Mine Financial Security Program and Tailings Management Framework Review

ENGO Caucus Submission

ENGO Caucus of the Tailings Management Framework – Mine Financial Security Program Working Group | August 15, 2017

Foreward

This submission has been prepared by the Environmental Non-Governmental Organization (ENGO) caucus for Alberta Environment and Parks (AEP). It comprises our final deliverable for the Tailings Management Framework (TMF) – Mine Financial Security Program (MFSP) multi-stakeholder working group engagement, which occurred between May and July 2017, as well as our input on the overall MFSP to the MFSP Review Working Group. The ENGO caucus is comprised of the Pembina Institute, Alberta Wilderness Association, and Keepers of the Athabasca.

The ENGO caucus has appreciated the opportunity to engage with the Government of Alberta and other stakeholders on modifications to the MFSP, as required to meet the policy intent of the TMF. However, the caucus asserts that the scope of the working group was narrow and did not permit discussion of the presently inadequate management of environmental and financial risks from oilsands mining. The ENGO participants in the working group believe that the MFSP's asset to liability approach misrepresents the liability risk to the Crown and improperly transfers significant public liability to future generations of Albertans.

This submission is correspondingly divided into two parts: Part One delineates recommended modifications to the MFSP that will address both the shared ENGO perspective of major gaps in the program as well as the concerns raised by the July 2015 report from the Office of the Auditor General. Part Two describes the ENGO caucus' final input on the Options Report prepared by AEP on possible modifications to the MFSP to implement the policy intent of the TMF.

Part One: Commentary on the Mine Financial Security Program

Concurrent to the AEP's MFSP-TMF Review working group, the Government of Alberta is conducting a comprehensive internal review of the Mine Financial Security Program. The ENGO caucus has correspondingly prepared five recommendations to address systemic gaps with the MFSP for AEP to consider as it conducts its review of the program. These recommendations are as follows (Please note that since the coal sector has posted full security, this discussion pertains specifically to the oilsands sector):

1. Full security posted for oilsands mining operations
2. Review of liability calculation methodology
3. Unprejudiced public disclosure of liability data
4. Overhaul of asset to liability calculation
5. Revisions to Reserve Life Index (RLI) Calculation

The most urgent, critical, and heavily emphasized recommendation of the ENGO caucus is the first: **securing the equivalent of the oilsands sector's full financial liability**. Recognizing that this is a significant change to security collection in the sector, incremental changes will be necessary in the interim to ensure the MFSP actually "protect[s] the public from paying for end-of-life project closure costs."[1] The July 2015 Auditor General report states "for the design and operation of the MFSP to fully reflect the intended objectives of the program, improvements are needed to both how security is calculated and how security amounts are monitored."[2] The Auditor General recommends the following three things be reviewed: overstatement of asset values, inappropriate extension of mine life and enhancement of monitoring and auditing conducted by the AER. We are convinced that the calculation of liability must also be reviewed. Finally, we support changes to auditing and monitoring to ensure the AER is more proactive in understanding risk and liabilities but understand those changes have already been made.

[1] Alberta Energy Regulator, "Mine Financial Security Program." http://www.aer.ca/abandonment-and-reclamation/liability-management/mfsp

[2] Auditor General of Alberta, *Report of the Auditor General of Alberta July 2015* (2015), 27. https://www.oag.ab.ca/webfiles/reports/OAG%20Report%20July%202015.pdf

Recommendation #1: Full security should be posted for the cost to reclaim and close all currently disturbed land

- Security could be posted either in cash, letters of credit, or another agreed upon form.
- Per Section 3 of the current MFSP guide, liability should be comprehensively assessed and submitted annually.
- Full security could be gradually collected over a 10 year period, wherein existing operators are obliged to post 10% per year until 100% is secured.
- Pending further analysis and stakeholder consultation, the ENGO caucus is open to considering security contribution arrangements that could balance government revenue requirements with operators' tax burdens.
- Security contributions will be returned as stages of remediation and reclamation activities are completed, with the final amount returned after reclamation certificates are issued by the Government of Alberta and a sufficient warranty period has expired.

