FINANCIAL ASSURANCES WORKSHOP

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Introduction

This workshop was set up to explore what financial assurance options might be employed for various mines in Saskatchewan.

A work package was provided which included the following:

- draft Financial Assurance Regulations (Mineral Industry Environmental Protection Regulations (1995)

- a discussion of the types of financial assurances which might be available, as well as some advantages and disadvantages.(extracted from an "Evaluation of Financial Assurance Alternatives of Licensees", by John N. Douglas for Atomic Energy Control Board).

- a discussion on draft principles for an "Environmental Liability Reduction Covenant", a form of contractual agreement for reducing liability through ongoing decommissioning and reclamation during operation of an existing mine. This might be proposed as a financial assurance option to at least partially replace the building of a financial assurance fund.

- an extract from a report by a joint industry/government financial assurances taxation subcommittee, entitled "The Tax and Financial Implications of Financial Assurances for Reclamation in Saskatchewan".

- Three mining scenarios with different mine-life and liabilities.

After a brief presentation of the above material by the Facilitator, some general discussion occurred, raising the following points:

- Alberta system works to a constant reclamation scenario using a Letter of Credit. Companies used to pay on a cost per tonne basis, but this didn't work, as land wasn't certified as fast as reclamation occurred. A new system is assessed yearly with minimal administration. There are no tax implications. Some contingency is built in (about 25%). Was initially 65%, but has come down over time. More contingency is required for mountains than for prairies.

- B.C. also uses a Letter of Credit primarily, based on cost of reclamation.

- In Alberta, there is a minimal auditing process with regards to costing. There is a high level of trust in the numbers, due to experience. The general magnitude for coal financial assurance from as low as $2M to$3M, to as high as $15M. Letters of Credit work best.

- Ontario has a guideline of D&R and Financial Assurances. AECB's position is that soft assurances don't work. They have been burned by mine closures at Elliot Lake. In this instance, the company used their reputation as a guarantee. When closure came, they were broke. The public will probably be stuck with the bill for cleanup.

- "Perpetual maintenance" concept of reclamation still being used in Florida. There is apparently no ongoing discussion regarding financial assurances, but a growing realization that removal of liability is the answer.

- Concern about how to reasonably predict costs for D&R when closure is many years into the future: Possible answer - continue to project liability ahead to 5 years or less. Thus cost projections can have at least a reasonable level of confidence. If there is a low level of confidence, this will show up as an increase in the contingency.

- What protection do companies have against rules changing in the future, requiring a change in reclamation requirements.

  It was suggested that perhaps the best protection against this is to reclaim as soon as possible under existing approvals and regulatory regime.

  It perhaps should also be noted that in this era of developing partnerships, such turn of events is increasingly difficult to envisage.

Sub-Working Groups

The overall group split into three subgroups, each to evaluate one of the mine scenarios presented. The intent was to propose some financial assurance options, to fit the scenarios, and to identify questions and concerns over options and the financial assurance process. The results are attached.

Financial Assurance Workshop

Working Group Mine Scenario 1

Age of Mine: 10 years

Remaining Mine Life: 10 years

Decommissioning & Reclamation Liability (1999 $):

- *Infrastructure (bldgs; tankfarms; treatment plants; roads; pipelines; electrical; etc) - $2M*
- *Environmental (stabilize or remove tailings and wasterock /overburden/spoil; cleanup contaminated areas; recontour; revegetate; risk of failure contingency; etc.) - $2M*
- *Monitoring (during and post D&R) - $0.05 M/year*
- *Rate of Liability Accumulations as of 1999 - zero*

Time required to reclaim minesite after closure: 2 years

Post Decommissioning and Reclamation Monitoring Period: 3 years

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Working Group Mine Scenario 2

Age of Mine: 10 years

Remaining Mine Life: 20 years

Decommissioning & Reclamation Liability(1999$):

- *Infrastructure (bldgs; tankfarms; treatment plants; roads; pipelines; electrical; etc) - $15M*
- *Environmental (stabilize or remove tailings and wasterock /overburden/spoil; cleanup contaminated areas; recontour; revegetate; risk of failure contingency; etc.) - $20M*
- *Monitoring (during and post D&R) - $0.20 M/year*
- *Rate of Liability Accumulations as of 1999 - $2M/year*

