Alberta Energy Regulator

Guide to the Mine Financial Security Program

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ALBERTA ENERGY REGULATOR
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Changes to the Guide

This edition of the *Guide to the Mine Financial Security Program* contains the following changes and replaces the February 2017 edition:

- Section 2.1.1 – Added the AERs ability to determine if a deemed netback will be accepted under certain conditions.
- Section 7.3 – Added a notice date for the director's determination whether deemed netback requests will be accepted.

Summary

The fundamental principle of the Mine Financial Security Program (MFSP) is that the *Environmental Protection and Enhancement Act* approval holder is responsible to carry out suspension, abandonment, remediation, and surface reclamation work to the standards established by the Province of Alberta and to maintain care-and-custody of the land until a reclamation certificate has been issued. The approval holder must have the financial resources to complete these obligations.

The MFSP provides a responsible balance between protecting the people of Alberta from the costs associated with the liability of coal and oil sands development in the event an approval holder cannot meet their obligations, and maximizing the opportunities for responsible and sustainable resource development. It does so by retaining existing oil sands mine security, enhancing existing documentation and reporting practices, and providing new requirements:

- Enhanced practices
  - Regulatory certainty and equal treatment within and between coal and oil sands mine sectors
  - Consistent and transparent methods for calculating closure costs
  - Consistent, objective, and conservative methods for determining how much financial security
  - needs to be provided and when
  - Public disclosure of not only the financial security amounts, but sector and approval-specific progress on reclamation and liability management
- New requirements
  - Incentives for progressive reclamation through use of a specific security deposit trigger for reclamation planned for but not achieved
  - Six years prior to the end of the operation, full financial security for all outstanding abandonment, remediation, and surface reclamation is on deposit with the Alberta Energy Regulator (AER).
  - Annual updates on asset and liability information, and annual posting of revised security amounts
  - The chief executive officer, chief financial officer, or the designated financial representative of a joint venture must certify that appropriate procedures were used to determine the value of the MFSP asset, MFSP liability, and financial security deposit estimates, confirming that the resulting estimate is reasonable
  - Annual public disclosure of asset safety factor and reclamation progress

The program covers the following current[1] and future industrial sites in Alberta:

- coal mines (underground and surface),
- coal processing plants and related infrastructure at coal mine sites, and
- oil sands mines.

The program also provides expanded liability coverage for

- bitumen extraction processing facilities and upgrading plants,[2] and related infrastructure at oil sands mine sites; and
- other plants and infrastructure located on the land leased or owned for the purposes of mining or processing of coal or oil sands, irrespective of ownership, approval holder, or purpose.

The MFSP adopts an approach to managing financial risks which recognizes that the resource value associated with an approved project is an asset in terms of the net revenue generated by its operations. Where an approval holder has MFSP assets at least three times greater than the MFSP liability, is 15 years or more from the end of its reserves, and is keeping current with its reclamation plans, additional financial security above the base amount is not required. Where an approval holder has MFSP assets less than three times its MFSP liability, or is nearing the end of the mine productive life, or is not meeting its approved reclamation plans, additional financial security is required.

There are four types of financial security deposits, focusing on various potential risks in the life cycle of a mine, in the MFSP:

- *Base security deposit* (*BSD*) provides immediate funds for the government, if the approval holder defaults, to maintain security and safety at the site until a new approval holder takes over or the site is closed, plus an additional amount to address some of the residual risks of the program. If no new approval holder takes over the site, then the BSD can be used for abandonment, remediation, and surface reclamation of the site. The BSD is based on the sector, and reflects the amount and complexity of work required to make the site safe. The BSD is $2 million for a mine-mouth coal mine approval (those supplying thermal coal to power plants); $7 million for an export coal mine approval or coal processing plant approval; $30 million for a new oil sands mine with no upgrader; and $60 million for a new oil sands mine with an upgrader. For oil sands mines with an *EPEA* approval in effect as of December 31, 2010, the BSD equals the security held by the government to cover disturbances up to that date.

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[1] **Current** means mines and plants with an *EPEA* approval as of the date of MFSP implementation.
[2] These are called **oil sands processing plants** under *EPEA*.

- *Operating life deposit* (*OLD*) addresses the risks at the end of the mine's life. The approval holder is required to post financial security when there are less than 15 years of reserves left so that all outstanding abandonment, remediation, and surface reclamation costs are fully secured by the time there are less than six years of reserves left. The OLD is offset by the BSD (i.e., the OLD payable is only the amount it exceeds the BSD).
- *Asset safety factor deposit* (*ASFD*) addresses the risks that an approval holder's MFSP assets fall below a level deemed adequate to ensure that all MFSP liability can be fully funded. The approval holder posts financial security when the MFSP asset to MFSP liability ratio falls below 3.00. Sufficient financial security is posted to bring the ratio back to 3.00.
- *Outstanding reclamation deposit* (*ORD*) addresses the risks posed by an approval holder deferring reclamation. The approval holder posts financial security when they do not reduce liability according to a reclamation plan approved by the AER.

Assets under the MFSP represent the estimated financial capability of an approval holder's project to address its future environmental obligations. MFSP assets are determined by multiplying the Project's gross proven plus probable reserves by the three-year average annual netback and are reduced if the future commodity price is expected to be lower. Netback is the approval holder's gross revenues minus operating costs divided by the annual sales volume for the project. A three-year average annual netback is used to smooth out fluctuations in commodity pricing and applicable operating costs.

The MFSP will account for liabilities associated with suspension, abandonment, remediation and surface reclamation of mines and plants, and the care-and-custody of the land until a reclamation certificate is issued. Liability is based on the following:

- The concept that industry is responsible for the full life cycle of a project and addressing the liability of each phase.
- The undiscounted and unescalated cost estimated to settle the environmental obligations for the MFSP sites. This number provides a conservative estimate of the liability, as it is neither inflated nor discounted.[3]
- The estimated suspension, abandonment, remediation and surface reclamation costs for any components which may be excluded from the public disclosure above. This includes, but is not limited to, aspects of the operation with an indeterminate life, high uncertainty, and the effects resulting from improper operation of a facility.

Financial security deposits will be returned to the approval holder as the suspension, abandonment, remediation and surface reclamation liabilities are retired. In the event that an approval holder cannot, or does not, carry out their suspension, abandonment, remediation or surface reclamation

[3] This amount is generally larger than the actual asset retirement obligation number in the financial statements.

responsibilities, the government will use the financial security to cover the cost of undertaking any outstanding work. However, the AER will endeavour to work with the approval holder or their partners to seek alternatives for completing the outstanding abandonment, remediation and reclamation work.

1 Mine Financial Security Program

The Mine Financial Security Program (MFSP) incorporates principles of environmental science, mine and civil engineering, cost estimation, and transparent and generally accepted accounting, financial and public reporting practices. The MFSP is designed and intended to allow the approval holder[1] and the government to manage risk within clear and predetermined parameters. When circumstances cause the approval holder's mine or plant operations to fall outside of those parameters, the requirement for an appropriate amount of financial security is automatically triggered.

The program accounts for a reasonable range of economic conditions and accommodates future legislative and technology changes. Within this reasonable range of operating conditions the program supports the sustainable development of Alberta's natural resources. Each project will secure its environmental liabilities with a conservative estimate of its asset value. The approval holder can then utilize net revenue or capital resources to manage environmental liabilities, and for expansions or new developments. When the asset value diminishes, either through weakening commodity value or depleting reserves, the approval holder must convert the asset security to financial security at a point where the current and remaining net revenue generating capacity of the project can sustain the contributions to financial security. The program includes forward-looking review mechanisms designed to identify economic conditions outside of the reasonable range or significant legislative or technological change (section 7.6) so that the program can be adjusted if necessary.

The principles that guided the initial development of the MFSP are found in appendix 3.

TIP

In this document the **approval holder** is the corporate entity who holds the *Environmental Protection and Enhancement Act* approval for the mine or plant.

The primary reclamation incentive tool in MFSP is the placement of financial security deposits (section 4), including a specific deposit for those scenarios where the approval holder does not achieve the approved planned reclamation. These financial security deposits act as an ongoing incentive to reduce liabilities to the maximum extent possible during the life of the operation. In addition, the regulators, through the approvals process and the ongoing monitoring of the operations, play an integral role in liability management by ensuring the approval holder has appropriate environmental management plans and schedules and adheres to those plans and schedules.

MFSP liability is the current, third-party costs of carrying out suspension, abandonment, remediation and surface reclamation.

[1] Appendix 2 contains a list of definitions and acronyms used in this guide.

1.1 Program Scope

The program covers the following current[2] and future industrial sites in Alberta:

- Coal mines (underground and surface)
- Coal processing plants and related infrastructure at coal mine sites
- Oil sands mines

The program also provides expanded liability coverage for:

- Bitumen extraction processing facilities and upgrading plants,[3] and related infrastructure at oil sands mine sites
- Plants and infrastructure located on the land leased or owned for the purposes of mining or processing of coal or oil sands, irrespective of ownership, approval holder, or purpose

The MFSP is focused specifically on the assets and liabilities associated with the above bulleted activities. Therefore the MFSP does not include the following:

- Infrastructure and plants located off the mine site
- Coal-fired power plants associated with mine-mouth coal mines
- Mines and plants that were abandoned as of the date the program starts
- Approval holders that are in default at the time the program starts
- Exploration operations for coal and oil sands (unless and until the locations are developed as part of the mine)
- Lands that have received a reclamation certificate as of the date the program starts (unless they receive approval by the government to be re-disturbed as part of the mining or processing operations)
- Approval holder assets and liabilities that are outside of Alberta
- Assets from approval holder operations other than coal or oil sands mining or processing
- In situ oil sands sites, other than the production (assets) from sites that provide bitumen directly to an MFSP oil sands upgrader

All coal mine and oil sands mine approval holders are subject to the MFSP.

A coal or oil sands plant will continue to be part of the MFSP as long as it continues to process ore from another mine or feedstock from an in situ operation or other source. This requirement continues

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[2] **Current** means mines and plants with an *EPEA* approval as of the date of MFSP implementation.
[3] These are called **oil sands processing plants** under *EPEA*.

even if the mine on which it sits has been completely reclaimed and certified, or the plant is sold separately from the mine. The ore or feedstock does not have to come from the same approval holder (see section 2.5 for more details on processing third-party reserves).

The Program will account for environmental liabilities associated with suspension, abandonment, remediation and surface reclamation of these mines and plants.

1.2 *EPEA* Approval as Basis for the Program

Under the MFSP, the entity responsible for providing all the data and the resulting financial security deposit is the *EPEA* approval holder. The *EPEA* approval holder is deemed to have 100% of the MFSP assets and 100% of the MFSP liability of the site for which they hold the approval. Other parties may participate in MFSP mines and/or plants but unless they are the approval holder they do not have any direct MFSP responsibilities.

TIP

Companies participating in MFSP mines and/or plants may provide their share of the required security to, or on behalf of, the approval holder. **Participation** includes being an owner, working interest participant, or a joint venture participant. Sharing of security is a business arrangement between the parties, not a requirement of the MFSP. Note however that participants may fall under the broad definitions of *person responsible* or *operator* in EPEA (sections 1(tt) and 134(b), respectively) and may be ordered to carry out the abandonment, remediation and surface reclamation if the approval holder does not meet their statutory obligations.

All MFSP asset, liability, and financial security calculations will be done separately for each *EPEA* approval.

1.3 Programs Supporting the Mine Financial Security Program

There are additional requirements that provide financial incentives for approval holders to reduce environmental liabilities or to responsibly estimate assets and liabilities. Readers are encouraged to look at the documents specified in these sections; however they should be aware that the documents are continuously updated and only the most recent version should be relied on for current rules applicable to MFSP.

1.3.1 Asset Retirement Obligation

The US Financial Accounting Standards Board (FASB) Statement No. 143 (issued June 2001) took effect for financial statements issued after June 15, 2002. The Accounting Standard Board of the Canadian Institute of Chartered Accountants (CICA) subsequently developed Section 3110 under its policy of international harmonization and convergence. Section 3110 is effective with respect to financial statements and financial reports commencing on or after January 1, 2004. Section 3110 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. Section 3110 applies to all entities. It applies to legal obligations associated with the retirement of long- lived assets that result from the acquisition, construction, development and/or the normal operation of a long-lived asset, except for certain obligations of lessees. As used in Section 3110, a legal obligation is an obligation that a party is required to settle as a result of an existing or enacted law, statute, ordinance, or written or oral contract or by legal construction of a contract under the doctrine of promissory estoppels.

The MFSP accepts the financial reporting standards used in audited, publicly reported statements as the starting point for liability calculations.

1.3.2 Financial Statement Assessment and Certification

In Canada, National Instrument 52-109 (NI 52-109), *Certification of Disclosures in Issuers' Annual and Interim Filings* (Canadian Securities Administrators), requires CEOs and CFOs to assess whether the financial information included in the interim and annual filings, as well as the annual information form in the annual filing fairly present in all material respects the financial condition, result of operations and cash flow of the issuer. Companies that comply with the US *Sarbanes-Oxley Act* (see below) are exempt from NI 52-109 requirements.