Rationale

Liability remains with approval holder

- Under the current MFSP, oilsands developers may offer undeveloped oilsands reserves as collateral for their liability costs. This approach exposes Albertan and Canadian taxpayers to considerable unfunded liabilities beyond that currently held in the program[3]; as the long-term economic viability for oilsands mining in the 21st century is increasingly uncertain. This is due to unknown future international oil prices, ever-accelerating global transitions toward decarbonized energy systems, and the comparatively high start-up and operations costs of the oilsands mining industry.
- In its 2015 report on the oilsands mining sector, Alberta's Auditor General explicitly addresses this risk to taxpayers and supports the value of a full security approach. Specifically, the report states"[b]ecause the MFSP has been designed using an asset-to-liability approach rather than a full security approach, Albertans bear a degree of risk that reclamation will not be completed by the mine operator."[4]
- It follows that if an existing operator is unable to complete extraction of their reserves for economic reasons, it is debatable whether the province or another operator will be

[3] As of June 2016 $1.38 billion held in MFSP security compared to estimated liability of $23.2 billion (for coal and oilsands mines)

[4] Auditor General of Alberta, *Report of the Auditor General of Alberta July 2015* (2015), 27. https://www.oag.ab.ca/webfiles/reports/OAG%20Report%20July%202015.pdf

able to do it viably either. Moreover, if one oilsands mining operator defaults on its liabilities, there is a high risk that others will as well, particularly given the recent concentration of Canadian ownership in the sector. As the “Redwater”[5] legal decision clearly indicates, receivers acting on behalf of defaulting companies are not legally obligated to address outstanding liabilities of failed companies but they are entitled to utilize outstanding assets.

Encourage Progressive Reclamation

- Posting full security would strongly motivate progressive reclamation activities, in effect minimizing operations' liabilities over time. As the Auditor General Report (2015) states, "[i]f incentives are not in place to reclaim lands as soon as reclamation is possible, mine sites may remain disturbed for longer than necessary and Albertans face a larger risk that they will end up having to pay the eventual reclamation costs.”[6] Under the current program, operators set their own targets for reclamation activities and tailings treatment, and if they don’t meet those targets management actions may be imposed by the regulator. The current system thereby encourages operators to err on the side of longer planning horizons, and built-in contingency to avoid the risk of being in non-compliance. By posting full security, the incentive to progressively treat and reclaim and thus reduce the liability and recover posted security will be significant.

Consideration of Financial Implications

- The MFSP Guide prescribes that when an approval holder pays full financial security, "[the] liability must be calculated based **on the current state** of disturbance at the approval holder’s mine and plant sites.”[7] Consequently, even under this proposal a new operation will have much lower security to post than more mature operations.
- Moreover, under the MFSP mature operations that are within 16 years of the end of their mine’s operating life are currently required to begin posting financial security in increments of 10% per year until they have posted 100% by year six before end of mine life.[8] Therefore this proposal will not significantly impact the most mature operations.
- The timing for collecting full security is now. Operators’ capacity to pay is actually high and posting full security is possible. The following points provide evidence of deep financial resources and healthy cash flow in the sector.

[5] Tracy Johnson, “Creditors over environment: Alberta Court of Appeal upholds Redwater Energy decision,” *CBC News,* April 24, 2017. http://www.cbc.ca/news/canada/calgary/redwater-energy-appeal-dismissed-alberta-bankruptcy-environment-creditors-1.4083474

[6] *Report of the Auditor General of Alberta July 2015*, 30.

[7] Alberta Energy Regulator, *Guide to the Mine Financial Security Program* (2017), 16. https://www.aer.ca/documents/liability/MFSP_Guide.pdf Guide to the Mine Financial Security Program.

[8] This is the Operating Life Deposit or OLD.