Time required to reclaim minesite after closure: 10 years

Post Decommissioning and Reclamation Monitoring Period: 20 years

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Working Group Mine Scenario 3

Age of Mine: 30 years

Remaining Mine Life: 50 years

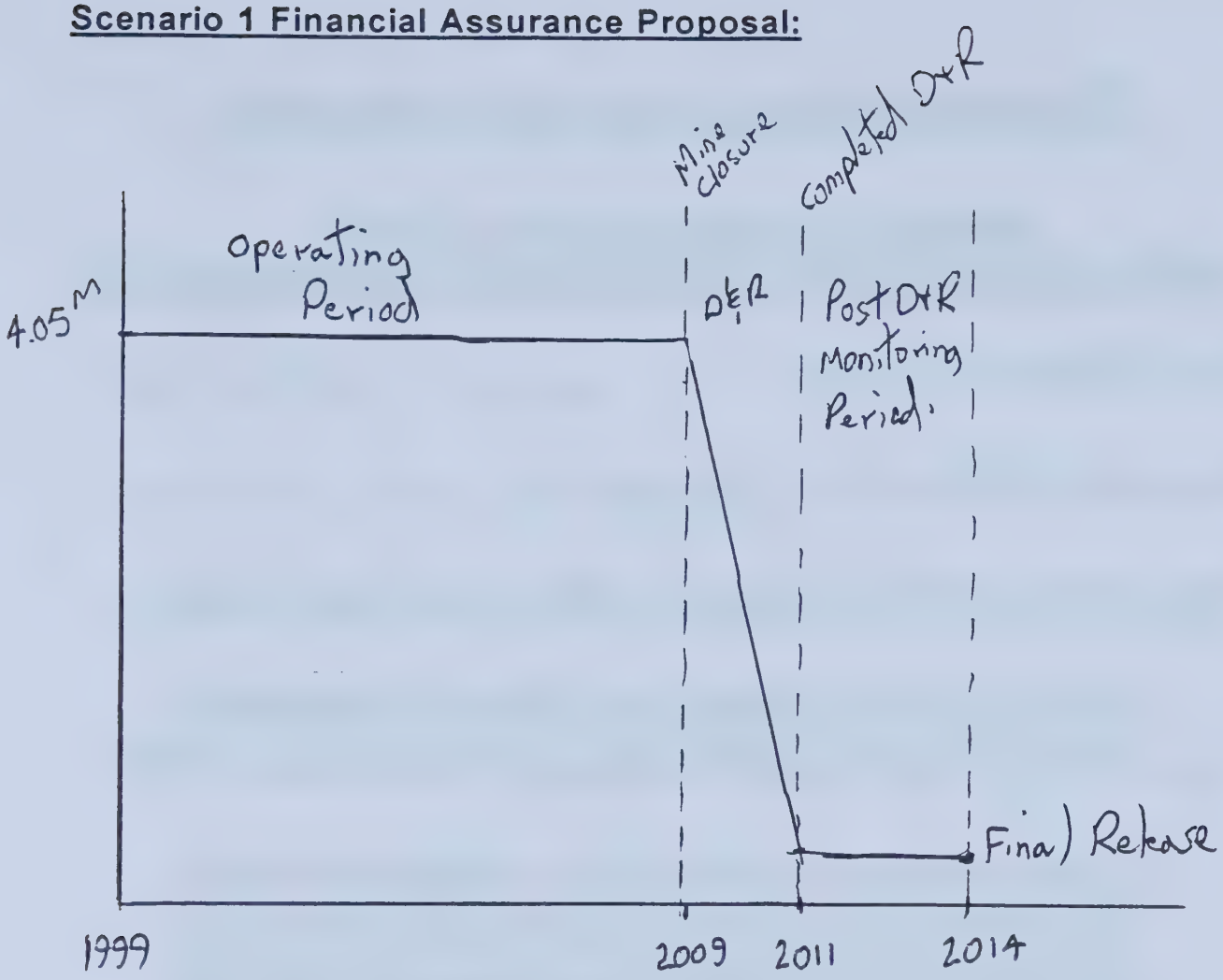
Decommissioning & Reclamation Liability (1999$):