The US *Sarbanes-Oxley Act 2002*[4] requires that the CEO and CFO of each issuer[5] shall prepare a statement to accompany the audit report to certify the "appropriateness of the financial statements and disclosures contained in the periodic report, and that those financial statements and disclosures fairly present, in all material respects, the operations and financial condition of the issuer." Financial condition includes the description of the consolidated asset retirement obligations of the approval holder. Some of the companies subject to the MFSP are listed in the US and are therefore bound by the act.

1.3.3 Reserves Estimates

Reserves estimate calculations are governed by documents sanctioned by the Alberta Securities Commission. The National Instruments (NI 51-101 for oil and gas and NI 43-101 for coal, or as amended) and the United States SEC Industry Guide 7[6] specify that reserves data must be reported to a board of directors by a qualified reserves evaluator or a qualified reserves auditor. The National Instruments also specify how reserves are to be estimated and the data disclosed.

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4 Sarbanes-Oxley is the common name of the act. The proper title is the *Public Company Accounting Reform and Investor Protection Act of 2002*.

5 Company listed on the New York Stock Exchange.

6 *SEC Industry Guide 7 - Description of Property by Issuers Engaged or to Be Engaged in Significant Mining Operations.*

For the purposes of the National Instruments:

Qualified reserves auditor means an individual who

(i) in respect of particular reserves data or related information, possesses professional qualifications and experience appropriate for the estimation, evaluation, review and audit of the reserves data and related information; and

(ii) is a member in good standing of a professional organization.

Qualified reserves evaluator means an individual who:

(i) in respect of particular reserves data or related information, possesses professional qualifications and experience appropriate for the estimation, evaluation and review of the reserves data and related information; and

(ii) is a member in good standing of a professional organization.

Professional organization means a self-regulatory organization of engineers, geologists, other geoscientists, or other professionals whose professional practice includes reserves evaluations or reserves audits that

(i) admit members primarily on the basis of their educational qualifications;

(ii) requires its members to comply with the professional standards of competence and ethics prescribed by the organization that are relevant to the estimation, evaluation, review or audit of reserves data;

(iii) has disciplinary powers, including the power to suspend or expel a member; and

(iv) is either

(A) given authority or recognition by statute in a Canadian jurisdiction; or

(B) accepted for this purpose by the securities regulatory authority or the regulator.

1.3.4 Royalty Treatment

The provincial royalty regimes for oil sands products are defined in the *Mines and Minerals Act*, and the subsequent *Oil Sands Royalty Regulation*. Royalty is determined using a revenue-less-cost calculation with reclamation being an allowed cost. In general, royalty rates are set with the expectation that reclamation is being performed during the time that the project is generating revenue.

MFSP deposits meeting the requirement of “being directly attributable to the royalty project” will be treated for royalty purposes according to the regulations.

The treatment of royalties with respect to coal mines has a bearing on Tier II royalty costs. MFSP deposits meeting the requirement of "being directly attributable to the coal project" will be treated for royalty purposes according to the regulations. As such, any costs expended on MFSP deposits would qualify as Tier II royalty expenditure for coal mines under the *Coal Royalty Guidelines*.

2 MFSP Asset Calculation

MFSP assets are used to determine the operator liability rating, which is used in the asset safety factor deposit calculation (see section 4.2). Coal and oil sands are subject to the same rules unless otherwise noted.

The MFSP does not establish or modify the financial accounting standards and engineering standards that form the basis of the asset calculations (e.g., reserves estimates). These are described in the various acts, regulations and policy documents of the regulators and professional organizations. If these standards change, the MFSP calculations must be revised in the next MFSP annual report to reflect the changes.

TIP

The MFSP asset amounts should be derived from each approval holder's publicly filed annual financial reports (or the supporting working papers) and reserve evaluation reports.

2.1 Description

Assets under the MFSP represent the estimated financial capability of an approval holder's project to address its future obligations. MFSP assets are determined by multiplying the project's gross proven plus probable reserves by the three-year average annual netback and then multiplying the result by a factor that is based on the projected future commodity price.

Netback is the approval holder's gross revenues minus operating costs divided by annual sales for the project. A three-year average annual netback is used to smooth out fluctuations in commodity pricing and applicable operating costs. Netback includes sales of coke, sulphur, other by- products and technology. Netback excludes adjustments for gains or losses from hedging.

MFSP assets = $N \times R \times F$

Where

N = Three-year average annual netback

R = Gross proven and probable reserves (prepared by a qualified reserves auditor or qualified reserves evaluator – see section 2.2)

F = Forward price factor

Annual netback = (Gross revenues – Operating costs) / Annual sales

Where

- Gross revenues for all products sold are net of transportation and handling, and are adjusted for inter-segment non-arms-length volumes transactions at fair market value
- Operating costs
  - include all production costs, including royalties and relevant administrative costs
  - do not include reclamation costs, which are booked directly against the liability
  - do not include depreciation, accretion and capital costs
  - do not include exploration costs

The forward price factor (F) varies by sector as follows:

- Oil sands – the lesser of
  - the ratio of the next three-year NYMEX WTI average price (three year strip on the last trading day of December for the reporting year in $US/bbl) divided by the past three year NYMEX WTI average price in $US/bbl; or
  - 1.00

  The NYMEX prices and the forward price factor will be placed on the MFSP website at the beginning of each calendar year for approval holders to include in the calculation of MFSP assets.

- Coal – the lesser of
  - the ratio of the weighted average coal price for the calendar year in which the MFSP annual report is submitted divided by the weighted average coal price for the reporting year; or
  - 1.00

  TIP

  Future price increases do not increase the MFSP assets to provide a conservative approach to asset calculation.

  The three-year average annual netback is simply the average of three years of annual netbacks (actual or deemed). For example, the three-year average annual netback for the 2015 reporting year is calculated as

  N = (2015 annual netback + 2014 annual netback + 2013 annual netback) / 3

2.1.1 Deemed Netback Eligibility

The approval holders may submit a request to the Alberta Energy Regulator (AER) for a deemed netback if

- actual netback data are not available for three years of production or
- The director will make a determination by January 31 of the submission year if deemed netback requests due to short-term anomalous market conditions or economic conditions are accepted. This will be posted on the AER's website.

The approval holder must also meet the following eligibility requirements for a deemed netback:

- the approval holder has proven and probable reserves that are verified and identified in the reserves report prepared by an independent qualified reserves auditor or a qualified reserves evaluator in accordance with the *Canadian Oil and Gas Evaluation Handbook Standards*; and
- the deemed netback is supported by the reserves report.

A mine or plant that was part of an approval transfer (section 5.2) is considered a new operation for the purposes of determining the netback. The transferee may use the transferor's data to submit a request for a deemed netback.

The request to use a deemed netback must be accompanied by the following supporting documents:

- cover letter signed by the chief executive officer (CEO) or the chief financial officer (CFO) or, in the case of a joint venture approval holder that does not have a CEO or CFO, the approval holder's senior designated financial or accounting representative (designated financial representative);
- a reserves report or audit for the operation prepared by an independent qualified reserves auditor or a qualified reserves evaluator in accordance with the *Canadian Oil and Gas Evaluation Handbook Standards* for the most recent reporting year;
- audited financial statements or other financial information (such as a corporate budget for the project);
- official document providing the approved sanction date if the deemed netback request is for a new operation (such as audited financial statements or annual report); and
- document showing the detailed calculations of the deemed netback, three-year average annual netback, and MFSP asset, as well as the methodologies, models, and assumptions used to derive these calculations.

The AER may require additional information from an approval holder.

The approved deemed netback expires on March 31 of the year following the director's approval and may be subject to an MFSP audit.

The AER will compare the request to the netback data from all other approval holders in the sector and may consult with Alberta Treasury Board and Finance and Alberta Energy when determining an appropriate netback.

The AER may reduce the proposed netback (potentially to zero – resulting in zero asset value) if the technology used in the mine or associated plant is not proven in Alberta. This would require the approval holder to provide the full asset safety factor deposit at the start of the operation.

TIP

For the period between the sanction of an operation and first production, approval holders can submit a request for a deemed netback.

For the fiscal year in which production first occurred and the next two fiscal years, approval holders can elect to either use an actual netback or submit a request for a deemed netback.

Calculating a Deemed Netback for a New Operation

The following example shows how an approval holder would report approved deemed netbacks in Schedule 2 of their MFSP annual report.

First-year deemed netback eligibility:

- Approval holder submits a request on March 30, 2021, for a deemed netback of $20.00.
- The AER approves use of the $20.00 deemed netback by May 31, 2021.
- The approval holder files Schedule 2 before June 30, 2021, indicating an approved deemed netback of $20.00 for reporting years 2020, 2019, and 2018, yielding a three-year average annual netback of $20.00 to be used in the MFSP asset calculation.

Second year of deemed netback eligibility:

- The approval holder files another request before March 31, 2022, for a deemed netback of $25.00 (before the 2021 approved deemed netback expires).
- The AER approves use of the $25.00 deemed netback by May 31, 2022.
- The approval holder files Schedule 2 before June 30, 2022, indicating an approved deemed netback of $25.00 for reporting year 2021 and retains the 2020 and 2019 approved deemed netback of $20.00 (i.e., approved deemed netback from first year is used for the previous two reporting years), yielding a three-year average annual netback of $21.67 to be used in the MFSP asset calculation.

Third year of deemed netback eligibility:

- The approval holder files another request before March 31, 2023, for a deemed netback of $35.00 (before the 2022 approved deemed netback expires).
- The AER approves use of the $35.00 deemed netback by May 31, 2023.

- The approval holder files Schedule 2 before June 30, 2023, indicating an approved deemed netback of $35.00 for reporting year 2022 and retains the 2021 and 2020 approved deemed netback of $25.00 and $20.00 respectively (i.e., approved deemed netbacks from second year and first year are used for the previous two reporting years), yielding a three-year average annual netback of $26.67 to be used in the MFSP asset calculation.

A new approval holder should submit a request for the deemed netback as soon as possible to provide ample opportunity for the AER to review the information supporting the proposed netback and for the approval holder to develop and provide any further information the AER needs.

Calculating a Deemed Netback Due to Short-Term Anomalous Market or Economic Conditions

The approval holder must use the three-year forecasted annual netback calculation outlined below to calculate their deemed netback. Joint venture approval holders are not required to use the three-year forecasted annual netback calculation unless the approval holder is requesting a deemed netback due to short-term anomalous market or economic conditions. The calculations included in the table below are based on the annual netback calculation from section 2.1.

Table 1. Deemed netback calculation

Deemed Netback Calculation	**Forecasted Annual Netbacks**			
($ CAD millions)	**2021**	**2022**	**2023**	**Calculation**
Forecasted Gross Revenues				
Operating Revenues				
Less Transportation				
Total Forecasted Revenues				**A**
Forecasted Operating Costs				
Production Costs				
Royalties				
Total Forecasted Operating Costs				**B**
Forecasted Annual Sales (MMbbls)				**C**
Forecasted Annual Netbacks ($/bbl)				**D = (A−B) / C**
2020 Deemed Netback ($/bbl)				**E = Average of D over the three years**

2.2 Reserves

Gross proven and probable reserves for petroleum resources under the MFSP are an approval holder's gross proven and probable reserves, derived in accordance with National Instrument 51-101 of the security regulations or the requirements of the United States Financial and Accounting Standards Board and United States Securities and Exchange Commission. The reserves may be calculated using constant dollar or forecasted prices.

Reserve calculations are based on the product being sold. In the oil sands for example, if bitumen is the product that is sold by the project then reserves are based on bitumen production. If synthetic crude is the product, then the reserves are based on synthetic crude production (the reserves may be different than if the product is bitumen depending on the process used to produce synthetic crude).

Gross proven and probable reserves for coal resources under the MFSP are derived in accordance with National Instrument 43-101 of the security regulations. Reserve calculations are measured based upon the type of coal being sold.

TIP

MFSP reserves are calculated only for mine sites with both an AER approval and an *EPEA* approval, and are calculated based on the lands described in the AER approval (oil sands) or permit (coal). In situ reserves are also only for the AER approved areas.

TIP

Reserves estimates must not include areas within the approved mine area that have been excluded from mining in either the AER or *EPEA* approval (e.g., rivers, creeks, lakes, wetlands, roads, and other sensitive areas, and other developed areas such as a plant site or tailings pond, and the setbacks associated with any of these). These reserves may be added into the estimate (or further deletions made) if the approval conditions change.

In situ reserve methodology is under extensive review by CICA, SEC, the Canadian Association of Petroleum Producers, the Association of Professional Engineers, Geologists, and Geophysicists of Alberta and the Canadian Institute of Mining, Metallurgy and Petroleum. MFSP reserves methodology will follow the outcome from that review.

A mine-mouth coal mine must have a contract in place for the reserves with a viable power plant or an alternative market otherwise the reserves cannot be included in the MFSP asset calculation (i.e., they are a resource not a reserve).

The reserves map required in the MFSP annual report must clearly demarcate the area that contains the reserves, and must show any exclusions.

Approval holders must be able to provide the information on the drilling density used to develop the estimates for MFSP audit purposes.

The approval holder must clearly indicate which standard is being used to determine the reserves number (Canadian or US), whether constant dollar or forecasted prices are used, and which commodity or blend of commodities is being reported.