- Large acquisitions occurred in the sector over the last 12 to 24 months that indicate significant financial resources. Namely, CNRL bought Shell and Marathon oilsands assets for $12.74 billion[9] in March of 2017 and Suncor acquired Canadian Oil Sands Ltd for $4.9 billion[10] in March 2016. As evidenced by 2017 quarterly reports, cash flows in the sector are also healthy. In the first quarter of 2017, Suncor reported[11] oilsands operating costs of $22.55/barrel and started[12] a $2 billion share buyback program. Despite major second quarter maintenance programs, in July 2017 Suncor reported[13] that its total quarterly cash flow was $1.7 billion. Imperial Oil announced[14] a significant increase in its first quarter 2017 operations cash flow. In July 2017, Imperial reported[15] second quarter cash generated from operating activities of $492 million, dividends and share purchases totaling $250 million, and confirmed a significantly expanded share buyback program to "return surplus cash to shareholders." On May 4, CNRL announced[16] a substantial increase in the size and sustainability of its cash flow, with oilsands mine operating costs of approx. $22/barrel. In July 2017 CNRL announced[17] second quarter funds flow from operations of $1.7 billion and stated that it expected "positive significant free cash flow growth" for the remainder of the year.

- In the May 2017 response from Teck Resources Ltd. (Teck) to the Joint Review Panel for the Frontier Oil Sands Mine Project CEAA application, Teck states that they are able to provide full security. In this submission, Teck proposes:

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[9] Dan Healing, "Canadian Natural buying Shell, Marathon oilsands for $12.74B," *The Star*, March 9, 2017. https://www.thestar.com/business/2017/03/09/canadian-natural-buying-shell-marathon-oilsands-for-1274b.html

[10] Suncor, "Suncor Energy completes acquisition of Canadian Oil Sands," news release, March 21, 2016. http://www.suncor.com/newsroom/news-releases/2036304

[11] Marketwired, "Suncor Energy reports first quarter 2017 results," *BOE Report*, April 26, 2017. http://boereport.com/2017/04/26/suncor-energy-reports-first-quarter-2017-results/

[12] Suncor, "Suncor Energy announces increased return to shareholders and early repayment of US $1.25 billion bond," news release, April 26, 2017. http://www.suncor.com/newsroom/news-releases/2140460

[13] Suncor, "Suncor Energy reports second quarter 2017 results," news release, July 26, 2017. http://www.suncor.com/newsroom/news-releases/2156149

[14] CNW, "Imperial announces first quarter 2017 financial and operating results," *Cision,* April 28, 2017. http://www.newswire.ca/news-releases/imperial-announces-first-quarter-2017-financial-and-operating-results-620713113.html

[15] Imperial, "Imperial announces second quarter 2017 financial and operating results," news release, July 28, 2017. http://www.imperialoil.ca/en-ca/company/media/news-releases/170728-second-quarter-earnings

[16] Seeking Alpha, "Canadian Natural Resources (CNQ) Q1 2017 Results - Earnings Call Transcript," May 4, 2017. https://seekingalpha.com/article/4069327-canadian-natural-resources-cnq-q1-2017-results-earnings-call-transcript

[17] Marketwired, "Canadian Natural Resources Limited Announces 2017 Second Quarter Results," Aug 3, 2017. http://www.marketwired.com/press-release/canadian-natural-resources-limited-announces-2017-second-quarter-results-tsx-cnq-2228801.htm

> [a]lthough full security is not required under the current MFSP, in the event that Teck chooses or is required to provide full security payment based on the MFSP calculation, a maximum security of approximately $4.3 billion throughout the life of the Project would be required. Being a diversified resource company provides Teck with stable cash flows and the ability to endure through challenging economic times. Teck believes this will allow the necessary financial security, if required by the MFSP at the time.[18]

- Finally, the oilsands industry represents significant government revenues in terms of royalties and other taxes and reducing these revenues in any way may seem objectionable. However, it is important to remember the public cleanup costs should any operators default on their liability would *dramatically* eclipse any interim impact to annual provincial revenues under this proposal.

Recommendation #2: Revise MFSP liability calculation methodology

- The current approach to evaluating oilsands mine liabilities is inadequate, particularly in relation to capturing total costs to reclaim boreal wetlands and to treat and reclaim fluid tailings.
- The liability calculation should be revised, with operators given much more detailed direction on what to include and how to factor in uncertainty, risk, and contingency.
- For operations that propose to place fluid tailings in end pit lakes, liabilities should reflect the costs of implementing trafficable surface outcomes in the event water capping technologies prove ineffective, unapproved by the regulator, and/or prohibitively socially unacceptable.
- All liablity costs must continue to be based on third-party costs.