- *Infrastructure (bldgs; tankfarms; treatment plants; roads; pipelines; electrical; etc) - $15M*
- *Environmental (stabilize or remove tailings and wasterock /overburden/spoil; cleanup contaminated areas; recontour; revegetate; risk of failure contingency; etc.) - $170M*
- *Monitoring (during and post D&R) - $0.20 M/year*
- *Rate of Liability Accumulations as of 1999 - $4M/year*

Time required to reclaim minesite after closure: 50 years

Post Decommissioning and Reclamation Monitoring Period: 20 years

Scenario 1 Financial Assurance Proposal:



Options:

1. Letter of Credit
   - 100% (yearly cost $40,000/year @ 1%)
   - + Contingency
2. Trust Fund
   - 10 years to accumulate
   - approximately 300,000/year
3. Asset Pledge
4. Trust/Letter of Credit

Scenario 1 Financial Assurance Proposal: (continued)

Other Points to Consider:

- Letter of Credit a good instrument for multi-mine or diversified company. It has a reasonable cost, (1/4% to 2%/annum) and the cost is tax deductible.

- If using a Letter of Credit, must still have the full amount in cash at the end of the mine life, to actually carry out the work, as well as to continue obtaining a Letter of Credit.

- Single mine companies and junior companies may have trouble obtaining a Letter of Credit. If they have to put up a trust fund and haven't got the cash, they might not continue to obtain an approval to operate (ie: concern over crippling the juniors).

- Would a Letter of Credit have to be maintained from year 10 to final release (ie: during D&R work and post D&R monitoring?).

- **Trust Funds** raise a concern about taxation of a trust fund, if that were used. Double taxation of the interest makes a trust fund unattractive.

- For a single mine operator, however, a trust fund may be the only choice.

- Expensive, ties up capital.

- **Pledge of Assets:**
  - there is a problem of valuation, identifying salvage value, and the ongoing (annual?) valuation costs.
  - a general concern over the viability of this option.

- have difficulty with assurance for post reclamation monitoring, and how to cover this component of the assurance.

- would like to see a level playing field, although discussions revealed just how difficult maintaining a level playing field would be. Site specificity may rule in spite of desires to the contrary.

Scenario 2 Financial Assurance Proposal:

Assumptions:

a) The mine in question is a 'uranium' mine.

b) The facility is owned by a large mining corporation that has at least two mining facilities operating or under development.

c) Infrastructure liability will accumulate at a rate of $250,000 per annum for the remaining 20 year operating life, for an additional total of 5.0 M$.

Achievement of Assigned Tasks:

- Decommissioning 'Infrastructure' & 'Environmental' features = $35M + $5M = $40M at the end of remaining 20 years of life.

  A 'Letter of Credit' for a maximum of $40M will be required of the Company.

- The rate of liability accumulation of $2M/year will be accommodated by a 'Contractual Agreement' within the license that will require the Company to actually spend a minimum of $2M/year in approved decommissioning activities.

  The Company performance will be assessed during each licensing review to ensure that the Company has met its agreement.

  This action will maintain the total outstanding liability at a maximum of $40M.

- It is estimated that monitoring costs during decommissioning (10 years) and post-decommissioning (20 years) at $200,000/year will reach a total of $6M.

  The Company will establish an investment instrument (ie: term deposit, GIC) that will generate an investment income of $200,000/year for 30 years after closure or one that will generate a monitoring fund of $6M during the remaining 20 years of operating life.

- At the end of the remaining 20 years of operating life there will be an accumulated decommissioning liability of $40M. The major concern is whether a financial institution will continue to annually issue a 'Letter of Credit' for the diminishing outstanding decommissioning liability for a period of 10 non-operating years (ie: start at $40M and reduce it $4M each year for 10 years).

  The financial institution will likely do this if the large corporation has put up sufficient and acceptable assets to secure the instrument.

  In the case of a Company with other profitable operating facilities in place, this is an acceptable scenario.