2.3 Suspended or Depleted Mines

If an approval holder suspends a mine, or if gross proven plus probable reserves are reduced to zero, the approval holder shall report a netback of zero. This would automatically trigger payment of an asset safety factor deposit (unless the approval holder is already fully deposited through payment of the Operating Life Deposit – i.e., suspension occurred within five years of the end of reserves life).

If a suspended mine restarts, or if additional reserves are added to a depleted mine, the approval holder must submit a request for a deemed netback.

2.4 Inclusion of Integrated In Situ Oil Sands Production and Reserves

In situ reserves that are heat-integrated[7] with, and processed through, an MFSP upgrader facility are included in the approval holder's MFSP asset calculation.

TIP

Liabilities associated with in situ wells, pipelines, and facilities having an approved design capacity less than 5000 m^3/day remain within the AER's Licensee Liability Rating (LLR) Program. Liabilities for in situ facilities having an approved design capacity equal to or greater than 5000 m^3/day fall within the AER's Large Facility Liability Management Program. To prevent double counting of assets, production from wells associated with reserves included within the MFSP is not included in the approval holder's LLR asset calculation.

2.5 Inclusion of Third-Party Production

Third-party production from in situ wells of another operator or from a mine that is not subject to the MFSP, that are processed in the MFSP plant will be allowed to be included in the netback calculation of the plant's approval holder as long as the production is less than 10% of the approval holder's own production.

Third-party processing income will be included in net revenue and the production will be part of the plant sales for the purposes of netback and reserve life index calculations. The third-party's reserves do not enter into the approval holder's MFSP asset calculation.

If the third-party production exceeds 10% of the approval holder's own production the approval holder may submit a request to the AER to include the additional volumes in the MFSP asset calculation. The AER will review the request and may

- refuse the request,
- adjust the MFSP program for the approval holder's approval, or
- request a review of the MFSP under section 7.6.2 prior to making a decision.

2.6 Certification of MFSP Asset Data

The CEO or CFO or, in the case of a joint venture approval holder that does not have a CEO or a CFO, the approval holder's designated financial representative will be required to certify all MFSP asset information provided by the approval holder in respect of the MFSP. The certification on any estimates that form part of the MFSP asset calculation only attests that appropriate procedures were used to determine their value and the resulting estimate is reasonable.

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[7] Heat-integrated in situ projects obtain heat from the mining project and ship bitumen to the mine for upgrading and sales via an interconnected heat insulated pipeline system.

The CEO, CFO, or designated financial representative will have procedures in place to obtain data and assurances from the appropriate professionals before certification. Any procedures, data or reports comprising such assurances will be made available at the time of any government audit (section 7.4).

TIP

Under the *Environmental Protection and Enhancement Act* it is an offence to knowingly provide (section 227(a)) or provide (section 227(b)) false information.

3 MFSP Liability Calculation

MFSP liability is calculated and used in the asset safety factor deposit (section 4.2) and operating life deposit (section 4.3).

The MFSP does not establish or modify the suspension, abandonment, remediation or surface reclamation standards that form the basis of the MFSP liability calculations (i.e., that describe the endpoints that must be reached). These are described in the various Acts, regulations, approvals and policy documents of the regulators. They may also be identified in plans submitted by the approval holder, and approved by the director. If these standards change, the MFSP calculations must be revised at the next reporting period to reflect the changes.

TIP

Unless otherwise specified, the MFSP liability amounts should be derived from each approval holder's publicly filed and audited annual financial statements (or the supporting working papers).

Most mine reclamation and closure plans rely on material from future mine development (overburden) or from plant operations (tailings, coal ash) to backfill mine pits and to establish final contours and drainage systems. Reclamation and closure plans also provide for the orderly abandonment and re-use or disposal of infrastructure. The MFSP liability calculations represent the third party costs to suspend, abandon, remediate and surface reclaim the site based on the assumption the operation will continue to run in normal fashion until the final reclamation certificate is received. It is recognized that activities required to suspend, abandon, remediate, and surface reclaim the site will continue to occur after the mine ceases to operate, and that a period of monitoring may be required prior to reclamation certification on any given piece of land.

TIP

Costs to be factored into the MFSP liability calculation should be based on the approved reclamation and closure plans, and include activities such as:

- Mobilization and demobilization of equipment
- Suspension – prepare site for decommissioning
- Dismantling or demolishing plants (including foundations) and disposal of the dismantled or demolished components
- Abandonment of underground coal mine access structures (adits, portals, etc.)
- Removal of all infrastructure (e.g., roads, pipelines, power lines and aerodromes)
- Removal or approved disposal of by-products such as sulphur, coke, bottom ash or fly ash
- Treatment of contaminated soils and water

- Management of tailings and tailings structures (including breaching, contouring, capping, drainage and treatment of water)
- Sloping and contouring of landforms to ensure geotechnical stability, drainage and natural appearance
- Integration of landforms, topography, vegetation, waterbodies and watercourses within and across lease boundaries to develop functioning and sustainable ecosystems, or compatible agricultural or recreational use
- Development of lakes, watercourses and wetlands, including filling waterbodies
- Movement and placement of overburden and reclamation material
- Planting or seeding of vegetation
- Monitoring water, soil, vegetation and wildlife (including maintaining bird deterrent systems as necessary)
- Maintenance of equipment and structures
- Planning and reporting
- Maintaining care and custody of the site after abandonment but prior to certification (site safety and security)
- Appropriate contingencies, depending on the degree of certainty associated with the costs
- Costs to revise the approved reclamation and closure plans to reflect current conditions or regulator expectations

3.1 Description

MFSP liability is calculated as:

MFSP liability = Asset retirement obligation (ARO) liability + Other liability

ARO liability – The undiscounted and unescalated estimated cost required to settle the suspension, abandonment, remediation and reclamation obligation for the MFSP site. This amount may be reported in the notes to the financial statements under CICA disclosure requirements for asset retirement obligations (ARO). Since the amount is undiscounted and unescalated, it is generally larger than the actual ARO figure on the balance sheet. This number includes all the appropriate suspension, remediation and reclamation activities that form part of the abandonment process as described in section 1.3.1 and the ARO definition in the glossary.

The Government of Alberta expects the calculation of the MFSP liability to be based upon third-party costs.

New accounting guidelines will take effect in 2011 in Canada, as the country adopts the International Financial Reporting Standards (IFRS).[8] As such, different terms may be used by entities in their financial statements (e.g., provision, reserve, liability for reclamation and remediation activities, etc.) to replace the ARO terminology. Notwithstanding the change in terminology, it is anticipated the amounts derived under the IFRS guidelines will be consistent with the amounts currently calculated. The Other Liability provisions within the MFSP liability calculation will accommodate any inconsistencies between the reporting standards. These standards will be monitored to determine if material changes have occurred in the accounting requirements (see section 7.6.2).

Other liability – In addition to the ARO liability, the following items, which may be excluded from the ARO calculation, currently or on a go-forward basis, are included in the MFSP liability estimate:

- The estimated suspension, abandonment, remediation and surface reclamation costs for any components that were not included because
  - they had an indeterminate life[9] (This number is not generally stated in the financial statements or the footnotes, though the latter may indicate that these components have not been included in the ARO estimate);
  - the methods to undertake the suspension, abandonment, remediation or surface reclamation are not certain or are unknown or;
  - any other excluded liability amounts associated with components of the project that are outside the scope of the approval issued by the director.
- Remediation of known contamination not included in operating cost (remediation should be undertaken as soon as contamination occurs and generally should not be carried to end of life).
- All other plants and infrastructure, irrespective of ownership, approval holder, or purpose of the plant or infrastructure, that are located on the land leased or owned for the purposes of mining or processing of coal or oil sands and that are not the subject of a separate MFSP submission.
- Costs to revise the abandonment and reclamation plan for the site so that it reflects current site conditions.
- If the ARO liability detailed above does not include a "fair value" component then the approval holder will be required to estimate a "fair value" component and add it to the reclamation cost estimates. The "fair value" component would be based on third party costs, which would need to

[8] See Schneider (2010) Accounting for Environmental Liabilities under International Financial Reporting Standards.
[9] For example, some of the mines may not currently report their plant sites in their asset retirement obligation numbers.

be reasonably accessible to the Government of Alberta in the event of an unexpected default of the operation.

Contingencies are built into cost estimates as part of good engineering and budgeting practice. The size of the contingency depends on the level of certainty at the time of the estimate, based on the work to be done, the costing methodology applied to the work, and whether or not the work will be done soon (increasingly predictable costs) or a long time from now (less predictability). In all cases, the contingencies must be known and available for disclosure in the MFSP audits.

The following time periods apply for the MFSP liability calculation:

- Approval holders electing to pay financial security
  - Liability must be calculated based on the reclamation costs for the entire area to be disturbed over the life of the project.
- Approval holders electing to pay full financial security (section 5.1.)
  - Liability must be calculated based on the current state of disturbance at the approval holder’s mine and plant sites (i.e., as of December 31 of the reporting year).

TIP

The approval holder must maintain a record of the individual contingency values built into the MFSP liability estimate for MFSP audit purposes.

Applicants for new mines must estimate the cost of reclamation based on the MFSP liability that would exist on December 31 of the year the approval is issued.

Small coal mines with no additional disturbance and no additional reclamation must still recalculate the MFSP liability each year to account for, at a minimum, changes in fuel and equipment costs. The MFSP liability, and therefore security owing, is not expected to remain constant from year to year.

3.2 Certification of MFSP Liability Data

The CEO or CFO or, in the case of a joint venture approval holder that does not have a CEO or a CFO, the approval holder’s designated financial representative will be required to certify all the liability calculation data provided by the approval holder in respect of the MFSP. The certification on any estimates that form part of the MFSP liability calculation only attests that appropriate procedures were used to determine their value and the resulting estimate is reasonable.

The CEO, CFO, or designated financial representative will have procedures in place to obtain data and assurances from the appropriate professionals before certification. Any procedures, data or reports comprising such assurances will be made available at the time of any government audit (section 7.4).

TIP

Under the *Environmental Protection and Enhancement Act* it is an offence to knowingly provide (section 227(a)) or provide (section 227(b)) false information.

4 Financial Security Deposit

The MFSP requires security from an approval holder. The government can use the financial security to carry out suspension, abandonment, remediation and surface reclamation responsibilities of an approval holder that cannot, or does not, carry them out (section 4.9). This will generally occur when an approval holder is insolvent, bankrupt or in receivership and the trustee or receiver does not carry out those responsibilities. The government is bound by the provisions within the *Environmental Protection and Enhancement Act* and *Conservation and Reclamation Regulation* regarding the access and use of security funds, which include notice and appeal provisions.

Each approval holder calculates security deposits, and provides a separate MFSP annual report, for each of their approvals.

There are four categories of financial security deposits required pursuant to the MFSP. The base security deposit (section 4.1) addresses the short term financial risks associated with the unexpected suspension of operations, plus an additional amount to address some of the residual risks of the program. There are three additional tests that determine if additional financial security deposits for abandonment, remediation and surface reclamation must be provided to the AER. Each test has a trigger that determines when the financial security is required. The approval holder must provide the financial security no later than June 30 each year along with their MFSP annual report.

TIP

The financial security deposit triggers have been designed with the intent that deposits paid each year will be less than 50% of the previous year's net revenue. However, an approval holder will be required to post the full amount of any required security irrespective of how much of the net revenue the deposit represents.

The following table briefly summarizes the differences between the four financial security deposits:

	Base security deposit (BSD)	**Asset safety factor deposit (ASFD)**	**Operating life deposit (OLD)**	**Outstanding reclamation deposit (ORD)**
Risk addressed	Approval holder unexpectedly defaults	Approval holder's MFSP asset value falls below 3.00 times their MFSP liability	Approval holder's resource base is nearing the end of its life.	Approval holder is not progressively reclaiming land that has been scheduled for reclamation
Main factor(s)	Complexity of the sector	MFSP assets and MFSP liability, and any BSD and OLD (represented by the adjusted asset safety factor [AASF])	Reserves and sales rate represented by the reserve life index (RLI) for sites with AER approvals	Reclamation performance based on current mine reclamation plan
Deposit calculation basis	On the basis of each *EPEA* approval	On the basis of each *EPEA* approval	On the basis of each *EPEA* approval	On the basis of each *EPEA* approval

(continued)

	Base security deposit (BSD)	Asset safety factor deposit (ASFD)	Operating life deposit (OLD)	Outstanding reclamation deposit (ORD)
Deposit payment	Lump sum	Lump sum for the shortfall	Phased-in over 10 years, adjusted for the BSD	Lump sum for unreclaimed lands
Deposit reduced when …	Amount does not decrease until the MFSP liability falls below the BSD	The adjusted asset safety factor is equal to or greater than 3.00 (the AASF is calculated each year and the security adjusted accordingly)	MFSP liability is reduced (fully returned when MFSP liability is zero) OR Reserves added to bring reserve life index equal to or greater than 6.00 (partial return) or equal to or greater than 15.00 (full return)	When the approval holder reduces the cumulative reclamation balance

4.1 Base Security Deposit (BSD)

On program implementation each approval holder will provide a base security deposit (BSD) for each of its approvals within the MFSP (except when the approval holder has elected to provide full security under section 5.1).

The base security deposit provides immediate funds for the government, if the approval holder defaults, to maintain security and safety at the site until a new approval holder takes over or the site is closed, plus an additional amount to address some of the residual risks of the program. If no new approval holder takes over the site then the BSD can be used by the AER for abandonment, remediation and surface reclamation of the site.

