased further because of increased radiological sampling and analysis time during the cleanup verification process

- Schedule was originally based on continuous correlated gamma scanning
 - Wide-area “shine” rendered gamma scanning unreliable as a confirmatory cleanup tool
 - Schedule was impacted because of the need to perform radium soil sampling
 - Each radium soil sampling and analysis campaign required 9 days of time for return of results before work could continue; with 3 cleanup campaigns, this resulted in 27 days of unanticipated schedule slip
 - Through the course of work activities, it became apparent that the contractor was unable to mobilize sufficient resources to complete more than one excavation and construction task at a time
 - Because of excessive quantities of contaminated materials as well as excessive radiological sampling time, nearly 1 full month of delay was added to the schedule
 - Difficulties in procuring specialized and sole-source materials during upgrades of the hydraulic structures
 - Design complexity of forming and pouring of new concrete for the hydraulic structures.
 - There were 9 individual concrete pours, 3 per each of the 3 hydraulic structures. Each pour required 3 to 4 days duration for forming, pouring and curing. This amounted to a total of 34 days (1.5 months) of work in concrete work alone.
 - This level of work effort was not accounted for in the original schedule. Ultimately this caused a 2-week delay
 - Another week of schedule slip occurred because of late scheduling by the contractor; the sub-contracted liner installer could not mobilize by the time needed with the short notice given
 - Four more days of delay occurred due to winter weather and the Christmas holiday
 - While the geomembranes have been fully installed in Pond No.3, completion and commissioning were delayed another 3 weeks because backfilling of the anchor trench has not yet been completed
 - The cause of the delay in anchor trench backfilling was primarily due to persistent winter weather on site since 12/26/18.
 - Compaction cannot be performed in freezing weather
 - The delay in backfilling of the anchor trench delayed final commissioning of Pond No.3
 - Filling of the pond could not proceed until the anchor trench was backfilled
 - In turn, the final leak test of the primary liner could not be conducted until Pond No.3 was filled with water
 - Generally, winter weather was the most significant delay in commissioning of the liner. However, project delays from prior activities had contributed strongly to the schedule slip of the liner installation.
 - The backfilling of the anchor trench was prolonged due to freezing conditions and generally poor weather. Filling of Pond No.3 was similarly delayed due to the delay in completing the anchor trench, along with a slower than expected pumping rates.
- 3) Delay: Excavation of contaminated sediments from MWTU Ponds 1, 4, 5, 6, 7 and 8
- This task was delayed because of other priority work tasks (MWTU Pond No.3)
 - RGR anticipates it will continue this work through the winter and spring seasons
 - Efficiency of excavation decreased due to adverse weather and associated delays
 - Reduced digging capabilities in potentially frozen ground, icy roadways
 - Safety considerations for personnel due to winter weather conditions
 - Ability to perform radiation scans in freezing weather

- Equipment travel on icy roadways
- Icy conditions on steep pond access ramps

4) Delay: Stormwater Drainage System Schedule

- Significant delays due to availability of materials, procurement management issues and lack of contractor's ability to commit additional resources
 - Originally anticipated that work crews and materials would be on-site by late August
 - Materials did not arrive on site until 10/23/18
 - Manhole structures – long fabrication lead time
 - Contractor procurement issues led to a 2-month delay of material delivery
 - Need for more specialized and different equipment than that of regular earthmoving
- The north alignment was completed in late-January 2019.
 - Delay of nearly a month past original forecast due to weather conditions and the holiday season
- The south alignment has not been started. Construction will start shortly now that the north alignment is completed and stormwater control is no longer an issue. Work on the south alignment has generally been delayed due to overall schedule slip of other precursory tasks.
- Generally, winter weather conditions have delayed completion of the north alignment of the stormwater drainage system by 1 to 2 weeks due to freezing ground conditions

5) Delay: Construction of the Disposal Cell Clay Cap

- Originally a Phase II activity
- Anticipated to be partially constructed in mid to late 2019 depending on the need to expand the disposal cell
 - Construction of the disposal cell clay cap was intended to occur after the excavation and subsequent placement of all contaminated sediments from the MWTU ponds and contaminated soils from the ore pad and retention pond
- Potential for early partial construction of the disposal cell cap is being investigated
 - Capacity of the initial disposal cell area will be exceeded once MWTU Pond No. 2 is excavated
 - Preliminary designs are being investigated for accelerating the timing of cap construction once the initial disposal cell area is filled
 - Investigating layout options for expansion of the disposal cell
 - Expanding upwards
 - Expanding Eastwards
 - Expanding in segments

6) Potential Delay: Removal of the Low-grade Ore stockpile

- This could be potentially delayed an additional month due to ongoing contract negotiations and legal reviews between RGR and the licensed receiver of the materials