

Audit Protocol for the Mine Financial Security Program

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August 2012



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OSRIN is a university-based, independent organization that compiles, interprets and analyses available information about returning landscapes and water impacted by oil sands mining to a natural state and provides knowledge to those who can use it to drive breakthrough improvements in reclamation regulations and practices. OSRIN is a project of the University of Alberta's School of Energy and the Environment (SEE). OSRIN was launched with a start-up grant of \$4.5 million from Alberta Environment and a \$250,000 grant from the Canada School of Energy and Environment Ltd.

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Citation

This report may be cited as:

Dixon, R.J., J. Kenney and A.C. Sandilya, 2012. *Audit Protocol for the Mine Financial Security Program*. Oil Sands Research and Information Network, University of Alberta, School of Energy and the Environment, Edmonton, Alberta. OSRIN Report No. TR-27. 27 pp.

Copies of this report may be obtained from OSRIN at osrin@ualberta.ca or through the OSRIN website at <http://www.osrin.ualberta.ca/en/OSRINPublications.aspx> or directly from the University of Alberta's Education & Research Archive at <http://hdl.handle.net/10402/era.17507>.

Table of Contents

REPORT SUMMARY	iv
ACKNOWLEDGEMENTS	v
1 INTRODUCTION	1
1.1 Purpose of the MFSP Audit	1
1.2 Assumptions.....	2
1.3 Structure of this Report.....	3
2 MFSP AUDIT PROCESS	3
2.1 Supporting Information Required.....	5
2.2 Other Information Sources.....	6
2.3 People Expected to be Available for Level 3 and 4 Audits	6
2.4 Audits of Joint Venture Projects.....	7
2.5 Documenting the Audit.....	7
2.5.1 Participants	8
2.5.2 Chronology.....	8
2.5.3 Information Reviewed and People Interviewed	8
2.5.4 Findings.....	9
2.5.5 Response(s) to Letter of Direction	9
3 GENERAL AUDIT QUESTIONS	9
4 MFSP ASSET AUDIT.....	10
4.1 Netback	10
4.2 Reserves	11
4.3 Forward Price Factor.....	12
4.4 Special Cases	12
4.4.1 Integrated In-situ Production and Reserves	12
4.4.2 Third-party Production.....	12
4.4.3 Suspended Mines.....	13
5 MFSP LIABILITY AUDIT	13
5.1 ARO Liability	14
5.2 Other Liability.....	14

6	BASE SECURITY DEPOSIT AUDIT	15
7	OPERATING LIFE DEPOSIT AUDIT	15
8	ASSET SAFETY FACTOR DEPOSIT AUDIT	16
9	OUTSTANDING RECLAMATION DEPOSIT AUDIT	17
	9.1 Planned Reclamation and Actual Reclamation Values	17
	9.2 Annual Reclamation Balance and Cumulative Reclamation Balance	17
	9.3 Carryover	17
10	MFSP ANNUAL REPORT AUDIT	18
	10.1 Schedule 2 – Mine Financial Security Program Annual Report	18
	10.2 Schedule 3 – Mine Financial Security Program Annual Report – Full Financial Security	20
	10.3 Schedule 4 – Approval Transfer Acknowledgement of MFSP Security	21
11	REFERENCES	22
12	GLOSSARY	23
	12.1 Terms	23
	12.2 Acronyms	23
	LIST OF OSRIN REPORTS	25

REPORT SUMMARY

The Audit Protocol for the Mine Financial Security Program was commissioned to provide a framework to assist government or third-party auditors of Annual Reports under Alberta Environment and Sustainable Resource Development's Mine Financial Security Program (MFSP). The Audit Protocol seeks to assist in the verification of the information provided to Alberta Environment and Sustainable Resource Development under the MFSP by coal and oil sands mine companies.

The Audit Protocol was prepared based upon the requirements of the *Mine Financial Security Program Standard* and the *Guide to the Mine Financial Security Program*, with reference to accepted auditing standards and defined reclamation requirements. The Audit Protocol has been designed to systematically enable an auditor to review and assess an Approval Holder's MFSP Project's:

- MFSP Assets (e.g., reserves);
- MFSP Liabilities (e.g., closure and reclamations costs);
- Reporting requirements;
- Base Security Deposit;
- Operating Life Deposit;
- Asset Safety Factor Deposit; and
- Outstanding Reclamation Deposit.

For each section of the MFSP Audit, a series of questions are presented to direct the auditor to the required information supporting the MFSP Annual Report.

ACKNOWLEDGEMENTS

The Oil Sands Research and Information Network (OSRIN) and the School of Energy and the Environment (SEE) of the University of Alberta provided funding for this project.