Rationale

- Oilsands mining is a relatively young industry, with very little progress made to date on reclamation of the disturbed landscape (i.e., 90,416 ha disturbed, of which 5,901 ha is reported as permanently reclaimed and 104 ha has been certified as reclaimed).[19]
- Fluid tailings are a particularly significant component of an oilsands operator's end of mine life liability. [20] With respect to the categories delineated in the MFSP Guide,[21] it is not

[18] Teck Resources Limited, Frontier Oilsands Mine Project, May 2017. Response to Information Request Joint Review Panel Package 5. p5-54 http://www.ceaa-acee.gc.ca/050/documents/p65505/119231E.pdf

[19] Alberta Environment and Parks. Oil Sands Information Portal. Regional Totals for Reclamation and Disturbance Tracking, by Year (2014), http://osip.alberta.ca/library/Dataset/Details/27

clear if the operational costs of treating tailings are in fact included in the liability calculation. All components of the liability calculation should be identified and clearly communicated so that there is consistency across the sector.

- There remain significant risks and uncertanties in terms of how quickly and effectively various tailings treatment technologies will ensure progress towards self-sustaining closure landscapes. Treatment technologies deployed to date have not demonstrated long-term commercial success, and the Tailings Management Plans (TMPs) submitted in proposed compliance with Directive 085 in November 2016 are based largely on unproven technologies. In particular, these plans rely heavily on water capped fluid tailings.
- In addition to the significant treatment costs of fluid tailings, reclamation is still a relatively new endeavour in the oilsands industry, and more complex substrates such as fluid tailings have never been reclaimed. Historical costs of reclaiming terrestrial uplands are therefore not representative of creating muskegs, bogs, wetlands or uplands that contain treated tailings. As a result, the ENGO caucus is concerned that true costs of successfully reclaiming total land disturbed by oilsands mining are still highly uncertain and likely understimated at this time – particularly if water capping is ultimately not technically viable or socially acceptable to local stakeholders.

Recommendation #3: Public disclosure of liability data

- The detailed costs that make up each individual operator's current and total liability must be disclosed.
- This disclosure should include what factors were applied to capture uncertainty, risk and contingency.

Rationale

- The AER has committed to disclosure and transparency. Liabilities associated with cleaning up the environmental impact of oilsands operations are key information that must be shared with Albertan citizens as the resource owners. To date, disclosure of data and methodologies related to liability calculations has been extremely inadequate.
- Federal government and regulatory bodies in Canada (such as CEAA) are currently emphasizing the need for 'Open Data' systems to improve transparency and increase access to information for stakeholders and concerned citizens.

[20] To date, Syncrude has spent over $1.5 billion on centrifuges at Mildred Lake Mine, Suncor has spent over $2.5 billion on tailings reduction operations, CNRL has spent more than $1.5 billion on NST and other tailings treatment technologies and one might argue none have achieved commercial scale success.

[21] *Guide to the Mine Financial Security Program*, 16.

- The MFSP Guide states that the "Other Liability" included with MFSP liability consists of items "which may be excluded from the ARO calculation."[22] Disclosure of components within the ARO as well as "Other Liability" will provide the AER and the public the ability to better assess the associated liability.
- Teck Resources Ltd. has provided an itemized reclamation estimate in their response to the Joint Review Panel for their Frontier Oil Sands Mine Project CEAA application that is much more detailed than anything we've seen from existing operators (see Annex A**)**. The addition of detailed reclamation costs associated with different closure outcomes (terrestrial/wetlands/open water) , and factors used to reflect risk, uncertainty and contingency, would meet the intent of this recommendation.

Recommendation #4: In the absence of Full Security, revise MFSP asset calculation

- The ENGO caucus strongly emphasizes that full security should be collected, per Recommendation #1. In the alternative, if the asset to liability approach is maintained, the MFSP assets calculation should be revised to include only proven reserves and better reflect future economic risk to the sector.