The deposit is based on the sector, and reflects the amount and complexity of work required to maintain the site in a safe condition until a new approval holder takes over or the site is closed. The BSD is based on the following industry standards:

- $2,000 ,000 for a mine-mouth coal mine approval (those supplying thermal coal to power plants)
- $7,000,000 for an export coal mine or plant approval
- $30,000,000 for an oil sands mine with no *EPEA* approval as of January 1, 2011
- $60,000,000 for an oil sands mine and upgrader with no *EPEA* approval as of January 1, 2011

An approval holder may elect to submit a third party independent assessment of these costs and request approval and adjustment of their specific BSD.

Oil sands mines that had *EPEA* approvals as of December 31, 2010 will provide a base security deposit according to the following table. These amounts reflect the security that was held as of December 31, 2010.

Approval holder, project name, and *EPEA* approval number	Base security deposit
Canadian Natural, Horizon, 149968	$61,200,000.00
Imperial, Kearl, 46586	$64,655,000.00
Shell Albian, Jackpine, 153125	$72,361,895.00
Shell Albian, Muskeg River, 20809	$111,277,441.29
Suncor, Base Mine, 94	$359,096,654.00
Suncor, Fort Hills, 151469	$38,958,605.00
Syncrude, Mildred Lake and Aurora North, 26	$205,303,024.00

4.2 Asset Safety Factor Deposit (ASFD)

The asset safety factor deposit (ASFD) addresses the scenario where the approval holder's MFSP asset value falls below three times the cost of their MFSP liability (adjusted for other financial security deposits provided by the approval holder). The ratio of MFSP assets to MSFP liability is called the asset safety factor (ASF).

ASF = MSFP assets / MSFP liability

The approval holder will provide the asset safety factor deposit when the adjusted asset safety factor (AASF) falls below 3.00. The adjusted asset safety factor is calculated as

AASF = MFSP assets / (MFSP liability − OLD − BSD)

MFSP assets are described in section 2 and MFSP liability is described in section 3. The OLD and BSD are included in the equation since they offset the approval holder's total MFSP liability. Outstanding reclamation deposits (section 4.4) are not included in the equation since they are directed at specific annual performance for liability reduction rather than overall outstanding MFSP liability.

The deposit will equal the amount required to bring the AASF back up to 3.00 (resultant ASF in example below). An example of the security required and the impacts of the security deposit on the AASF are shown below.

MFSP assets	MFSP liability minus OLD minus BSD	AASF	Asset safety factor deposit (ASFD)	Liability net of deposits	Resultant ASF
$61,000,000	$20,000,000	3.05	$0	$20,000,000	3.05
$57,500,000	$20,000,000	2.88	$833,333	$19,166,667	3.00
$54,000,000	$20,000,000	2.70	$2,000,000	$18,000,000	3.00
$50,500,000	$20,000,000	2.53	$3,166,667	$16,833,333	3.00
$47,000,000	$20,000,000	2.35	$4,333,333	$15,666,667	3.00
$43,500,000	$20,000,000	2.18	$5,500,000	$14,500,000	3.00
$40,000,000	$20,000,000	2.00	$6,666,667	$13,333,333	3.00
$36,500,000	$20,000,000	1.83	$7,833,333	$12,166,667	3.00
$33,000,000	$20,000,000	1.65	$9,000,000	$11,000,000	3.00
$29,500,000	$20,000,000	1.48	$10,166,667	$9,833,333	3.00

Calculation Notes:

- Liability net of deposits = MFSP liability − OLD − BSD − ASFD
- Resultant ASF = MFSP assets / Liability net of deposits

TIP

The ASFD is calculated as

ASFD = MFSP liability − OLD − BSD - (MFSP assets / 3)

MFSP liability is calculated based on the applicable time period listed in section 3.1.

4.3 Operating Life Deposit (OLD)

The operating life deposit (OLD) addresses the scenario where the approval holder’s resource base is nearing the end of its life.

The approval holder begins calculating the operating life deposit – initial (OLDI) value when the reserve life index (RLI) for the approval holder’s mine or operation covered by the approval falls below 15.00 years. The OLDI is as follows:

- 0% of the MFSP liability when RLI >= 15.00
- 10% of the MFSP liability when RLI < 15.00
- 20% of the MFSP liability when RLI < 14.00
- 30% of the MFSP liability when RLI < 13.00

- 40% of the MFSP liability when RLI < 12.00
- 50% of the MFSP liability when RLI < 11.00
- 60% of the MFSP liability when RLI < 10.00
- 70% of the MFSP liability when RLI < 9.00
- 80% of the MFSP liability when RLI < 8.00
- 90% of the MFSP liability when RLI < 7.00
- 100% of the MFSP liability when RLI < 6.00

The reserve life index (years) is calculated as

RLI = Gross proven plus probable reserves / Three-year average annual sales volume

where the same commodity is used for both reserves and sales (e.g., SCO, bitumen, coal).

The OLDI and OLD are calculated and reported each year. Operating life deposit payments are offset by the BSD (i.e., the OLD payable is only the amount that it exceeds the BSD):

- OLD = $0 when OLDI is less than or equal to BSD
- OLD = OLDI – BSD when OLD is greater than BSD

For example, if an approval holder's RLI falls below 15.00 years and they have an outstanding MFSP liability of $200,000,000, a base security deposit of $60,000,000 and they do not reduce their MFSP liability or increase reserves, their deposit payments are as follows:

RLI (years)	Percentage of MFSP liability	MFSP liability	BSD	OLDI	OLD
16.00	0	$200,000,000	$60,000,000	N/A	N/A
15.00	0	$200,000,000	$60,000,000	N/A	N/A
14.00	10%	$200,000,000	$60,000,000	$20,000,000	$0
13.00	20%	$200,000,000	$60,000,000	$40,000,000	$0
12.00	30%	$200,000,000	$60,000,000	$60,000,000	$0
11.00	40%	$200,000,000	$60,000,000	$80,000,000	$20,000,000
10.00	50%	$200,000,000	$60,000,000	$100,000,000	$40,000,000
9.00	60%	$200,000,000	$60,000,000	$120,000,000	$60,000,000
8.00	70%	$200,000,000	$60,000,000	$140,000,000	$80,000,000
7.00	80%	$200,000,000	$60,000,000	$160,000,000	$100,000,000
6.00	90%	$200,000,000	$60,000,000	$180,000,000	$120,000,000
5.00	100%	$200,000,000	$60,000,000	$200,000,000	$140,000,000

RLI (years)	Percentage of MFSP liability	MFSP liability	BSD	OLDI	OLD
4.00	100%	$200,000,000	$60,000,000	$200,000,000	$140,000,000
3.00	100%	$200,000,000	$60,000,000	$200,000,000	$140,000,000
2.00	100%	$200,000,000	$60,000,000	$200,000,000	$140,000,000
1.00	100%	$200,000,000	$60,000,000	$200,000,000	$140,000,000
0	100%	$200,000,000	$60,000,000	$200,000,000	$140,000,000

If an approval holder's RLI falls below 15.00 years and they have an outstanding MFSP liability of $200,000,000, a base security deposit of $60,000,000 and they start reducing their MFSP liability by $5,000,000 per year as deposits are required, their deposit payments are as follows:

RLI (Years)	Percentage of MFSP liability	MFSP liability	BSD	OLDI	OLD
16.00	0	$200,000,000	$60,000,000	N/A	N/A
15.00	0	$200,000,000	$60,000,000	N/A	N/A
14.00	10%	$200,000,000	$60,000,000	$20,000,000	$0
13.00	20%	$200,000,000	$60,000,000	$40,000,000	$0
12.00	30%	$200,000,000	$60,000,000	$60,000,000	$0
11.00	40%	$200,000,000	$60,000,000	$80,000,000	$20,000,000
10.00	50%	$195,000,000	$60,000,000	$97,500,000	$37,500,000
9.00	60%	$190,000,000	$60,000,000	$114,000,000	$54,000,000
8.00	70%	$185,000,000	$60,000,000	$129,500,000	$69,500,000
7.00	80%	$180,000,000	$60,000,000	$144,000,000	$84,000,000
6.00	90%	$175,000,000	$60,000,000	$157,500,000	$97,500,000
5.00	100%	$170,000,000	$60,000,000	$170,000,000	$110,000,000
4.00	100%	$165,000,000	$60,000,000	$165,000,000	$105,000,000
3.00	100%	$160,000,000	$60,000,000	$160,000,000	$100,000,000
2.00	100%	$155,000,000	$60,000,000	$155,000,000	$95,000,000
1.00	100%	$150,000,000	$60,000,000	$150,000,000	$90,000,000
0	100%	$145,000,000	$60,000,000	$145,000,000	$85,000,000

TIP

If there are less than three years of sales volumes to calculate the three-year average, use the design capacity for the plant for any of the missing years.

The three-year average annual sales volume is calculated as a simple average of annual sales volumes. That is, the three-year average annual sales volume for the 2015 reporting year is calculated as

(2015 sales volume + 2014 sales volume + 2013 sales volume) / 3

The examples show a straightforward reduction in RLI of one year each year. However, an approval holder may enter the table at any given RLI, and may go through more than one year's reserves in any given year, and so will be required to provide the security deposit based on their actual RLI.

The following special rules apply to the RLI calculation:

- Reserves owned by the approval holder that are associated with in situ production tied to an MFSP upgrader are included in the RLI calculation.
- Reserves associated with third-party production (section 2.5) are not included in the RLI calculation.

A mine-mouth coal mine must have a contract in place with a viable power plant to take the coal or an alternative market otherwise the reserves cannot be included in the RLI calculation (i.e., they are a resource not a reserve). Therefore once a power plant is scheduled for decommissioning the remaining active life of the plant becomes the maximum reserve life index unless replacement markets are secured.

4.4 Outstanding Reclamation Deposit (ORD)

Approval holders are required to proactively manage their reclamation liabilities, which includes the requirement to reclaim disturbed lands that are ready-to-reclaim throughout the life of the project.

The asset safety factor deposit (section 4.2) is intended to operate as a long-term incentive to prevent approval holders from deferring reclamation to the end of a project by accounting for the total MFSP liability of the site. The 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.

The overall reclamation program for a mine site consists of a series of sequential reclamation activities, which are conducted at different times on different parts of the land, once the land is considered ready-to-reclaim. Carrying out any of these activities reduces the approval holder's MFSP liability. All reclamation projects commonly involve the following activities – land contouring or sloping, placement of reclamation materials, and revegetation. Additional reclamation activities may include infrastructure removal and disposal, soil and water remediation, and water management, including filling water bodies and constructing watercourses.

Approval holders are expected to schedule reclamation activities as soon as practicable to meet the intent of progressive reclamation. The proposed reclamation activities must be consistent with the approved mine and tailings plans (AER) and the current mine reclamation plan (AER). Where regulators believe that approval holders are not scheduling reclamation activity in a timely manner they will require approval holders to start work through the approval and inspection processes. The onus will rest with the approval holder to prove that it would be contrary to good reclamation practices or the efficient and economic development of the resource not to schedule the work. If the approval holder is unable to justify their schedule to the director then the reclamation activity must be included in the current mine reclamation plan.

Approval holders will be required to identify the hectares of permanent land reclamation proposed for completion in each year (planned reclamation) based on the approval holder's current mine reclamation plan. The plans are updated every three years to always show 10 years into the future (i.e., they are rolling 10-year plans).

For the purposes of the MFSP, permanent reclamation is defined consistent with the definition used in the current mine reclamation plan and conservation and reclamation annual report. Permanent reclamation is deemed complete only when any given area has been reclaimed consistent with the final end land use objectives required by the approval. In terrestrial landscapes, the land is planted and/or seeded to the species and plant densities reflective of approved revegetation plan, which is in turn, reflective of the intended end land use objective(s) outlined in the closure plan. In aquatic environments, the water body has been constructed to the approved morphology and the appropriate water level has been reached. A reclamation certificate does not have to be issued for lands to qualify as permanent reclamation.

TIP

If a coal mine approval holder does not have a current mine reclamation plan then the approval holder will use the planned reclamation value from the conservation and reclamation annual report submitted in the reporting year. If no report has been submitted, the approval holder will provide a planned reclamation value with the MFSP annual report.

If the director has not approved the updated mine reclamation plan for an oil sands mine by April 30 of the submission year, the approval holder shall use the planned reclamation value from the fourth year of the current mine reclamation plan in calculating the outstanding reclamation deposit. When submitting the MFSP annual report in the following year, the approval holder shall replace the planned reclamation value used in the previous MFSP annual report with the value from the approved updated mine reclamation plan and adjust the cumulative reclamation balance as required.

Each year the approval holder will calculate the annual reclamation balance as the difference between the planned reclamation and the actual reclamation (the number of hectares of permanent reclamation actually completed) in a given year. The approval holder will also calculate the cumulative reclamation balance (CRB; the sum of all annual reclamation balances to date) by adding the current annual reclamation balance to the previous CRB.

Approval holders receive credit in any year when the actual reclamation is greater than the planned reclamation through a reduction in the CRB. Approval holders carry forward the credit into the next year.

