

ERCB Draft Tailings Directive—Public Review

Discovery Centre, Fort McMurray, Alberta

September 24, 2008

Introduction

Stephen Smith, Executive Manager of the ERCB Fort McMurray Regional Office, welcomed the participants.

His presentation (available on the ERCB Web site) outlined the history of tailings management for this region, including current public views. The presentation made reference to three documents that are also on the ERCB Web site.

- Bulletin 2008-28: Tailings Performance Criteria and Requirements for Oil Sands Mining Schemes
- ERCB backgrounder on the draft directive
- The draft tailings directive

In the ensuing dialogue, the participants made comments, asked questions, and requested follow-up actions. In the text below, the dialogue is sorted into three categories:

- General Comments/Notes
- Questions and Responses
- Follow-up Action Items

General Comments/Notes

- 1) First Nations participants clarified that they were not representing the public.
- 2) Clarification of the terms “commitment” and “condition” was provided by the ERCB. A commitment is a nonbinding promise from an applicant to do something subsequent to an approval. A condition is a specific requirement cited in an approval that has the ability to be monitored and enforced by the ERCB.
- 3) Fluid tailings in end pit lakes have been raised as a concern by First Nations and other organizations. The concept of end pit lakes has been approved in past applications, subject to proof of their ability to sustain a self-supporting ecosystem. As of today, end pit lakes have not undergone a full-scale test. The goal of the directive is to decrease the amount of fluid tailings present in the end landscape.
- 4) The public is expressing a preference for dry tailings. The ERCB’s intent is that subsequent revisions of the directive will move towards dry tailings. Currently the draft directive proposes to regulate fluid tailings reductions using CT or other technologies.
- 5) The issue of managing CT or equivalent deposits over their full life-cycle was identified as a public concern. The draft directive includes a performance criterion for creating trafficable deposits that are ready for reclamation.
- 6) The directive was prepared by the ERCB (with input from SRD, AENV, and the Energy Research Institute). A concern was expressed that the September 24 workshop should have been joint with AENV, as reclamation and tailings are so closely tied. First Nations requested a separate session to discuss this. (See action item #1.)

- 7) Concern was raised regarding the effect of oil sands development on the environment and country foods consumed by First Nations. The high cost of replacing country foods with supplies shipped by plane was raised.
- 8) The ERCB Fort McMurray Regional Office supports numerous multistakeholder groups. This tailings directive has taken priority over all of these other commitments.
- 9) Concern was raised that consultation with First Nations had not occurred. A commitment was made to arrange a meeting with First Nations, AENV, SRD, and ERCB. Later discussion in the meeting ensued with respect to contacting the Métis. This meeting was requested to occur before the release of the directive. (See action item #1.)

Questions and Responses

Q1. How does reclamation bonding work in oil sands? What is included in the liability calculation?

Concern was raised that it is not acceptable to leave liabilities to future generations and that currently liabilities are greater than the security deposits collected.

Liabilities are generated over the full life-cycle of the mineable oil sands industry. AENV identified its role in collection of reclamation security deposits. AENV collects security deposits during operations of a mine. If an operator defaults on its reclamation activities, AENV may use the security deposit. AENV noted that a review of the security program is required.

The tailings directive has the intent of progressively reclaiming fluid tailings and thereby limiting or removing liability. A meeting was requested to discuss this matter further. (See action item #1.)

Q2. Tailings accumulation in the past has exceeded projected volumes. Is that issue going to be a planned recurrence?

The ERCB's intent is that existing operators restrict storage requirements to original approved application volumes.

Q3. An expansion is currently before the Board with an additional impoundment. Will this be the norm?

No. The intent of the directive is to limit the amount of tailings production.

Q4. Will large external containments continue?

Yes. New ponds associated with new projects will be required. The intent is to reduce the volume of tailings ponds.

Q5. How will the ERCB measure the success of the tailings directive? What are the consequences to industry if they don't comply?