Rationale

- The 2015 Auditor General's report[23] states "the MFSP asset calculations do not incorporate a discount factor to reflect risk, use a forward price factor that underestimates the impact of future price declines, and treat proven and probable reserves as equally valuable." The Auditor General recommends that Alberta Environment and Parks "review the asset calculation to ensure it is not overestimating asset values [and] demonstrate that it has appropriately analyzed and concluded on the potential impacts of inappropriately extended mine life in the calculation."[24]
- With the provincial, federal and global commitment to curb the most dangerous impacts of climate change come direct impacts on carbon intensive fuels. There is an increased likelihood that the Alberta oilsands will not be developed as currently planned. If this occurs, the remaining bitumen assets that are currently undeveloped will be worth far less than previous estimations. As a result, asset to liability approach needlessly exposes the Crown to the potential liability of failed bitumen mine and processing plant operations. Despite industry's intentions to the contrary, there are many precedents for

[22] *Guide to the Mine Financial Security Program*, 16.
[23] *Report of the Auditor General of Alberta July 2015*, 25.
[24] *Report of the Auditor General of Alberta July 2015*, 9.

mining companies walking away from closure and reclamation responsibilities when asset values decline.[25]

- An asset to liablity formula is simply not a prudent approach to protecting the public from paying for significant future clean up costs. The current use of probable reserves to back stop a real liability serves to compound this risk.

Recommendation #5: In the absence of Full Security, revise MFSP Reserve Life Index (RLI) Calculation

- Revise the calculation for RLI to prevent inappropriate extensions to mine life that defer collection of security and set back progressive reclamation objectives.

Rationale

- In situ reserves should not be used to delay payment of the operating life deposit (OLD). The MFSP guide states "[r]eserves owned by the approval holder that are associated with in situ production tied to an MFSP upgrader are included in the RLI calculation."[26]
- Furthermore, the Auditor General's report raises the concern that operators are currently able to combine multiple mines under one approval or amend the areas under an approval,[27] thus increasing the resource asset and delaying the collection of the operating life deposit for an operation nearing its end of life.
- The opportunity to defer when RLI reaches 15 or less (which would trigger the start of payment of the OLD) simultaneously removes the pressure to reduce outstanding liabilities which equates to less motivation to progressively reclaim the disturbed footprint.

Part Two: Commentary on the Options Report

As stated above, collecting full financial security from oilsands approval holders would protect the public from insolvency risk and would incent progressive treatment and reclamation of fluid tailings as well as other operational disturbance. In addition to an operator posting full financial security, a fluid tailings performance deposit (FTPD) should be collected for exceeding an approved fluid tailings profile. As requested by AEP to conclude the TMF –MFSP Review

[25] Faro mine operated from 1969 to 1998 and the Yukon government is saddled with $700M cleanup. Giant mine operated from 1948 to 2004 in the Northwest territories, expected to cost the federal tax payer (all of us) $1B to clean up. BC has estimated $500M to clean up abandoned industrial sites, 90% of which are mines.

[26] *Guide to the Mine Financial Security Program,* 25.

[27] *Report of the Auditor General of Alberta July 2015*, 30.

Working Group, the ENGO caucus provides in this section our final feedback on the AEP's Options Report and the FTPD. Our recommendations are organized in accordance with the corresponding sections of the Options Report:

1. Background on the TMF threshold system (Section 4 of Options Report)
2. Proposed Fluid Tailings Performance Deposit (Section 5 of Options Report)
3. Options for Potential Financial Security Requirements related to Threshold Exceedances (Section 6 of Options Report)
4. Potential Reporting and Review Requirements Related to the Proposed FTPD (Section 7 of Options Report)

Background on the TMF threshold system (Section 4 of Options Report)

Recommendation #6: Profile Deviation Trigger Calculation

- The profile deviation trigger must be an annual calculation and not a rolling average, and it must apply to both growth and decline phases.
- The profile deviation trigger must be calculated on the expected annual *growth* or *decline* of fluid tailings (i.e., the expected annual *change* in inventory).