Reclamation cost for oil sands mines can range from $45,000 per hectare to $75,000 per hectare (depending on haul distances, stockpile vs. direct placement, presence of sodic/saline overburden, etc.). To establish a conservative number for oil sands ORD calculations, the director has set the reclamation cost at $75,000 per hectare for the 2012, 2013 and 2014 reporting years. The value will be reviewed in the three-year program review in light of completion of reclamation activities within this period (actual cost data available) and changes in technology, regulatory requirements or research that may affect reclamation activities and associated costs. Should a coal mine approval holder decide not to elect to provide full security, the approval holder and director will need to determine an appropriate reclamation cost for the purposes of the ORD prior to submission of the MFSP annual report.

The impact of not meeting the planned reclamation target is posting of an ORD based on the CRB multiplied by the reclamation cost. ORD security is refunded as the CRB is reduced. Examples of ORD calculations are provided below.

The planned reclamation values will not be varied for the three-year period of the current mine reclamation plan. However, at the time the updated mine reclamation plan is submitted, the approval holder may request an adjustment to the CRB for any lands that were not reclaimed during the past three years. The basis for an adjustment request would be unforeseen changes in the reclamation plan for such events as production changes, geotechnical failures or director- or inspector-directed reclamation plan changes. The director must approve all adjustments. The adjustment in the CRB will take effect once the director approves the request.

TIP

The request for a change to the CRB must be submitted at the same time as the updated mine reclamation plan and be supported by solid rationale, including:

- Why the mine plan changed, and therefore why the reclamation could not be completed, based on
  - established mining or reclamation practices;
  - site safety needs; and/or
  - orderly, efficient, and economical development of the resources.
- Confirmation that the facts or assumptions on which the current mine reclamation plan was based changed (with the exception of commodity prices or operating costs), and that a prudent approval holder could not have anticipated such changes.

Each year the approval holder will provide information on the progress against the planned reclamation in the MFSP annual report (Schedule 2 of the *Mine Financial Security Program Standard*).

The following example shows how the ORD is calculated and how the CRB works within the first three years of the current mine reclamation plan over three plan cycles. For simplicity, the example assumes there is no change to the $75,000/ha reclamation cost after the three-year program review.

Example

In 2011 and 2012 less reclamation was carried out than planned so the CRB grows and an ORD is posted. In 2013 the excess reclamation work erases all of the outstanding reclamation deficit and results in a credit of 15 hectares in the CRB. Therefore there is no ORD posted in 2013 and the 15 hectare credit is carried forward to the next cycle. During the second cycle, reclamation performance in 2014 added 158 hectares to the reclamation deficit. The net effect in 2014 was a 143 hectare deficit (158 hectare annual reclamation balance - 15 carryover hectares). Activities in 2015 and 2016 reduced the outstanding reclamation balance to 25 hectares which is carried forward into the third cycle. In the third cycle, even though excess reclamation is done in 2017 and 2019, an ORD is payable in each year as the CRB remains above zero.

First cycle	**Carryover**	**2011**	**2012**	**2013**
Planned reclamation (ha)		42	175	142
Actual reclamation (ha)		36	158	180
Annual reclamation balance (ha)		6	17	-38
Cumulative reclamation balance (ha)		6	23	-15
Reclamation cost ($/ha)		$75,000	$75,000	$75,000
ORD ($)		$450,000	$1,725,000	$0
Second cycle	**Carryover**	**2014**	**2015**	**2016**
Planned reclamation (ha)		298	107	125
Actual reclamation (ha)		140	200	150
Annual reclamation balance (ha)		158	-93	-25
Cumulative reclamation balance (ha)	-15	143	50	25
Reclamation cost ($/ha)		$75,000	$75,000	$75,000
ORD ($)		$10,725,000	$3,750,000	$1,875,000
Third cycle	**Carryover**	**2017**	**2018**	**2019**
Planned reclamation (ha)		150	225	200
Actual reclamation (ha)		165	200	215
Annual reclamation balance (ha)		-15	25	-15
Cumulative reclamation balance (ha)	25	10	35	20
Reclamation cost ($/ha)		$75,000	$75,000	$75,000
ORD ($)		$750,000	$2,625,000	$1,500,000

Along with the March 2020 updated mine reclamation plan submission, the approval holder requests the director for an adjustment of the CRB because the 25 hectare deficit in 2018 was due to the need to retain a road planned for reclamation for access to another part of the mine. The director agrees to the adjustment so instead of carrying forward a 20 hectare CRB into the fourth cycle the approval holder carries forward a credit of 5 hectares (20 hectare CRB from 2019 minus 25 hectare adjustment from 2018 annual reclamation balance).

TIP

The approval holder shall submit in the MFSP annual report all available data for each of the three years in the table in Schedule 2 of the MFSP Standard (using the example above, in 2012 the approval holder will submit planned reclamation for all three years, and actual reclamation, annual reclamation balance, CRB, reclamation cost, and ORD for 2011 and 2012. The carryover value will also be submitted.

4.5 Calculating Financial Security

Security is calculated annually, increasing with higher MFSP liability or lower MFSP assets or less reclamation than the planned reclamation amount, and decreasing with lower MFSP liability or higher MFSP assets or reclamation in excess of planned reclamation amounts.

Asset safety factor deposits and operating life deposits will be reduced when MFSP liability is reduced or MFSP assets are increased.

- MFSP liability can be reduced through progressive reclamation of disturbed land and abandonment of infrastructure (e.g., plants).
- MFSP assets can be increased by increasing netback (asset safety factor deposit) or by increasing reserves (asset safety factor deposit and operating life deposit).

Outstanding reclamation deposits will be reduced when the approval holder reclaims more hectares than planned. Partial reduction of the outstanding amount is allowed.

Financial security will usually equal the sum of the four deposits. However, if the sum of the four deposits exceeds the MFSP liability (section 3) the total financial security required will be adjusted to equal the MFSP liability.

Irrespective of the calculations used to determine the amount of financial security required, some residual financial security will be retained pending the issuance of the final reclamation certificate. For terrestrial reclamation areas the amount of that financial security is usually set at the cost to revegetate the lands that have not yet been certified. The director will determine the appropriate minimum security amount for wetlands and waterbodies. Financial security is no longer required (is fully returned to the operator) when the final reclamation certificate is issued for the approval.

4.6 Providing Financial Security

Security is most often provided as a letter of credit. Approval holders should contact the AER for the approved form of LOC to be submitted.

The government may consider alternative forms of security on a case-by-case basis, as provided for in the *Conservation and Reclamation Regulation*, but those alternatives must provide similar levels of protection for the government. As part of the regulatory amendments implementing the MFSP, qualifying environmental trusts (QET) were added to the *Conservation and Reclamation Regulation* as a form of security that may be acceptable to the director. The AER must give prior approval to any proposed alternative form of security.

The approval holder is responsible under the *Conservation and Reclamation Regulation* to provide the AER with the full amount of any financial security deposit required. If the approval holder chooses to have multiple parties submit the required financial security.

- The approval holder is accountable for ensuring that the financial security arrives on time.
- The approval holder will face penalties if the correct amount or form of financial security is not received on time.

Wherever possible the approval holder should submit the financial security rather than a group of companies (e.g., owners, joint venture participants, working interest participants). If necessary, an approval holder may make arrangements for other companies to provide some or all of the financial security. However, the approval holder is responsible for ensuring the entire amount of any financial security deposit required by the MFSP is provided on time and in the correct form.

Similarly, whenever possible the approval holder should provide one form of financial security. However, where an approval holder elects to provide two or more forms of security (e.g., an LOC and a QET), the amounts provided by each form of security will be disclosed.

TIP

Each year the amount of financial security will be recalculated in the MFSP annual report. The approval holder will be responsible for communicating any changes in the amount required from each entity providing financial security.

4.7 Forfeiture and Use of Financial Security

When an approval holder is unable or unwilling to carry out any or all of its suspension, abandonment, remediation or surface reclamation responsibilities the regulators may take some or all of the following steps:

- Take the appropriate enforcement actions under all available legislation, which could include suspending the approval

- Work with the approval holder's partners (owners, joint venture partners, working interest participants, etc.), where applicable, and a receiver or trustee, where applicable, to find alternative solutions (e.g., a new approval holder takes over, the partners agree to do the work)
- Convert all or some the financial security instruments to cash [10]
- As a last resort, use the financial security to carry out necessary suspension, abandonment, remediation and surface reclamation

The AER will identify the necessary work to carry out suspension, abandonment, remediation and surface reclamation activities on the site(s) and an appropriate schedule.

Where multiple corporate entities have provided financial security, and the approval holder has defaulted, the government will cash all security instruments at the same time. Therefore it may be in the interests of the remaining viable parties to take on the liabilities of the defaulting approval holder.

Where one of the parties providing security (other than the approval holder) defaults the government will cash that party's security. When financial security is recalculated in the next MFSP annual report the approval holder will be responsible to provide the full amount of the new financial security estimate. Once the new security is provided the defaulting party's cash will be returned.

[10] Section 24 of the *Conservation and Reclamation Regulation* stipulates the circumstances and procedures concerning the access and used of financial security by the regulator.

5 Special Cases

Three special cases are built into the MFSP.

5.1 Electing to Pay Full Financial Security

An approval holder may elect to pay the full amount of financial security any time an MFSP annual report is submitted. As full financial security is in place, the approval holder will not be subject to any of the MFSP deposits or triggers and will have reduced reporting requirements.

The approval holder will be required to submit their financial security estimate to the director no later than June 30 each year using the appropriate form in the MFSP annual report (Schedule 3 of the *Mine Financial Security Program Standard*). The amount of the financial security will be based on the MFSP liability calculations (section 3). The approval holder's CEO, CFO, or designated financial representative must sign off on all the MFSP liability calculation data provided by the approval holder in respect of the MFSP.

In addition to the MFSP submission, the approval holder will continue to submit all reports and plans required in AER approvals and authorizations. It is through these documents that progressive reclamation and other approval holder reclamation targets can be tracked by the government.

5.1.1. Use of Deemed or Actual Netbacks

An approval holder that does not meet the requirements to file using a deemed netback as prescribed in section 2.1.1 of this guide is required to file under Schedule 3 and post the full financial security amount.

An approval holder that has met the requirements in section 2.1.1 and received director approval to use deemed netback can elect to continue to provide full financial security under Schedule 3, as prescribed in section 5.1, or complete a Schedule 2 filing, as prescribed in section 4.

An approval holder that can provide an annual netback can elect to either file under Schedule 2, as prescribed in section 4, or Schedule 3, as prescribed in section 5.1.

5.1.2. Security Return or Reduction Request

Approval holders paying full financial security may request the return of all or part of the cash deposit security or a reduction of the security posted by letter of credit, in accordance with section 22(1)–(4) of the *Conservation and Reclamation Regulation*. The request may be made once work is done that results in a significant decrease in MFSP liability. Such work could include

- facility demolition,
- remediation of an area, or
- surface reclamation of an area.

Approval holders can submit a request for any remaining security once the final reclamation certificate has been issued.

Approval holders who pay one or more of the financial security deposits (BSD, ASFD, ORD, and OLD) may also request the return of all or part of the cash deposit security or a reduction of the security posted by letter of credit. The request must be done in accordance with the criteria listed in the last row of the first table under section 4.

All security return or reduction requests are audited by the AER. If the AER cannot verify the amount requested, the request may be denied. The director makes the final decision on security return or reduction requests.

TIP

Under the *Environmental Protection and Enhancement Act* it is an offence to knowingly provide (section 227(a)) or provide (section 227(b)) false information.

5.2 Approval Transfers

Requests for *EPEA* approval transfers from one approval holder to another will trigger various requirements depending on the nature of the transfer:

- Where the entire approval is to be transferred, the transferee will be required to confirm in writing that they understand and will comply with the MFSP; this includes the BSD amount and all applicable financial and reclamation commitments in the current mine reclamation plan, and the implications for the ORD (Schedule 4 in the *Mine Financial Security Program Standard*), prior to acceptance of the transfer request. The transferee will be required to provide security equal in amount and form to that currently held by the approval holder (transferor) before the approval is transferred. The transferee will need to submit a request for a deemed netback using the transferor's data to calculate their Netback in the next MFSP annual report.
- Where a part of the approval is to be transferred (e.g., the mine but not the plant) both the transferee and the current approval holder (transferor) shall provide updated MFSP calculations.
  - Both the transferee and the transferor shall submit a request for deemed netback to calculate the MFSP assets.
  - These calculations will be done with the assumption that the transfer had gone through (i.e., the transferor no longer has the property's MFSP assets or MFSP liability and the transferee does) and the transferee uses the transferor's netback(s) for the property.
  - Both parties must provide the director the new security amounts before the approval is transferred.
  - Both parties must consult the director to determine the appropriate base security deposit that will be required.

In either of these cases, the applicant or the approval holder or both may elect to provide full financial security before the transfer is approved.

Security will be refunded to either party (where applicable) only after the director approves the transfer and the replacement security has been received.

