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Staff Report

Applicant: Aboriginal Affairs and Northern Development Canada – Contaminants and Remediation Directorate	
Location: Giant Mine Site	Application: MV2012L8-0010
Date Prepared: February 26, 2014	Meeting Date: March 20, 2014
Subject: Roaster Waste Management Plan – Revision 1	

1. Purpose/Report Summary

The purpose of this report is to present a request made by Aboriginal Affairs and Northern Development Canada – Contaminants and Remediation Directorate (AANDC – CARD) for which they submitted their current Roaster Waste Management Plan – Revision 1 (Plan) to the Mackenzie Valley Land and Water Board (MVLWB/the Board).

2. Background

- December 17, 2013 – the Plan submitted to the Board;
- January 2, 2014 - the Plan distributed to reviewers;
- January 23, 2014 – comments received from reviewers;
- February 6, 2014 – responses submitted by CARD;
- February 19, 2014 – MVLWB staff send a request to CARD for further clarification on the responses made;
- February 26, 2014 – CARD responded to the clarification request sent by MVLWB staff;
- March 20, 2014 – presented to the Board.

3. Discussion

The purpose for the revisions to the Plan is to allow the temporary storage of arsenic impacted waste under geomembrane tarps at the Temporary Waste Storage Area. There is a total of 1529 bags of arsenic impacted wastes currently being stored in marine shipping containers (sea cans). However, due to shipping container availability and timing of delivery, there was a need for AANDC to cover approximately 772 bags of arsenic impacted waste with tarps.

AANDC has only added one section in the current Plan relating to the tarping of the impacted waste. No other sections of the Plan have been updated with the exception of administrative changes (i.e. table of contents, list of figure and figure references).

Prior to the bags being tarped they will be/have been placed on wooden pallets to prevent the bags from coming in contact with the ground and possibly freezing. The tarp will cover all of the bags and will be anchored so that they will not become airborne during windy conditions. There will be staff on site at all times who will be tasked with specific monitoring activities relating to the monitoring of the tarps and the arsenic impacted waste.

The request being made by AANDC is one which is only temporary in nature. The bags are being stored in the central tailings pond. The arsenic impacted waste will be transferred to the Material Storage Area (MSA) as originally planned.

4. Comments

5. Review Comments

During the review comments were received from Aboriginal Affairs and Northern Development – Inspector (Inspector), Alternatives North (AN) as well as the North Slave Metis Alliance (NSMA).

Details on the comments and responses provided are in the attached comment summary table generated by the ORS.

On February 19, 2014, MVLWB staff requested further clarification on the responses provided by AANDC. The request was as follows:

- What is the reasoning as to why AANDC can't perform more frequent inspections?
- When will the "temporary" arsenic impacted waste be at its final destination?
- Please provide dates as to when the contract was tendered and when the contract was awarded for the tarping materials.
- How will the tarping material be cleaned?
- What are the standards for decontamination?

Responses from AANDC are summarized as follows:

- The current method of storage of the waste and the completion of regular inspections is consistent with the requirements listed in the Guidelines for the General Management of Hazardous Waste in the NWT and is of greater frequency for the completion of inspections on other hazardous materials storage facilities (e.g. PCB Regulations). The frequency of the inspections will be adjusted if there is a change in conditions and if deemed appropriate for the safe operation of the site (i.e. in the event of the change of site conditions or due to storm events). As noted in the

original response in addition to routine inspections, site security conducts regular patrols over the entire site, which includes the area of the MSA.

- The storage containers will remain undisturbed in their current location until a means of storage for the 2014 season is available onsite. Providing a specific date to have the arsenic waste moved is difficult due to a variety of factors including procurement, timing of delivery, onsite placement and construction time, etc. If shelter buildings are re-evaluated as the preferred option the delivery and construction of the shelter may not occur until September 2014. Until the final method of containment is decided the containers should remain in place to ensure their integrity. Moving the containers before or during the freshet is problematic as some of the bags may still be in a frozen state, which makes them harder to handle and introduces more risks during the transfer of the bags. As noted in the original response, the geomembrane will protect the wastes in a similar fashion as a soft-sided structure or marine container in that it will protect the bags from weather elements: sunlight (ultraviolet radiation), precipitation, and wind.
- Below is a timeline of events that lead up to the use of geomembranes:
 - On March 12, 2013, the Roaster Complex Deconstruction contract was awarded to Parsons Canada Limited (Parsons). Parsons proposed TDG compliant bags to containerize the arsenic waste generated for the deconstruction of the Roaster.
 - In May of 2013, as due diligence measures and considering these bags would likely be stored for an extended period of time, it was determined by the Giant Mine Project team that the waste bags be placed into temporary shelters as an added measure against weathering.
 - In August 2013 following design, the tendering for the temporary shelter buildings began and closed. However, the results of the public tender yielded no contractor who could meet the project requirements.
 - In September 2013, the Roaster Complex deconstruction contractor was then hired to obtain marine shipping containers, haul them to the Material Storage Area and fill them with the bagged arsenic waste. Shipping containers were also an approved method of storage of the waste.
 - 70 shipping containers were ordered and the full order did not arrive on-site until November.
 - Due to an unexpected increase in waste quantities removed late in the 2013 construction season and due to time limitations with trying to procure all of the necessary additional shipping containers to store these additional quantities, not all of the bagged waste could be placed in containers by the end of the 2013 season.
 - In late October/ early November, the Roaster Complex deconstruction contractor started overlying geomembranes on the TDG compliant bagged waste until such time they can be stored in a method that is consistent with the Water Management Plan.
- If required, the cleaning methods will follow the procedures presented in the Waste Management Plan. The methods are expected to be consistent with the methods to clean/decontaminant materials removed from the Roaster complex structures. These methods utilize; removing bulk

materials, vacuuming and washing. If the material cannot be cleaned, it will be disposed of as arsenic impacted waste. The Roaster Complex contract specifications contain standards for decontamination and the containerization/disposal requirements for material that cannot meet those standards. The standards that will be used to confirm the geomembrane cover materials have been cleaned will include:

1. Visual Inspections
2. Surface wipe checks
3. Guidelines for Industrial Waste Discharges in the NWT to confirm if waste contains contaminants above landfill disposal guidelines.

6. Security

n/a

7. Conclusion

Staff have reviewed the Plan, the comments from the reviewers, responses from AANDC and the clarification requested by Board staff.

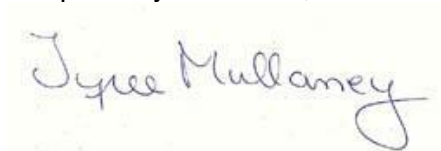
8. Recommendation

Staff recommends that the Board approve the Roaster Waste Management Plan, Revision 1 as submitted by Aboriginal Affairs and Northern Development Canada – Contaminants and Remediation Directorate.

9. Attachments

- [Roaster Waste Management Plan](#)
- Comment Summary Table
- [Clarification Request from MVLWB Staff](#)
- Response from AANDC on the clarification request from MVLWB Staff
- Draft Approval Letter

Respectfully submitted,



Tyree Mullaney
Regulatory Officer