Rationale

- In order to respond in a sufficiently timely manner to deviations from the approved fluid tailings profile, the Profile Deviation Trigger must be calculated annually, rather than being based on a five year rolling average as suggested by the TMF.
- Due to the shape of most submitted fluid tailings profiles, the Profile Deviation Trigger will be the most responsive threshold for regulating tailings. By contrast, exceeding the 'Volume Trigger' or the 'Volume Limit' represents a material risk for most operators only over a very short period of time, when they are operating at peak fluid tailings inventory.
- The Profile Deviation Trigger must apply to the decline phase of legacy fluid tailings as well as the decline phase of new fluid tailings. Non-compliance during the decline phase is of particularly significant concern, since it represents the final opportunity to meet end of mine life goals.
- The Profile Deviation Trigger must be calculated on the expected annual *change* in inventory, as opposed to the overall inventory. If the overall inventory is used, at higher inventories a larger deviation would be required to exceed 20%. For example, when an operator's inventory is 20 Mm^3,missing their treatment goals by 5 Mm^3 would exceed

the 20% threshold, and yet with an inventory of 100 Mm^3 they could miss their annual treatment volume by 20 Mm^3 before hitting the 20% threshold.

Recommendation #7: Fluid Tailings Performance Deposit should be used beyond Ready-to-Reclaim

- The FTPD tool should also be used in cases when fluid tailings that have met the Ready-to-Reclaim (RTR) requirements are not on track to meeting subsequent Ready-for-Reclamation (RFR) criteria in accordance with approved timelines, but do not end up back in the FT inventory

Rationale

- The fluid tailings profile tracks the treatment of fluid tailings to reach ready-to-reclaim (RTR) state, as defined by operators. However, the ENGO caucus contends that RTR is a misnomer in that achieving RTR is merely an intermediate step along the trajectory to ready-for-reclamation (RFR) and, most importantly, achieving final closure outcomes. Since there is a substantial amount of time and level of activity required in managing fluid tailings deposits after they achieve RTR, the AER needs a compliance tool for monitoring and managing the phase from RTR to RFR.

Proposed Fluid Tailings Performance Deposit (Section 5 of Options Report)

Recommendation #8: Fluid Tailings Performance Deposit Intent

- The FTPD should provide an immediate and continuous incentive for progressive treatment of fluid tailings, by making the cost of deferring tailings treatment greater than the cost of treating fluid tailings.
- The FTPD should also financially backstop the increased environmental risk and liability associated with fluid tailings at oilsands mining projects that have deviated from their approved tailings management plans.

Rationale

- This proposal will make the FTPD design consistent with the Outstanding Reclamation Deposit (ORD) in the MFSP, which manages and monitors reclamation activities after they reach RFR. As stated in the MFSP Guide, “[t]he outstanding reclamation deposit (ORD) is intended to operate as an immediate and continuous incentive, by making the cost of deferring reclamation greater than the cost of reclaiming."[28] It follows that decisions by approval holder must always favour proactive treatment of tailings.

- Avoiding any exceedances of approved fluid tailings profiles should remain a primary objective of the compliance and enforcement mechanisms for Directive 085. This is in part because the Directive allows operators to develop their own fluid tailings profiles based on their own definition of RTR. It is reasonable to assume that operators are building in adequate flexibility and contingency in these proposals, and that the proposed profiles therefore represent absolute maximum fluid tailings inventories. Any exceedance of the project specific profile therefore indicates significant mismanagement of fluid tailings, and this form of non-compliance should therefore warrant strong management responses to reduce the risk to both stakeholders and the province.

Recommendation #9: Impact of FTPD to existing deposits under the MFSP

- **The FTPD is a distinct non-compliance deposit in the MFSP and should not reduce other elements of the existing MFSP program. The overall calculation should be adjusted as follows:**

  Required Financial Security = BSD + OLD + ASFD + ORD ***+ FTPD***

  or

  Required Financial Security = MFSP Liability ***+ FTPD***

Options for Potential Financial Security Requirements related to Threshold Exceedances (Section 6 of Options Report)

Recommendation #10: FTPD dollar amount per cubic meter of Fluid Tailings

- The dollar amount per cubic meter of fluid tailings should be based on the premise that costs for treatment should be less than deferring treatment and paying financial security.
- The amount of $\$30/m^3$ would likely ensure that implementing future treatment technologies under a range of operational circumstance remains preferable to paying the FTPD.