TIP

Approval holders need to consider regulatory instruments and covenants when undertaking a sales agreement for projects included in the MFSP. For instance:

1) Transfer of AER approval is a legislative requirement that must be considered when buying or selling mine sites and associated facilities.
2) The transferee must be eligible to hold AER approvals.
3) The opportunity to transfer an AER approval is through request to the AER – sufficient time for review and deliberation of the request should be provided in sales agreements.
4) The AER considers numerous factors when evaluating a transfer request including the public good.
5) The AER may approve or deny requests to transfer approvals (and does so regardless of any sales agreement in place). Sales agreements should provide for means to accommodate this decision.
6) Until the transfer of an AER approval is complete, the AER holds the current approval holder responsible for regulatory compliance – regardless of the status of the sales agreement.

5.3 Joint Venture Deemed Netback

Joint venture approval holders who wish to use a deemed netback must submit a request for approval by March 31 of the year it would start being used in the MFSP annual report.

The request to use a deemed netback must be accompanied by the supporting documents listed in section 2.1.1. If a joint venture approval holder cannot provide the required supporting documents, they must

- explain why, and
- provide alternative information in lieu of what they cannot provide.

The AER must approve the deemed netback in order for the joint venture approval holder to use it in their MFSP annual report.

Joint venture approval holders do not need to submit a request for a deemed netback unless one of the following situations applies:

- The director revokes its approval.

- There is any change to the basis of the deemed netback request that was last approved. In this case, the joint venture approval holder must submit a deemed netback request describing the changes for the director's approval by March 31 of the submission year.

6 Program Implementation

6.1 Mine Financial Security Program Standard

The *Mine Financial Security Program Standard* is incorporated into and forms part of the *Conservation and Reclamation Regulation*. The Standard contains the regulatory requirements that must be followed by approval holders subject to the MFSP.

6.2 Transition from Existing Program

The MFSP will come into effect in 2011 with the adoption of the *Conservation and Reclamation Amendment Regulation*. Due to the timing of implementation, some of the 2011 MFSP deadline dates will have passed or will not provide sufficient time to generate the request (see section 7.3). As a result, for 2011 only, approval holders who wish to

- submit a request for a deemed netback or
- submit a request for use of third-party production volumes in excess of 10% of the approval holder's volumes

may do so up until the date they submit their MFSP annual report. The March 31 date for these requests is effective for all future years. Approval holders are encouraged to submit their requests as early as possible to allow the director time to review their request.

6.2.1 Oil Sands Calculations

Approval holders will be required to run all of the MFSP calculations for their sites using their 2010 data and submit the MFSP annual report and financial security by June 30, 2011. If the appropriate data are not available to run the calculations, or the data are not provided by June 30, 2011, the approval holder will be required to post full cost of reclamation security based on the MFSP liability calculations (section 3).

Approval holders will not be required to calculate an ORD in the 2011 MFSP annual report since the first planned reclamation values will be for 2011. Approval holders will indicate the planned reclamation value for 2011, 2012 and 2013 in Years 1, 2 and 3 of the table in Schedule 2 of the MFSP annual report, respectively.

In the 2012 MFSP annual report, approval holders shall calculate the Year 1 (2011) ORD based on the planned reclamation value from the 2011 MFSP annual report and the actual reclamation value from their 2011 conservation and reclamation report (submitted in April of 2012).

For 2011, the oil sands forward price factor (FPF), used in the MFSP asset calculation (section 2.1), is 1.0 based on the following historical and projected NYMEX WTI values:

Historical NYMEX WTI values	Projected NYMEX WTI values
2008 = $99.59	2011 = $93.97
2009 = $61.63	2012 = $93.77
2010 = $79.43	2013 = $92.77
Three-year Historical average = $80.22	Three-year future average = $93.50

FPF ratio = 93.50/80.22 = 1.17. Since the ratio is over 1.0 the FPF is set at 1.0.

6.2.2 Coal Calculations

Coal security estimates are normally submitted in March of each year. The MFSP is coming into effect at this time. As a result there is insufficient time for coal approval holders to submit both their normal security estimate and their MFSP estimate. Therefore, coal approval holders will be required to provide security in 2011 based on methodology acceptable to the director in 2010.

Thereafter, approval holders will be required to run all of the MFSP calculations for their sites and submit the MFSP annual report and financial security by June 30 each year. If the appropriate data are not available to run the calculations, or the data are not provided by June 30, the approval holder will be required to post full cost of reclamation security based on the MFSP liability calculations (section 3).

7 Program Administration

7.1 MFSP Calculations

The MFSP calculations will be done:

- Annually
- At the time of an application to the AER to transfer a portion of an approval (section 5.2) from one approval holder to another
- Prior to issuance of an amendment to an *EPEA* approval that would result in an increase in MFSP security
- Any other time the director believes it is in the public interest to do so

The AER may require an approval holder to provide a written report on the potential implications to their MFSP status upon the occurrence of any of the following:

- Significant environmental impact event
- Catastrophic event at the plant (e.g., fire, explosion)
- Significant decrease in commodity prices, or
- Significant multiyear declines in annual netback

7.2 MFSP Annual Report

Each approval holder will submit the results of their MFSP calculations for the reporting year to the AER, no later than June 30 of the Submission Year. Approval holders who elect to pay full financial security (section 5.1) must submit Schedule 3 of the *Mine Financial Security Program Standard* with their MFSP annual report each year. Otherwise, approval holders must submit Schedule 2 of the *Mine Financial Security Program Standard* with their MFSP annual report each year.

TIP

Approval holders are encouraged to file the MFSP annual report earlier if they have all the necessary information to provide time for the director to review and approve the security amount before the June 30 security submission date. Approval holders that wait until June 30 to file their security amount may be faced with additional costs if the security amount must be changed following review by the director.

7.3 Important Dates in the MFSP Annual Cycle

The following are the key dates in the MFSP annual cycle:

- January – Forward price factor for oil sands posted by the AER
- January 31 – Notice on the AER's website that the director has made the determination that deemed netback requests will be accepted due to short-term anomalous market conditions or economic conditions.
- March 31 – latest date for submission of request for use of third-party production volumes in excess of 10% of the approval holder's volumes
- March 31 – latest date for submission of request to adjust the CRB to account for mine plan changes that impacted past reclamation success
- March 31 – latest date for submission of requests for a deemed netback
- March 31 – latest date for submission by joint venture operations of a request to use alternative methodologies and information.
- April 30 – Approval holders will use the planned reclamation value from the fourth year of the current mine reclamation plan in the ORD calculation if the director has not yet approved the updated mine reclamation plan
- May 31 – latest date for the AER to provide a decision on deemed netback requests.
- June 30 – latest date for submission of the MFSP annual report. Approval holders are encouraged to submit the report earlier, especially the security estimate portion to allow time for the director to review the estimate and approve the amount before the approval holder provides the letter of credit
- June 30 – latest date for submission of the MFSP financial security
- September – MFSP website updated with current year's public data
- December 31 – MFSP asset data calculated based on proven and probable reserves as of December 31

The tables in appendix 4 describe the administrative cycles for MFSP start-up and implementation.

7.4 Government Audit of MFSP Data

The AER may conduct audits of the MFSP submissions. Audits may be conducted anytime between the submission of the MFSP annual report and the submission of the next MFSP annual report, though efforts will be made to have the audits completed by calendar year end to allow for changes to be incorporated into the next MFSP submission.

Four levels of audit may be undertaken, alone or in any combination:

- Level 1 – Phone or in-person discussions with the approval holder seeking clarification of information in the MFSP annual report
- Level 2 – Written questions and responses confirming scope and methodology used in preparing the MFSP annual report
- Level 3 – Detailed audits by government staff[11] of all or a portion of the data and assumptions that form the basis of the MFSP calculations
- Level 4 – Detailed audits by a third-party auditor reporting to the AER

The Level 3 and 4 detailed audits:

- Will likely be conducted at the approval holder's offices to ensure timely and secure access to data and personnel.
- May be broad, encompassing all parameters of the MFSP calculations, or may be targeted on one or more parameters.

When being audited, approval holders

- Must provide the data used in the MFSP calculations upon request – confidentiality of the data will be maintained through provisions of the *Freedom of Information and Protection of Privacy Act*.
- May also be asked to provide access to technical and financial staff to provide additional details on the assumptions, environmental liabilities and costs used in the MFSP submission – confidentiality of the data will be maintained through provisions of the *Freedom of Information and Protection of Privacy Act*.

The director will notify the approval holder 60 calendar days before a Level 3 or 4 detailed audit will be conducted. The approval holder will have opportunity to respond to questions and clarify documents during the audit. Following completion of the audit the director will provide the approval holder with a written report on the results of the audit.

The director or a designate may contact the approval holder at any time to conduct Level 1 or 2 audits.

If the AER identifies concerns about the data or assumptions during any of the audit levels, the approval holder may be required to revise the MFSP calculations and post any security deemed necessary as a result of the revised calculations within the timeframe specified by the director in the audit report. Enforcement actions (section 8) may also arise depending on the findings of the audit.

[11] The Alberta Energy Regulator is likely to involve other government departments and agencies (e.g., Energy, and Alberta Treasury Board and Finance) as part of the audit.

7.4.1 Requirement to Provide Data

Under section 9(2)–(3) of the *Mine Financial Security Program Standard* and section 24.3(1)–(2) of the *Conservation and Reclamation Regulation*, approval holders must provide the data they used in the MSFP calculations to the AER upon request.

7.4.2 Typical Audit Questions

The following are examples of questions that might be asked at an audit. Some questions are applicable only to one sector (e.g., coal or oil sands). If an approval holder has elected to provide full financial security then only the general, administrative, and liability questions apply.

General Questions

- How long after mining and/or plant operations cease do the MFSP calculations cover? Why?
- What has changed since the last calculations?

Administrative Questions

- What professionals signed off on the various MFSP calculations? Were they internal or third-party?
- What technical reports are available to support the MFSP calculations?

Asset Questions

- Were sales of items other than the primary commodity used to calculate the annual netback? If so, what were they and how much of the netback value was attributed to those items?
- Is annual netback from a blend of commodities? If so, how much does each contribute?
- Is annual netback based on any inter-segment non-arms-length volumes transactions? If yes, what fair market value was used in the calculations?
- What drill spacing or other investigative data are available to support the reserves estimate?
- How much product came from third-party reserves or from in situ production?
- Is the coal forward price factor based on a blend of prices? If so, how was the factor calculated?
- Were ARO accruals, exploration expenses and future reclamation costs excluded from the MFSP asset calculations?

Liability Questions

- Is the MFSP ARO liability the same as the basis for ARO number reported in your last financial statement? Why or why not?
- What contingencies were used to calculate MFSP liability?

- What equipment rates were used to calculate MFSP liability and what proof is there that these rates represent a rate the AER could obtain?
- What standards and techniques were used to establish remediation costs and why?
- What standards and techniques were used to establish reclamation costs and why?
- What disposal strategies and costs for plant site structures and facilities were used to calculate MFSP liability?
- What disposal strategies and costs for wastes and by-products were used to calculate MFSP liability?
- Are any roads or other infrastructure components left in place (unreclaimed)?
- Does the cost of reclaiming end pit lakes include pumping costs for water or do they fill in naturally? If there are pumping costs how are they calculated?
- Are there costs assigned to the treatment of water to ensure water quality criteria for release is met?
- How much was allocated to the development of a revised reclamation plan?
- How much was allocated to monitoring and maintenance after final reclamation but prior to final reclamation certification of the site?

7.5 Confidentiality of MFSP Data

Approval holders should clearly mark the data that are to be deemed confidential by the regulator to trigger the confidentiality provisions under the *Freedom of Information and Protection of Privacy Act*. Section 7.7 lists the information that will be made public.

7.6 Program Monitoring and Review

The program will be monitored to ensure that it is functioning properly and to provide early warning to regulators and industry of any potential risks. Performance targets will be used to evaluate and report on program success.

The program will be reviewed periodically to identify any changes required to correct deficiencies and to incent continuous improvement in suspension, abandonment, remediation and surface reclamation progress.

7.6.1 Program Monitoring

An interagency committee (AER, and one or more of the following: Alberta Environment and Parks, Alberta Treasury Board and Finance, and Alberta Energy) will be created upon program implementation to:

- Conduct annual reviews of reported liability amounts
- Conduct/coordinate audits to verify reported asset, liability and financial security amounts
- Continue work on options for program development
- Conduct a three year program review and implementation of new or modified financial security deposit requirements.

The committee will review the following on an annual basis:

- The forward price factor
- Predicted commodity prices (is there a potential for significant erosion of prices that would reduce the ability of approval holders to submit financial security)
- Current or future legislative or policy changes that may impact the program
- Unintended consequences of the program

In addition, the following will be monitored to ensure the program is functioning as intended. If performance is not meeting targets the program will be reviewed and:

- If the approval holder is determined to be the problem, the approval holder will be required to identify mechanisms to improve their performance
- If the other factors are determined to be the problem, the program will be revised as required

Overall Risk

- Percentage of net revenue required to provide deposits.

Reclamation

- Reclamation performance (represented by ORD and CRB).

Submission of Annual Reports

- Compliance with MFSP annual report submission deadlines.

Submission of Financial Security

- Compliance with financial security submission deadlines.

Unfunded Liabilities

- There will be sufficient asset coverage or financial security to deal with suspension, abandonment, remediation, surface reclamation and any associated care-and-custody if an approval holder defaults.

The information can be compared to other liability management programs to provide an indication of relative performance of MFSP, and can be used as a basis for the periodic program reviews below.