The draft directive includes performance measures for fluid tailings reductions and formation of trafficable deposits. The draft directive requires reporting within a tailings plan on fluid tailings volumes and milestones for "ready to reclaim" landforms.

In the event of noncompliance, the ERCB applies *Directive 019: ERCB Compliance Assurance—Enforcement*.

If the operator still doesn't comply, the ERCB has the authority to implement reviews of sites, limit production, delay current applications and shut sites in. These options are not entertained unless there is significant noncompliance.

The ERCB will assess operators' compliance with the performance criteria. Operators will submit annual reports for ERCB assessment.

Q6. What is CT?

Composite tailings (or consolidated tailings) is a mixture of fluid tailings, coarse sand, and a coagulant. (See definition in Appendix A of the draft directive.)

Q7. Will reports on irregularities, exceeded levels, leaks, and spills be publically accessible?

Currently, this information is accessible by the public. The ERCB may approve, on application, special studies and experimental schemes progress reports to be held in confidence for limited periods.

Q8. Is there an issue with reusing water? If water is going to be released when tailings are consolidated, why can't this be recycled?

Operators already recycle a large portion of their process-affected water. There are environmental issues with respect to releasing this water. The water chemistry differs from receiving bodies.

Q9. A concern was raised about the release of process-affected water. What kinds of naphthenic acids are toxic and what are the limits for the release of these?

The discharge of process-affected water is not allowed. Groundwater monitoring programs are in place to monitor for leakage from tailings ponds. With respect to the release of naphthenic acids, guidelines exist and additional work is under way. Naphthenic acids exhibit chronic and acute toxicity, depending on concentrations and type, and may be consumed by bacteria. Some exist naturally in this environment, and some are naturally released through the ore body.

Consultation with downstream communities is requested if there is a release of process-affected water.

Q10. Will rehandling of tailings be part of the new requirement?

Yes. Rehandling of segregated tailings not within the definition of CT or equivalent deposits is required. (See draft directive, Section 4.1.)

Q11. How do existing developers deal with multiple ponds? How does the directive apply to legacy volumes of tailings in existing ponds?

The intent of this directive is to reduce the inventory of fluid tailings. The directive works towards measuring and reporting the fluid tailings inventory; this will be made available to the public. The directive does not explicitly address existing legacy volumes. (The consumption of fluid tailings will be from either legacy volumes or current produced volumes. This directive does not specify the method, but rather specifies the required outcome.) Legacy volumes may be the subject of subsequent revisions to the directive.

Q12. What are the volumes, types, and composition of tailings produced? What are the tailings recycle water composition trends over time?

Operators are required to file tailings reports. As fluid tailings volumes are difficult to measure, one goal of the directive is to ensure consistent measurement methods. The ERCB will work with industry to determine how inventory of fluid tailings will be measured and reported. (See Appendices B, E, and F of the draft directive for more details.)

The reports are supplied to the ERCB. AENV also has reporting requirements for the tailings ponds and dams (e.g., tailings dams are regulated by the Dam Safety Branch of AENV).

Q13. What is the timeline of the draft? When can we expect a final version? When will the notes from the workshops be released?

The information from this workshop will be collected, summarized, and released as soon as possible. The directive is expected to be issued in the fall of this year. Before the directive is issued, the ERCB will assess the information gathered from all input received and consider modification to the directive. The analysis of the information gathered will be issued to industry and other stakeholders. (See action item #2.)

Revisions to the directive and /or additional tailings regulations are anticipated. *Directive 056* is a past example where incremental changes were made as required.

Q14. What are examples of past ERCB criteria?

There are no past criteria specific to tailings. (An example of ERCB regulation with performance criteria is *IL 88-13: Sulphur Recovery Guidelines—Gas Processing Operations*.)

Q15. This draft directive contains criteria for managing tailings volumes. When will criteria be developed for the safety of workers or wildlife?

Wildlife management is not within the ERCB's mandate. Wildlife issues may be addressed in AENV approvals. The ERCB works with AENV and with other departments as necessary to address relevant wildlife issues. Until the production of fluid tailings ceases, wildlife safety will be an issue. Mitigation measures, including wildlife deterrent systems, need to be reviewed. (Worker safety is the responsibility of Workplace Health and Safety in Alberta Employment and Immigration.)