Rationale

- As previously explained, the intent of the FTPD is to provide a lasting incentive to avoid exceedances of approved fluid tailings profiles.

[28] *Guide to the Mine Financial Security Program*, 25.

- $30/m^3 reflects uncertainties and risks with fluid tailings treatment technologies, and effectively acknowledges that end landscape plans may change over time to achieve a functioning boreal forest or wetland ecosystem based on commitments to local stakeholders. To achieve this, technologies need to be flexible and adaptable.
- $30/m^3 would provide for treatment technologies that would achieve a terrestrial end landscape, as a drier deposit would be comparatively more expensive to achieve.
- $30/ m^3 reflects third party treatment costs (as per the MFSP[29]).
- A simple design for the FTPD ensures better understanding and acceptance by stakeholders as well as easier implementation. We therefore <u>do not agree</u> with allowing varying amounts for different operators, technologies, deposit types, or stages of the operation. Instead, we recommend that the amount chosen is sufficiently high to provide adequate and compelling incentives for *all operators* regardless of their specific circumstances.
- The ENGO Caucus wishes to point out that the Specified Gas Emitters Regulation[30] sets penalties for non-compliance with the regulation at $200 per tonne, which amounts to more than ten times the cost of compliance. This sets a precedent from the AER for strong fiscal incentives, and provides critical perspective that the $30/m^3 proposed by the ENGO caucus in this submission is comparatively moderate.
- During an MFSP-TMF Review Working Group meeting, COSIA presented a study that estimated fluid tailings treatment costs to be between $5-$8/ m^3. However, it was acknowledged that these costs did not reflect third party costs, degrees of uncertainty, contingency plans, or the possibility of achieving terrestrial outcomes (i.e., they were based solely on water capping treated tailings). Moreover, the Industry Caucus' proposed approach of picking an average cost would effectively render the FTPD cheaper than fluid tailings treatment for some operators and/or certain treatment options. This is categorically unacceptable, in that it could incent the opposite actions of what is desirable. With these factors in mind, the ENGO sector emphatically urges AEP to consider a far more holistic and comprehensive cost per cubic meter of fluid tailings that will ensure operators are always motivated to treat their tailings rather than pay the FTPD.
- The AER/Research Caucus proposal suggests using a percentage of total calculated MFSP liability as a factor for calculating the FTPD. Since the FTPD is to be used as an incentive for progressively treating fluid tailings, the amount paid needs to be directly

[29] *Guide to the Mine Financial Security Program*, 1, 14, 15.

[30] Province of Alberta, Climate Change and Emissions Management Act, Specified Gas Emitters Regulation, Alberta Regulation 139/2007 with amendments up to and including Alberta Regulation 64/2017, 28. http://www.qp.alberta.ca/documents/Regs/2007_139.pdf

related to treatment costs. In our view, the AER/Research proposal removes the logical link between the choices that operators will be facing, and would ultimately lead to random and arbitrary outcomes. The aspect of the AER/Research Caucus proposal that we are strongly aligned with is the principle that FTPD costs must be high enough to incent compliance.

Recommendation #11: **Profile Deviation Trigger**

- Per the TMF, the profile deviation trigger occurs when the annual fluid tailings volume growth is exceeded by 20% or more **OR when annual fluid tailings volume decline is missed by 20% or more**.
- Exceeding the profile deviation trigger should require the approval holder to post $30/m^3 for every cubic meter of fluid tailing that is above the approved profile.
- In order to respond in a sufficiently timely manner to deviations from the approved fluid tailings profile, the Profile Deviation must be calculated annually and NOT based on a five year rolling average.
- The profile deviation trigger should also be used when operators are found to deviate year over year from their profile but do not breach the 20% threshold.