1 INTRODUCTION

Alberta Environment¹ released the Mine Financial Security Program (MFSP²) in 2011³ under the *Conservation and Reclamation Regulation* (Government of Alberta 1996). The MFSP requires each coal or oil sands mine Approval Holder⁴ to submit a *Mine Financial Security Program Annual Report* (MFSP Annual Report) which provides the basic information related to the calculation of reclamation security (Alberta Environment 2011a). Following submission, Alberta Environment and Sustainable Resource Development can audit the Approval Holder to review the detailed information supporting the MFSP Annual Report (Alberta Environment 2011a,b).

The *Guide to the Mine Financial Security Program* (MFSP Guide; Alberta Environment 2011b – section 7.4) provides some suggested questions an auditor⁵ may ask and the *Mine Financial Security Program Standard* (MFSP Standard; Alberta Environment 2011a – section 9) provides the procedural steps required for Level 3 or 4 audits (see [section 2](#) for a description of the four levels of audit).

This report provides a recommended approach to conducting the MFSP audit and indicates the types of questions an auditor may wish to ask. *The list of questions provided here is not exhaustive, and in no way constrains an auditor from asking additional questions.*

1.1 Purpose of the MFSP Audit

The purpose of the MSFP audit is to enable Alberta Environment and Sustainable Resource Development to verify that Approval Holders are meeting the requirements of the MFSP Standard as well as the expectations of the MFSP Guide. In addition, the audit will provide information for Alberta Environment and Sustainable Resource Development and industry to help in:

- Identifying updates to the MFSP Guide to clarify program intent and expectations
- Preparing for the three-year review of the overall program described in the MFSP Guide (section 7.6.2)

¹ Now Alberta Environment and Sustainable Resource Development (AESRD)

² Acronyms used in this report are listed in section 12.2.

³ See <http://environment.alberta.ca/03388.html>

⁴ The holder of an *Environmental Protection and Enhancement Act* approval for a coal mine, coal processing plant, oil sands mine or oil sands processing plant.

⁵ The person (or persons) conducting the MFSP audit. An auditor may be a government employee or an employee of a third-party contracted to conduct the MFSP audit.

In general, the auditor should be focusing recommendations on items that will have a material effect⁶ on the amount of reclamation security or the information reported in the MFSP Annual Report. However, since the MFSP is a new program that will likely be scrutinized by the public, ENGOs and potentially the Auditor General, there are valid reasons for pointing out non-material items in early audits with the intent of ensuring that the integrity of the MFSP process is maintained. These non-material items may be addressed outside the formal audit process as a means of learning from the audit and improving future MFSP Annual Report submissions.

1.2 Assumptions

This report focuses on the questions that Alberta Environment and Sustainable Resource Development or its agents may want to ask the Approval Holder during an audit. The report makes the following assumptions:

- The Director⁷ has made all necessary decisions upon which the MFSP calculations are based, such as:
 - Authorizing (or not) the amount and use of a Deemed Netback
 - Authorizing (or not) the use of Third-party Production in excess of 10% of the Approval Holder's production
 - Authorizing (or not) the amount and use of an adjusted Cumulative Reclamation Balance, and the rationale for that authorization
 - Authorizing (or not) the transfer of all or part of an approval to another Approval Holder
 - Authorizing (or not) the form of the security
 - Authorizing (or not) the Mine Reclamation Plan
 - Authorizing (or not) the Mine Closure Plan
 - Authorizing (or not) the Conservation and Reclamation Annual Report
- The Approval Holder can fairly rely on these decisions to develop the calculations supporting their MFSP Annual Report.

⁶ The financial discussion on materiality, material effect, material adverse effect (MAE) and pervasive effect is extensive. Generally, the effect of misstatement is material when financial information as a whole, in part or in aggregate (remember that under IFRS an asset's useful life is separated into components something that rarely occurs under Canadian GAAP) could reasonably be expected to influence the economic decisions of users. There is no hard and fast percentage of what constitutes material effect. See also: [Materiality \(auditing\)](#) from Wikipedia and *Environmental, Social and Governance Issues in Institutional Investor Decision Making* <http://www.cica.ca/publications/list-of-publications/manual/item41881.pdf>

⁷ The Alberta Environment and Sustainable Resource Development staff member designated as Director under the *Environmental Protection and Enhancement Act* who issues the *Environmental Protection and Enhancement Act* approval for the mine or plant.

As a result of these assumptions the audit does not address the content or validity of these documents, nor the procedures related to them.

1.3 Structure of this Report

The report first describes the MFSP audit process requirements and recommends procedures for carrying out the audit. Subsequent sections provide suggested audit questions for each of the key requirements in the MFSP Standard. *Audit questions are provided in italics* – they may be simple questions, or may be presented as a series of nested questions in which the answer to one question leads to a follow-up question.