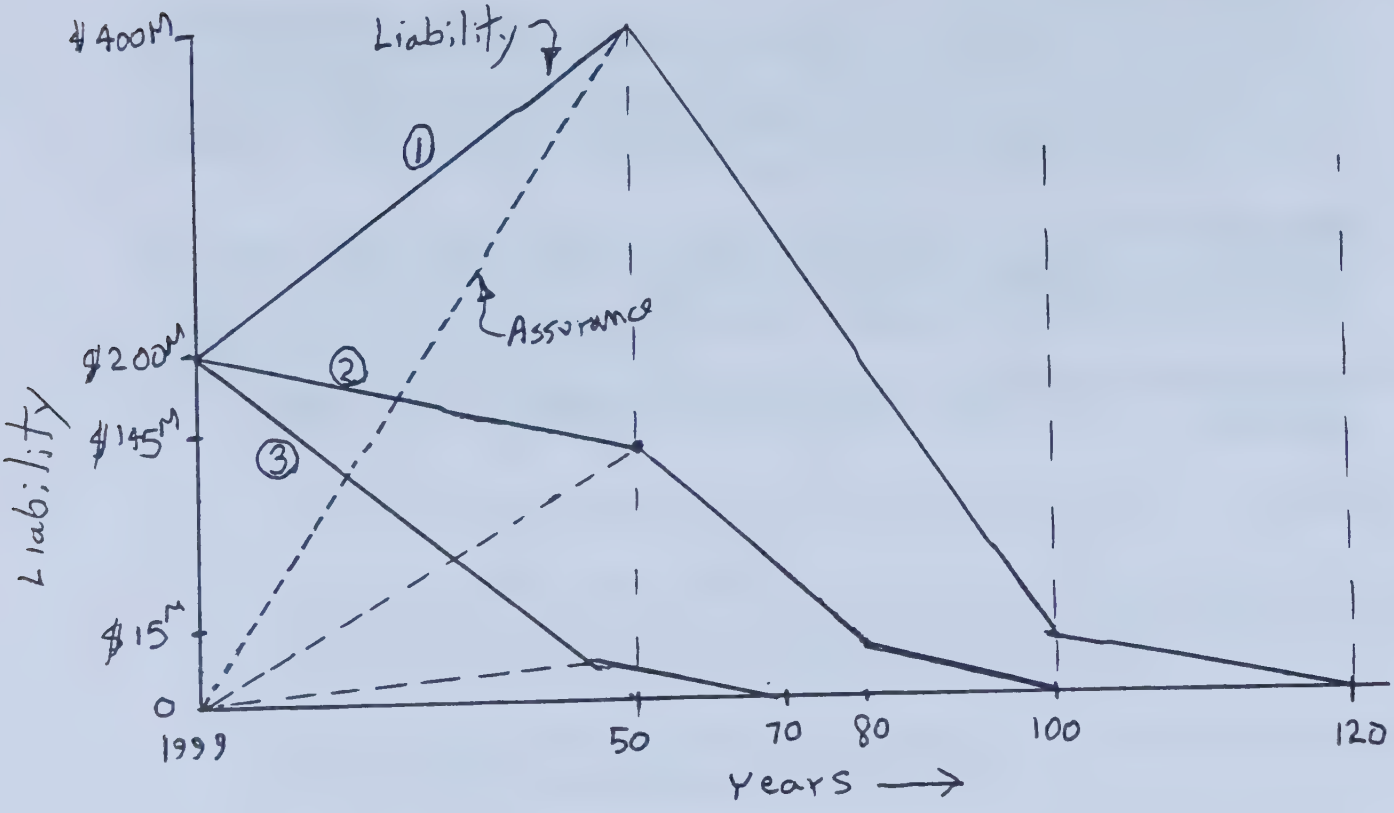
Scenario 2 Financial Assurance Proposal: (continued)

If, during annual or bi-annual reviews in the 20 year operating life a concern is identified that the likelihood of a constantly renewed 'Letter of Credit' during the 10 post-closure decommissioning years is not assured, it would be necessary for the Company to build-up a cash fund sufficient to pay for carrying out the remaining and approved decommissioning activities.