Q16. Why are there so many industry members in attendance?

Industry representatives were invited to attend and to listen to stakeholder concerns.

Q17. What will the landscape look like? Will reclamation occur faster? Will there be progressive reclamation?

The effect of the directive will be to reduce the number of ponds over time and to create trafficable landscapes suitable for reclamation.

Other criteria were considered during the development of the draft directive. The two key criteria within this draft were selected as a place to start to regulate tailings operations.

Industry participants indicated that reclamation would vary on a site-by-site basis, e.g., due to variations in the ore body.

Q18. How will the ERCB measure the magnitude of the change as a result of the tailings directive? Will 45% sand consumption result in zero net inventory? What is the ERCB's bottom line?

The long-term goal is to minimize and eventually eliminate fluid tailings. The first tool to limit the inventory of fluid tailings is to increase the consumption of mature fine tailings through CT. This is intended to create a zero net inventory. Although CT will not be the complete solution, the directive will slow the rate of increase of fluid tailings. Other technologies will be required to accomplish the goal of zero net inventory. (See action item #3.) A participant cautioned that the ERCB should manage expectations regarding the effect of the directive.

Q19. What can be done to reuse waste? Are there any studies to recycle liquid waste from the tailings pond? When will the research be applied?

Yes, lots of research has been done, for example, by CONRAD and individual operators. The information needs to be communicated to the public in a less technical format. A request was made to summarize this work in a public format. (See Action item # 4.)

Some groups have reported over-consultation (e.g., with respect to applications) and under-consultation (e.g., with respect to research sharing).

Studies and pilot tests are being done on tailings centrifuging, paste thickening, and drying.

Q20. Does the ERCB consult First Nations? Is there adequate and effective consultation with First Nations and government? First Nations and industry?

The scope and meaning of the term “consultation” were discussed.

The following concerns were expressed:

- There is not enough consultation or dialogue with the First Nations or the public.
- Traditional knowledge has to be incorporated into the directive through a meeting with the First Nations. (See action items # 1 & 3.)
- First Nation's input is needed with respect to subsequent revisions to the directive. (Future action item.)

Q21. Who else is here from the public? Why was this meeting held on the same day as the CEMA General Meeting?

First Nations should not be referred to as public. It was their perspective that regulators and industry do not understand the First Nations' relationship with the land and wildlife.

Concern was raised about a lack of representation by the general public at this meeting. The draft directive was released for public review on the ERCB Web site. Input was received from Northern Lights Health Region and the Pembina Institute. One-on-one meetings are still possible upon request.

Concern was raised regarding meaningful government consultation. First Nations should have more input regarding the leasing of land and their impact on the needs of the First Nations. (See action item # 5.)

Q22. Is the timing of the directive too aggressive? Is the ERCB able to capture all concerns before finalizing the tailings directive?

The intent of the ERCB is to finalize and release the tailings directive by fall 2008. The ERCB will continue to work with stakeholders to ensure that concerns and suggestions are incorporated where appropriate. Subsequent revisions to the directive are contemplated to address further aspects of tailings management. Some industry and First Nations participants shared the view that the directive was proceeding too quickly.

Q23. What would happen if the directive were not issued in 2008?

A participant responded that the reputation of the regulator and industry would be irreparably damaged. Another participant indicated that industry was obliged to deal with the issue as a business decision.

Action Items

- 1) ERCB will arrange a meeting or meetings with First Nations, SRD, & AENV regarding the draft directive.
- 2) The assessment of inputs received will be circulated to workshop participants and other interested stakeholders.
- 3) The ERCB staff will monitor the effect of 45% sand utilization on total MFT volumes.
- 4) The ERCB will consider public reporting on tailings performance at operations.
- 5) The ERCB will arrange a meeting with First Nations to discuss hearing process, other ERCB directives, and the ERCB function and decision-making process.

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