7.6.2 Periodic Program Review and Revision

This program will be reviewed as necessary. The first review of the program will occur no later than 2014, and will, at a minimum address

- the potential to convert the flat-rate sector-based BSD to a site-specific, estimated-cost BSD for new mines;
- whether a flat rate is appropriate for ORD calculations; and
- whether the $75 000/ha reclamation cost currently used to calculate the oil sands ORD is appropriate.

Any changes arising from the 2014 review shall be incorporated into the program through changes to the MFSP Standard and implemented in the 2015 MFSP annual report.

In addition, the following will trigger a review of the program:

- Government will monitor status of the sectors to ensure that the assumptions and principles of the MFSP are still sound. If concerns arise in the fundamentals of a sector the regulators will discuss the need for revisions to the program.
- If third-party volume processed in an approval holder's plant rises above 10% of an approval holder's throughput the program will be reviewed and a mechanism developed to address the issue.
- Material changes in financial accounting requirements for asset and liability calculations.
- Upon unexpected closure of a mine or plant under the MFSP program.

The reviews will cover all aspects of the program, but will emphasize the following aspects:

- Have risks changed? How are risks measured?
- Are the triggers correct?
- Are there any additional triggers required?
- Is a three-year average annual netback appropriate?
- Is the forward price factor for each sector appropriate?
- Is the ORD adequate/effective in incenting progressive reclamation?

- Should the calculations be done more or less frequently?
- Is the quality and quantity of data being reported appropriate?
- Are audits discovering problems?
- Should there be different rules for companies with multiple approvals?

7.6.3 Guide and Standard Revisions

This guide will be revised as experience is gained in implementing the MFSP. Revisions will be released by the AER and will be available on the AER website, www.aer.ca.

The Mine Financial Security Program Standard (section 6.1) may be revised following program reviews.

7.7 Public Reporting

Public access to information regarding the liabilities, financial security and reclamation progress of each approval holder is a key component of the MFSP.

The AER will report the following information to the public through the MFSP website. The financial security amounts will also be reported in the annual report of the *Environmental Protection Security Fund Annual Report* issued under the *Environmental Protection and Enhancement Act* (see most recent report on the Government of Alberta website.)

7.7.1 Asset Safety Factor and Financial Security

The Asset Safety Factor for each approval, and an aggregated sector number, will be published each year. Individual asset and liability numbers will not be disclosed as these numbers reflect confidential financial information. The ASF data will help the public understand the magnitude of the potential risks associated with the developments (the smaller the ASF the greater the potential risk).

The amount of each of the types of financial security provided by each approval holder, and an aggregated sector number, will be shown. This information helps the public see how financial deposits are offsetting liabilities.

7.7.2 Reclamation Progress

The AER website will show the progress of each oil sands approval holder by comparing their actual reclamation against their planned reclamation as set out in their mine reclamation plan.

8 Enforcement

A guiding principle of the MFSP is that it is supported by firm but fair enforcement of the MFSP requirements. Enforcement directly related to the MFSP will be contemplated when:

- An approval holder fails to submit the MFSP annual report required by the program
- An approval holder submits incomplete or inaccurate information
- An approval holder fails to submit the required financial security at the appropriate time

Enforcement options for MFSP requirements are described in the *Environmental Protection and Enhancement Act*, the *Conservation and Reclamation Regulation*, and *the Administrative Penalty Regulation* and include:

- Environmental protection orders (sections 113, 114, 140, 141, and 143 of *EPEA*) – to undertake abandonment, remediation or surface reclamation
- Enforcement orders (section 210(1) of *EPEA*) – to undertake abandonment, remediation or surface reclamation
- Prosecution (fines and or imprisonment – section 228 of *EPEA*) – for providing false information or for failure to comply with an enforcement order
- Administrative penalties (section 237 of *EPEA* and the *Administrative Penalty Regulation*) – in lieu of a charge for an offence
- Cancellation of existing approval (section 70(3) of *EPEA*)
- Refusal to issue future approvals (section 68(1) of *EPEA*)

Enforcement actions will primarily be directed against the approval holder as the person most directly responsible for the site. However, the definitions in the *Environmental Protection and Enhancement Act* of *operator* (section 134(b)) for reclamation duties and *person responsible* (section 1(tt)) for remediation duties are very broad and enforcement actions may be taken against any of the parties fitting these definitions.

In addition to these enforcement provisions, the amended *Conservation and Reclamation Regulation* provides the authority to collect additional financial security for failures to meet the requirements of the MFSP.

Appendix 1 Financial Security as of December 31, 2010

The following lists the oil sands and coal mine and plant sites that are subject to the Mine Financial Security Program. The list also shows the existing financial security provided by each approval holder. The amounts reported here are different than those in the most recent version of the *Environmental Protection Security Fund Annual Report* since security amounts are adjusted at different times of the year for each sector (see the most recent report on the Government of Alberta website). The Alberta Energy Regulator holds all the security pursuant to the *Environmental Protection and Enhancement Act* unless otherwise noted.

Oil sands mining – Security as of December 31, 2010 (*EPEA* approval number in brackets)	**$912,852,619**
Aurora North and Mildred Lake Mines (26) – Syncrude Canada Ltd	$205,303,024
Muskeg River Mine (20809) – Albian Sands Energy Inc.	$111,277,441
Steepbank/Millennium (94) – Suncor Energy Inc.	$359,096,654
Fort Hills Oil Sands (151469) – Suncor Energy Inc.	$38,958,605
Horizon Oil Sands Project (149968) – Canadian Natural Resources Limited	$61,200,000
Jackpine Oil Sands Mine (153125) – Shell Canada Ltd.	$72,361,895
Kearl Oil Sands Mine (46586) – Exxon Mobil and Imperial Oil	$64,655,000

Coal mining – Security as of December 31, 2010 (*EPEA* approval number in brackets)	**$214,021,707**
Vesta and Paintearth Mine (11364) – Prairie Mines and Royalty Ltd.	$10,395,598
Dodds Coal Mine (69353) – Dodds Coal Mining Company Ltd	$28,528
Dodds Coal Mine & Handling Facility (220226) – Dodds Coal Mining	$210,060
Cheviot Mine (46972) – Elk Valley Coal Corporation	$ 16,470,237
Cardinal River Mine (11767) – Elk Valley Coal Partnership	$ 27,124,055
Genesee Mine (10404) – EPCOR Generation Inc.	$ 21,232,677
Grande Cache Coal Mine (155804) – Grande Cache Coal Corporation	$11,519,598
Obed Mine (10119) – Coal Valley Resources Inc.	$ 18,171,453
Coal Valley Mine (11066) – Coal Valley Resources Inc.	$ 23,234,662
Sheerness & Montgomery Mine (11876) – Prairie Mines and Royalty Ltd.	$ 11,082,475
Tofield Mine (11889) – Prairie Mines and Royalty Ltd.	$25,000
Gregg River Mine (11903) – Coal Valley Resources Inc.	$ 1,738,358
Tent Mountain #3 Mine (47679) – Coal Valley Resources Inc.	$244,086
Kipp Mine (11893) – Mancal Coal Inc.	$493,000
Highvale Mine (11187) – TransAlta Utilities Corporation	$ 64,747,217
Whitewood Mine (11851) – TransAlta Utilities Corporation	$ 7,279,462
Kohut Pit & Coal Mine (194463) – Keephills Aggregate Company Ltd. (A coal mine approval issued for extraction of an aggregate deposit and an underlying coal deposit)	$25,240

Appendix 2 Glossary and Acronyms

The following definitions are used in the Mine Financial Security Program. Some of the defined terms are used only in *Mine Financial Security Program Standard*.

Additional definitions may be found in the *Environmental Protection and Enhancement Act* and the *Conservation and Reclamation Regulation*.

Abandonment

The permanent deactivation/dismantlement of a mine and/or associated facility and includes any measures required to ensure the mine is left in a permanently safe and secure condition, eliminate any safety hazard, and ensure long term structural stability. It also includes the dismantlement of plants and removal of all associated equipment and structures and removal and disposal of structural concrete.

Actual reclamation

The number of hectares reclaimed in the reporting year. The actual reclamation value is used in the ORD calculation.

Act

The *Environmental Protection and Enhancement Act* as amended or replaced from time to time and as modified by *Responsible Energy Development Act*.

Adjusted asset safety factor (AASF)

The ratio of the approval holder's MFSP assets to its MFSP liability minus deposits. Used in the determination of the asset safety factor deposit, as calculated in section 5 of Schedule 1 of the Standard.

AER

Alberta Energy Regulator

Annual netback

The approval holder's gross revenues minus operating costs divided by annual sales volume. The revenues, costs, and sales are for the approval activity only.

Annual reclamation balance (ARB)

The difference between the planned reclamation for the reporting year and the actual reclamation for the reporting year. The planned reclamation value is obtained from the approval holder's approved mine reclamation plan or if no plan has been approved from the conservation and reclamation annual report or another value approved by the director.

Approval

An approval issued under the *Environmental Protection and Enhancement Act* for a coal or oil sands mine or the on-site plants associated with those mines.

Approval holder

The company that holds the *EPEA* approval. The approval holder has all of the reporting and financial security obligations under MFSP.

ARB

Annual reclamation balance

Asset retirement obligation (ARO)

A legal obligation associated with the retirement of a tangible asset that a company is required to settle as a result of an existing or enacted law, statute, ordinance, or written or oral contract or by a legal construction of a contract under the doctrine of promissory estoppel. For MFSP, the asset retirement obligation includes the costs to address life cycle financial security obligations of a project, which are suspension, abandonment, remediation, surface reclamation and care and custody prior to land certification. This definition is based on the principles and concepts presented in the CICA handbook *Section 3110 – Asset Retirement Obligations*.

The information provided in this section would be considered a basis on which to further understand the term, asset retirement obligations, despite any future accounting changes in Canada and/or the United States. It is important to note in this definition that the term asset retirement obligation may cease to exist in financial reporting circles after the adoption of International Financial Reporting Standards (IFRS). There is no specific requirement under IFRS to use a specific term to describe the liability for this type of activity, but the term ARO will continue to be used in this document.

Asset safety factor (ASF)

The ratio of the MFSP assets to MFSP liability, as calculated in section 5 of Schedule 1 of the Standard.

Asset safety factor deposit (ASFD)

The financial security posted by the approval holder when the adjusted asset safety factor falls below the specified ratio. The amount of financial security provided is an amount sufficient to bring the adjusted asset safety factor back up to at least 3.00.

Base security deposit (BSD)

The financial security deposit placed by an approval holder to secure a site and maintain safety until a new approval holder takes over the site, plus an additional amount to address some of the residual risks of the program. The deposit is based on the sector, and reflects the amount and complexity of work required making the site safe until a new approval holder takes over or the site is closed.

CEO

Chief executive officer

Certified land

Land that has received a reclamation certificate under the *Environmental Protection and Enhancement Act*.

CFO

Chief financial officer

CICA

Canadian Institute of Chartered Accountants

Closure (plans)

The suspension, abandonment, remediation and surface reclamation activities (plans) that result in reclaimed lands receiving a certificate under the *Environmental Protection and Enhancement Act*. The plans outline conservation and reclamation activities to end of mine life, including those reclamation and closure activities required after mine life.

Conservation and reclamation annual report

(i) The report submitted to the director in the reporting year pursuant to the approval that contains, among other things, the number of hectares the approval holder plans to reclaim in the reporting year, or

(ii) The report submitted to the director in the submission year pursuant to the approval that contains, among other things, the actual reclamation value for the reporting year.

CRR

Conservation and Reclamation Regulation (under the *Environmental Protection and Enhancement Act*), as amended.

Cumulative reclamation balance (CRB)

The sum of the annual reclamation balances since the start of MFSP.

Current mine reclamation plan

A plan approved by the director that identifies the number of hectares to be reclaimed over a 10-year period, and that is updated every three years pursuant to the approval.

Decommissioning

The permanent closure of all or part of an industrial facility followed by removal of process equipment, buildings and other structures, and the decontamination of the surface and subsurface.

Deemed netback

A netback approved by the director for use in the asset calculation when an annual netback cannot be calculated. The process for approval is described in section 2 of the Standard.

Defaulting company

A company that cannot, or does not, carry out its statutory obligations to suspend, abandon, remediate, or surface reclaim a site. This will generally occur when a company is insolvent, bankrupt, or in receivership.

Designated financial representative

A joint venture approval holder's senior designated financial or accounting representative (equivalent to a chief financial officer).

Director

The Alberta Energy Regulator staff member who has been delegated the authority of director under the *Environmental Protection and Enhancement Act* who issues the *Environmental Protection and Enhancement Act* approval for the mine or plant.

EPEA

Environmental Protection and Enhancement Act

FASB

Financial and Accounting Standards Board (US)

Financial Security

A letter of credit, cash, or other security instrument in the amount determined in the MFSP annual report as approved by the director and in a form approved by the director.

Gross proven and probable reserves

The approval holder's reserves within the area determined in the AER approval or permit and evaluated or audited in accordance with National Instrument NI 51-101 (oil sands) or NI 43-101 (coal) or requirements of the United States Financial and Accounting Standards Board and the United States Securities and Exchange Commission. The reserves may be calculated using constant dollar or forecasted prices.