- Since this is a uranium mine that will have operated a total of 30 years the probability of any guaranteed return on salvage is very much in question. For this reason it was not taken into account in developing a financial assurance package.

The question of salvage is an issue that will require further analysis and discussion.

Scenario 3 Financial Assurance Proposal:



1) Status Quo
2) $5M per year
3) $8M per year

OVER FIRST 50 YEARS

Option	Ongoing Reclamation	Fund	Assurance Amount	Assurance Cost
1	$0M/Year	$8M/Year 0-$400	LOC(Hard) 200-14	1%
2	$5M/Year	$3/Year 0-$150	Soft ? 200-10	0?
3	$8/Year	0	Soft 200-4	0

Scenario 3 Financial Assurance Proposal: (continued)

Issues

Option 1

a) Risk of failure contingency (25%)
b) Tax implications on trust fund

Option 2

a) Per Option 1 but lower impact
b) Soft or hard assurance
c) Corporate tax level

Option 3

a) Per Option 2 b) and c)

Saskatchewan
Environment
and Resource
Management

Industrial Branch

October 25, 1995

To: All Mining Companies

RE: Financial Assurance Options for Mine Decommissioning and Reclamation

As discussions continue regarding options that might provide financial assurances for mine decommissioning and reclamation, one unusual but potentially attractive option appears to be development of a contract or "covenant". This would allow a company with an existing mine to carry out liability reduction work at their minesite in place of, or to supplement, a cash fund. The intent would be to satisfy the requirement for financial assurance, while permitting the company to complete decommissioning and reclamation work while the mine is still operating. The legal and practical value of such an agreement must still be determined, but discussions to date are promising.

If contractual agreements or covenants prove to be a useful option to provide financial assurance for mine decommissioning and reclamation under the "Mineral Industry Environmental Protection Regulations," a set of guiding principles will be needed. A tentative list of principles is attached.

This list is for discussion purposes only. It does not represent a position or departmental policy. It is intended to clarify the expectations of the Industrial Branch with regards to any potential contractual arrangements which might be achieved to provide a "financial assurance" mechanism. Some illustrative graphs are attached to show liability vs funding over time for three different potential scenarios.

This package is intended to provide some detail to a concept which has been discussed briefly with several mining companies. We are hoping to generate further discussion, and look forward to your questions and comments.

Lorne Cooper

Draft Principles for An Environmental Liability Reduction Covenant for Mine Decommissioning and Reclamation Financial Assurance

- Agreement to be binding upon both parties
- Must include commitment to environmental liability reduction
- Must recognize that for existing sites, with large environmental liabilities, full funding or liability reduction will take several years
- Must include a detailed schedule and firm dates for achievement of goals
- Must commit to a specific value of liability reduction per annum

    - might be averaged over a period of years to account for economic cycles

- Should be an "either, or" agreement. Either reduce liability or contribute to an assurance fund, (or both)
- Will fulfill, **not** circumvent, the regulatory obligations

    -Specific work to be predetermined as an approved decommissioning and reclamation plan, in accordance with best technology for the site
    -Requires accurately measurable milestones, markers or goals
    -Will include annual reports and periodic reviews

- Should be supplemented by some form of "soft" financial assurance on an interim basis
- Qualifying liability reduction must be a **NET** reduction

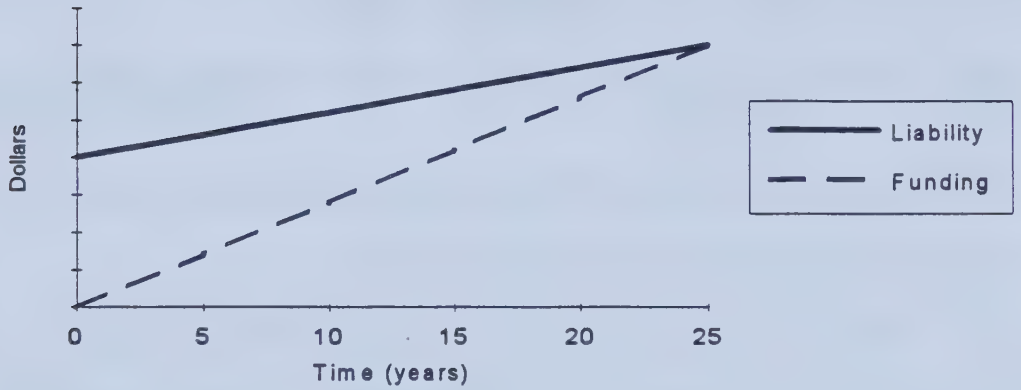
    - liability reduction measures would qualify to the extent that they exceed liability increases during the time period.