Recommendation #12: **Total Volume Trigger – New Fluid Tailings**

<u>Option 1 (Preferred particularly in the absence of a requirement for posting Full Security, as recommended in Part 1 of this report):</u>

- Exceeding the Total Volume Trigger requires that an approval holder posts $30/m^3 for each cubic meter in the entire fluid tailings inventory.

<u>Option 2</u>:

- Exceeding the Total Volume Trigger requires that an approval holder posts $30/m^3 for every cubic meter of fluid tailing that is above the approved profile.

Rationale

- The Total Volume is the absolute peak fluid tailings inventory level in an operator's plan, representing 100% of what the operator must adequately treat to be at the intermediate "ready-to-reclaim" stage within 10 years of the end of mine life. This is therefore the point in time when they have the most significant environmental and financial liability. Exceeding the Total Volume must result in serious management actions that sufficiently backstop this amplified liability and maximal degree of risk to the province.

Recommendation #13: Total Volume Limit – New Fluid Tailings

- Exceeding the Total Volume Trigger requires that an approval holder posts $30/m^3 for each cubic meter in the entire fluid tailings inventory.

Rationale

- Exceedance of the total volume limit (which AEP has drafted as140% of the peak planned inventory that must be at the intermediate 'ready-to-reclaim' stage within 10 years of the end of mine life) represents an unacceptable risk. Exceedance of this limit represents either severe mismanagement of tailings or treatment options that are clearly not working. This level of non-compliance raises serious doubts as to the operator's ability to get fluid tailings volumes back on track and ultimately must be avoided.

Potential Reporting and Review Requirements Related to the Proposed FTPD (Section 7 of Options Report)

Recommendation #14: Revisions to the MFSP Standard and Guide

- Any recommended changes to the MFSP Standard, MFSP Guide and other related regulations should be developed through a multi-stakeholder consultative process.

Rationale

- Revisions to the regulatory documents describing the MFSP will be required to implement the proposed FTPD. We specifically request that the revisions to the Mine Financial Security Program (MFSP) Standard, the Guide to Mine Financial Security or the supporting regulations and statutes be implemented through a collaborative consultation process which includes Alberta Environmental Network (AEN) delegates.

Recommendation #15: Return of Security

- In the case of a performance deposit collected when exceedances occur, the deposit will be returned once the company's fluid tailings profile is in compliance with the approved profile for two (2) consecutive reporting cycles as determined by an AER audit.

Recommendation #16: Review Requirements for the FTPD

- The FTPD should be reviewed in 2020 to coincide with the five year review of the TMF. After that the TMF, FTPD and Directive 085 should be reviewed on the same schedule at a minimum every five years.

The ENGO caucus of AEP's TMF-MFSP Working Group appreciates this opportunity to provide comments. Please do not hesitate to contact us should you have any questions.

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Annex A

Example of Liability breakdown from Teck Resources Frontier Mine Project Application.[31]

Table 5.4a-1: Reclamation and Closure Cost Detail

Description	Construction ($million)	Operations ($million)	Closure ($million)	Total Project ($million)
Mine	**201**	**5,569**	**2,566**	**8,336**
Reclamation material salvage and placement	201	1,542	1,062	2,805
Centrifuged fluid tailings system	0	3,391	29	3,420
Tailings area re-contouring	0	400	0	400
Reclamation and closure – other	0	235	58	293
ETA seepage management system	0	0	482	482
Staff and fixed inputs and contract indirects	0	0	210	210
Closure drainage system	0	1	470	471
Water monitoring system	0	0	81	81
Pit lake filling system	0	0	174	174
Plant CFT operations and closure	**0**	**3,134**	**126**	**3,260**
Owner[1]	**0**	**0**	**228**	**228**
Total	**201**	**8,703**	**2,920**	**11,824**

NOTES:
ETA = external tailings area, CFT = centrifuged fine tailings.
[1]Owner's costs includes items such as salaries, insurance, contract administration.

[31] Teck Resources Limited, Frontier Oilsands Mine Project, May 2017. Response to Information Request Joint Review Panel Package 5. p5-51 http://www.ceaa-acee.gc.ca/050/documents/p65505/119231E.pdf