Gross revenues

The approval holder's revenues net of transportation and handling including intersegment non-arms-length volume transactions at fair market value, and excluding hedging gains and losses for all product sold from the approval holder's mine or plant.

IFRS

International Financial Reporting Standards

Infrastructure

Any works, buildings, structures, facilities, equipment, apparatus, mechanism, instrument or machinery belonging to or used in connection with a mine or plant, and includes any storage site or facility, disposal site or facility, access road, haul road, railway or telecommunication line.

Letter of credit

A financial instrument on a form approved by AER from a bank or other financial institution that obligates the financial institution to pay AER the amount indicated in the LOC upon demand. The LOC must be presentable for payment at a bank in Canada and issued by a bank authorized under the *Bank Act* (Canada) to do business in Canada (or issued by such other financial institution approved in advance by AER, who may grant or decline such approval in its absolute discretion). AER may require the financial institution to have a senior, unsecured long- term credit rating of not less than A+ (with a stable outlook) or equivalent from Standard & Poor's, DBRS, or Fitch Ratings (or any other major credit rating agency approved by AER, who may grant or decline such approval in its absolute discretion.

LFP

Large Facility Program – a liability management program for large upstream oil and gas facilities administered by the AER.

Liability management

The measure undertaken to reduce current and long-term liabilities, and to ensure that adequate mechanisms, including funding, are in place to manage the remaining liabilities. Reduction in liabilities is achieved by fulfilling statutory obligations to suspend, abandon, remediate, reclaim and provide care and custody of the site until liability closure is achieved.

LLR Program

Licensee Liability Rating Program – a liability management program for the upstream oil and gas industry administered by the AER through the *Oil and Gas Conservation Act*.

LOC

Letter of credit

MFSP assets

The approval holder's estimated deemed value from an approval as calculated in section 1 of Schedule 1 of the Standard.

MFSP liability

The sum of the third-party (fair value) costs to suspend, abandon, remediate, and surface reclaim all the disturbed land associated with the approval as calculated in section 2 of Schedule 1 of the Standard.

Mine

An excavation in the ground for the purposes of removing coal or oil sands. Includes any tailings ponds, water management structures, out-of-pit waste dumps, reclamation material storage sites, aggregate pits and stockpiles, end-pit-lakes, and all supporting infrastructure within the lease area such as roads, powerlines, pipelines, and camps.

Mine Financial Security Program (MFSP)

A financial security program for coal and oil sands mines and their associated on-site plants.

Netback

The three-year average of the approval holder's annual netbacks used in the asset calculation as described in section 1 of Schedule 1 of the Standard.

Net revenue

The approval holder's gross revenues minus operating costs.

Operating costs

Expenses including operating, selling and general administration, royalties, turnarounds and taxes other than income taxes related to the approval. It excludes environmental obligation accruals, exploration expenses, depletion, depreciation and amortization and other non-cash items (including non-cash overburden costs).

Operating life deposit (OLD)

The financial security posted by the approval holder when the reserve life index for an approval holder's mine falls below 15.00 years, as calculated in section 4 of Schedule 1 of the Standard. The OLD is adjusted from the OLDI based on the base security deposit.

Operating life deposit – initial (OLDI)

The operating life deposit before adjustment for the base security deposit as determined in section 4 of Schedule 1 of the Standard.

Outstanding reclamation deposit (ORD)

The financial security required when the approval holder fails to reclaim planned reclamation hectares, as calculated in section 6 of Schedule 1 of the Standard.

Peer company

A company using similar, proven mining and/or processing technology. Used to determine an appropriate annual netback for a new approval holder.

PLA

Public Lands Act

Planned reclamation

The number of hectares planned for reclamation in the reporting year. The planned reclamation value is used in the ORD calculation.

Plant

The entire processing infrastructure related to, and on the site of, one or more coal or oil sands mines. Includes all facilities used for the storage, treatment, processing, transport, or handling of raw material, intermediate product, by-product, finished product, process chemicals, or waste material.

Liabilities for other types of plants that are located within the area leased or owned by the approval holder for the purpose of a coal or oil sands mine or plant are included in the MFSP liability calculation.

A coal or oil sands plant that is located on a remote site, and any infrastructure (e.g., pipelines) connecting the mine site to the remote plant is not included in the MFSP.

Products

A product, as contemplated by the MFSP for the calculations of asset value, is any commodity, good or service that is intrinsically associated with the MFSP project and can demonstrate a reserve calculation.

Project

The activities that are subject of an approval.

Qualifying environmental trust (QET)

A form of financial security established pursuant to the *Income Tax Act (Canada)*.

Ready-to-reclaim

Lands that are no longer required for mine or plant purposes but where reclamation activities have not yet commenced.

Reclamation

Reclamation means

1) The removal of equipment or buildings or other structures and appurtenances (see abandonment definition)

2) The decontamination of buildings or other structures or other appurtenances, or land or water, (see remediation definition)

3) The stabilization, contouring, maintenance, conditioning or reconstruction of the surface of land, (see surface reclamation definition)

4) Any other procedure, operation or requirement specified in the regulations.

When used in “planned reclamation” and “actual reclamation,” reclamation means permanent reclamation.

Reclamation cost

The value, expressed in $/ha, representing a conservative cost to reclaim the planned reclamation hectares. For oil sands, the director has set the reclamation cost at $75,000/ha for the 2012 to 2014 period, inclusive. Should a coal approval holder decide not to provide full financial security, the approval holder will work with the director to determine an appropriate reclamation cost for the purposes of the ORD prior to submission of the MFSP annual report.

Reclaimed land

Disturbed land that:

- Where dry, has been recontoured, had soil or reclamation material placed on it and has been vegetated to meet end land use objectives
- Where wet, has been recontoured and has been filled with water and/or tailings to the desired level, and has, where appropriate, been vegetated to meet end land use objectives

Remediation

The removal, reduction, or neutralization of substances, wastes or hazardous material from a site so as to prevent or minimize any adverse effects on the environment now or in the future.

Remediation should be managed on a progressive basis wherever possible, and must be managed immediately when an adverse effect is occurring.

Reporting year

The calendar year to which the MFSP annual report relates. The MFSP annual report is submitted no later than June 30 of the year after the reporting year.

Reserve life index

The approval holder’s total gross proven plus probable reserves divided by the three-year average annual sales volumes, both of which are in the same units and for the same product (e.g., SCO, bitumen or coal).

Retirement (of an asset)

The other-than-temporary removal from service of an asset, including its sale, abandonment, recycling, or disposal in some other manner, but not its temporary idling.

SEC

Securities and Exchange Commission (US)

Standard

The *Mine Financial Security Program Standard* published by the Alberta Energy Regulator, as amended or replaced from time to time.

Submission year

The calendar year after the reporting year. The year in which the MFSP annual report is submitted.

Surface reclamation

The recontouring, soil placement and revegetation of disturbed land. Surface reclamation occurs after abandonment and remediation (as required).

Suspension

The activities and operations required to ensure the safe and secure condition of a site when production activities have ceased and/or while receivership/resale of all or parts of the project takes place. This includes activities and operations to maintain the care and custody of a site while abandonment and surface reclamation activities are undertaken.

Third-party costs

The costs to suspend, abandon, remediate and surface reclaim a site that would be reasonably accessible by the Government of Alberta, or another third party, in the event of an unexpected default of the operation.

Transferee

The approval holder who gets the approval or portion of an approval transferred to him.

Transferor

The approval holder who transfers the approval or a portion of an approval to another approval holder.

Trigger

The condition that determines if a financial security deposit is required.

Updated mine reclamation plan

A plan submitted to the director to replace the current mine reclamation plan. The plan will be submitted in the fourth year of the current mine reclamation plan.

Wet sites

Any lands designated as lakes, end pit lakes, ponds, rivers, creeks or wetlands in the reclaimed landscape.

Appendix 3 Principles Guiding Development of the MFSP

The following principles guided the initial development of the MFSP:

The provincial government is the owner of most of Alberta's natural resources and as such has the responsibility to ensure the orderly, efficient and economical development of those resources.

The approval holder is responsible for the suspension, abandonment, remediation and surface reclamation of lands disturbed by resource development, and care and custody of those lands until a reclamation certificate is issued.

Sustainable development is a shared objective of government and industry.

Resources under development represent an asset of the approval holder (generating net revenues) and an asset of the province (generating tax and royalty revenues), and should be considered as such when assessing the extent to which outstanding reclamation liabilities should be secured by deposits.

Lands available for reclamation should be reclaimed and returned to the province or landowner as soon as possible.

The MFSP should provide appropriate liability protection for the public at a reasonable cost to industry.

The remaining project life economic return should remain favourable at the time the financial security is required or the suspension, abandonment, remediation and surface reclamation activity starts.

The MFSP should include transparent and understandable methodology for asset and liability calculations.

The MFSP should include transparent public reporting of outstanding liability.

The MFSP should include transparent public reporting of annual disturbance and reclamation status.

The MFSP should be backstopped by firm but fair penalties for noncompliance.

Appendix 4 MFSP Administrative Cycles

For approval holders electing to provide full financial security, the following schedule applies:

Date	Activity
June 30	• Submit MFSP annual report • Renew financial security as required • Regulator conducts enforcement as required for noncompliance
June 30 to June next year	• Regulator conducts one or more audits of MFSP submissions • Revised financial security submitted as required
October	• Regulator review of MFSP annual reports completed (does not include any audits that may occur)
November	• Regulator and industry review of first year of the program

For all other approval holders, the following tables show the administrative cycles for the various stages of MFSP initiation and implementation.

Program Start-up Cycle

This table assumes implementation of MFSP and submission of the first MFSP annual report in 2011. All references to June 30 submission of an MFSP annual report relates to the last day in the calendar year that the report can be filed. Approval holders may choose to file earlier if they have all the necessary information.

Date	Activity
Dec. 31, 2010	• Corporate year end
Spring 2011	• Regulation changes passed • MFSP liability calculations completed • MFSP asset calculations completed • Financial security estimate calculations completed • Discuss calculations with regulator(s) as needed
June 30, 2011	• Submit first MFSP annual report • Renew financial security as required • Regulator conducts enforcement as required for noncompliance
June 30, 2011, to June 2012	• Regulator conducts one or more audits of MFSP submissions • Revised financial security submitted as required
October 2011	• Regulator review of MFSP annual reports completed (does not include any audits that may occur)
November 2011	• Regulator and industry review of first year of the program • Preparation for second year

Program Annual Cycle

Data for calendar Year X MFSP assets, MFSP liability, financial security, and reclamation performance are reported June 30, Year X+1.

Date	Activity
Fall Year X	• Reclamation and mine plan discussions with regulators
December 31, Year X	• Corporate year end
January 31, Year X+1	• Notice that the director will accept deemed netback requests.
Spring, Year X+1	• MFSP liability calculations completed • MFSP asset calculations completed • Financial security estimate calculations completed
June 30, Year X+1	• Submit MFSP annual report • Renew financial security as required
June 30, Year X+1 to June, Year X+2	• Regulator conducts one or more audits of MFSP submissions • Revised financial security submitted as required • Regulator review of MFSP annual reports completed • Regulator conducts enforcement as required for noncompliance • Update MFSP website with Year X data

New Mine Start-up Cycle

The dates assume that the pre-approval to approval period occurs within one calendar year.

Date	Activity
December 31, Year X	• Corporate year end
Pre-approval, Year X+1	• Deemed netback applied for and approved by AER director • Mine reclamation plan or reclamation schedule submitted and approved by director • Liability calculations completed • Asset calculations completed • Security estimate calculations completed
Immediately after pre-approval, Year X+1	• Submit MFSP data (same as in MFSP annual report) • Post security if required by MFSP calculations
Approval, Year X+1	• Director approves MFSP data • Director approves security amount and form • Director issues approval
December 31, Year X+1	• Start program annual cycle

Transfer of Approval Cycle

Date	Activity
December 31, Year X	• Corporate year end
June 30, Year X+1	• Each company submits MFSP annual report information with the mine to be transferred reported by the potential seller • Renew security as required or request return of existing security
Anytime, Year X+1	• Companies submit a request to transfer approval • Transferee calculates MFSP assets, MFSP liability, and financial security as if the transfer had gone through – transferee may determine that the transfer is not appropriate at this time and not proceed • The transferee uses the seller's netback for the transferred property in the asset calculations • Companies discuss the transfer with the director to determine if the director will or will not approve the transfer • If the transfer will be granted, each company submits security as required (or gets a refund) and the director approves the transfer
December 31, Year X+1	• Corporate year end
Spring, Year X+2	• Transferee calculates MFSP assets, MFSP liability, and financial security for the mine
June 30, Year X+2	• Transferee provides information in the MFSP annual report and places any financial security as required • Transferor notes in the MFSP annual report that the mine has been transferred to transferee

End-of-Life Cycle

For details of the yearly cycles, see the Program Annual Cycle table.

Date	Activity
Year X	• End of mining and processing
Year X+1 to Year Y−1	• Ongoing reclamation and certification • Continue to provide MFSP annual reports • Continue to amend security • Repeat until last reclamation certificate is issued in Year Y
Year Y	• Obtain final reclamation certificate • Terminate final *EPEA* approval • Return final reclamation security • Provide final MFSP annual report (note – no need to wait until year Y+1 as per normal cycle since liability will be zero)