- Research into environmental liability reduction methods is **not** a substitute for actual liability reduction
- Should recognize that environmental liability reduction during operation cannot reduce liability to zero. Therefore, some supplemental funding arrangement will be necessary.
- Main Targets for Liability reduction (list not intended to be complete or limiting):

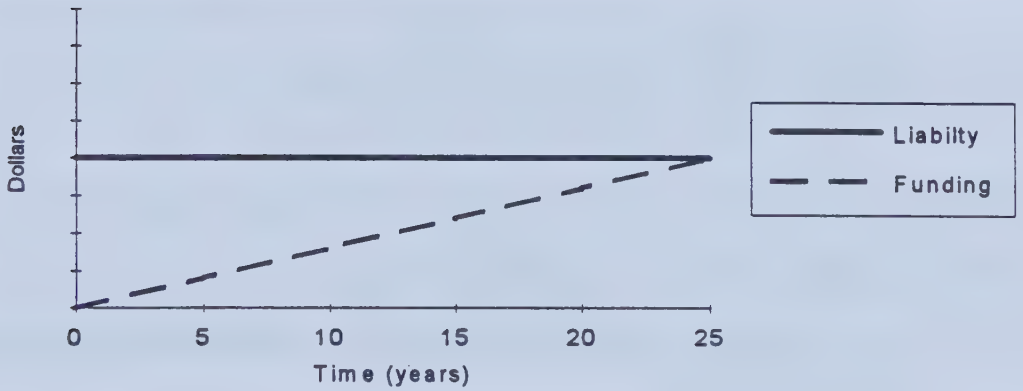
    - tailings disposal and cleanup of tailings management areas
    - surplus and abandoned buildings and infrastructure
    - hazardous materials such as asbestos
    - miscellaneous contaminated areas outside of the tailings management area, such as old spill sites or areas of past pollutant leakage or containment

Liability & Financial Assurance Funding For Existing Mines

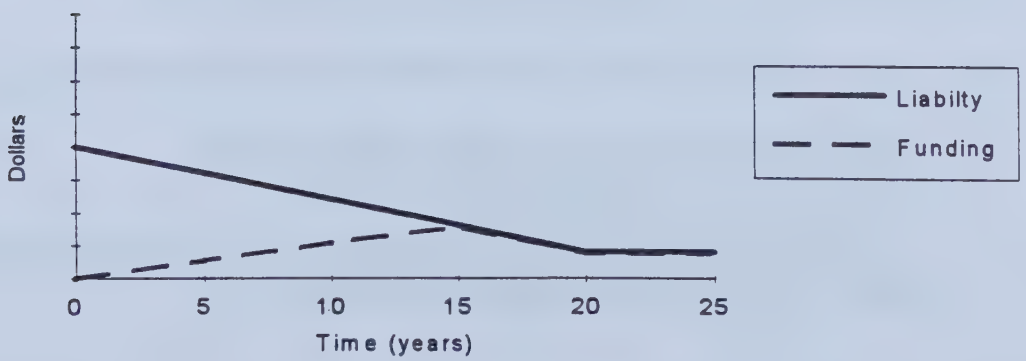
Liability Increasing - Fund Increasing



Liability Constant - Fund Increasing



Liability Reducing - Fund Increasingat Low Rate



ENVIRONMENTAL MANAGEMENT FOR MINING

Proceedings of the 19th Annual Meeting of the Canadian Land Reclamation Association/ Association Canadienne de Réhabilitation des Sites Dégradés (CLRA/ACRSD)

October 25-27, 1995
Saskatoon, Saskatchewan