The typical audit questions contained in the MFSP Guide are repeated here to provide a single source of information for auditors. There will be a certain degree of duplication of audit questions between the individual component sections of the MFSP and the MFSP Annual Report section because Level 1 and 2 audits will not have the benefit of the information gathered in the detailed audit of the individual components.

The references to the MFSP Guide, and in particular the MFSP Standard, provided in each section are based on an audit of an Approval Holder who has elected not to provide full financial security. An audit of an Approval Holder electing to provide full financial security (MFSP Standard; section 6) will focus only on the MFSP Liability amount ([section 5](#) in this report) and the contents of the MFSP Annual Report ([section 10.2](#) in this report).

2 MFSP AUDIT PROCESS

Audits can be undertaken at four different levels of intensity and scrutiny (MFSP Guide; section 7.4):

- 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 staff⁸ 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 Alberta Environment and Sustainable Resource Development

Following an audit the Director may require the Approval Holder to update the MFSP Annual Report and/or to amend the amount of security provided (MFSP Standard; section 9).

Audits at Levels 1 and 2 are intended to be less intense and will primarily involve the collection of information at arm's length; for example over the telephone and/or the internet (e-mail).

⁸ Alberta Environment and Sustainable Resource Development is likely to involve other government departments and agencies (e.g., ERCB, Energy, and Finance) as part of the audit.

Level 1 and 2 audits may focus on the Approval Holder's specific information and may also seek reasons for why the Approval Holder's information is different from the data of other Approval Holders⁹. The audit notification requirements in the MFSP Standard (section 9) do not apply to Level 1 and 2 audits but the Approval Holder is required to comply with the requirements specified in writing by the Director following a Level 1 or 2 audit (MFSP Standard; section 5(2) or 6(3)(c)).

Audits at Levels 3 and 4 are more intense, technical and in-depth¹⁰. They will be conducted on-site at the Approval Holder's place of business (MFSP Guide; section 7.4), and are likely to require the Approval Holder to make available both information and personnel. The Director is required to notify the Approval Holder 60 calendar days before the commencement of a Level 3 or 4 audit¹¹. During the audit, the Approval Holder is expected to extend full co-operation to the auditors by providing access to data, reports and personnel deemed necessary by the Director to successfully conduct the audit. Within 30 calendar days of the completion of an audit, the Director is required to provide an audit report to the Approval Holder, and inform the latter of the results of the audit.

If additional information is required as a result of the audit findings, the Director will prepare a Letter of Direction to the Approval Holder after the audit has been completed. The Director will consider the recommendations of the auditor in formulating the Letter of Direction. The Letter of Direction must also contain a timeframe within which the Approval Holder must comply with the Director's requirements.

The Approval Holder will submit a written response to the Director detailing measures taken in response to the Director's Letter of Direction. The response may include an updated MFSP Annual Report and/or updated financial security.

Level 1 and 2 audits may be conducted any time after submission of the MFSP Annual Report in June. Level 3 and 4 audits may be conducted any time after August in the year the MFSP Annual Report is submitted (due to the 60 day notice period). Neither the MFSP Standard nor the MFSP Guide specify a time after which audits may not/should not be conducted but it seems reasonable that an audit would not be conducted after the next MFSP Annual Report is submitted (i.e., an audit of the MFSP Annual Report submitted in June 2013 should not occur after June 2014). In addition, to ensure that any learnings from the audit are incorporated into the next MFSP Annual Report it would be ideal to have the audit completed by the end of March of the year following the submission of the MFSP Annual report.

⁹ Confidential information from other Approval Holders will not be disclosed. The questions are likely to be generic in nature; for example, "the average value is X, why is yours Y?"

¹⁰ Note – the Approval Holder may require audit team members to sign confidentiality or non-disclosure agreements to ensure that proprietary information is not revealed.

¹¹ Called a *Notice of Audit* in this report.

2.1 Supporting Information Required

For Level 1 and 2 audits, a copy of the MFSP Annual Report is required; copies of the reports from the last three years would be helpful.

The following information is likely to be required for MFSP Level 3 and 4 audits. Some will be available from Alberta Environment and Sustainable Resource Development staff, others will need to be obtained from the Approval Holder. Wherever possible the Director should identify in advance for the Approval Holder the materials that the auditors will need to access – preferably this would be done in the Notice of Audit.

1. The Approval Holder's MFSP Annual Reports for the Reporting Year¹² and two prior years (when available)¹³.
2. The Approval Holder's annual financial report for the Reporting Year and previous year¹⁴.
3. A report of Gross Proven plus Probable Reserves prepared by a qualified reserves evaluator/auditor.
4. Audited Gross Revenues, Operating Costs and Annual Sales Volumes for the Reporting Year and two years preceding.
5. Monthly resource production and recovery data for the Reporting Year.
6. The Approval Holder's current Mine Reclamation Plan and Mine Closure Plan as well as the previous version submitted to Alberta Environment and Sustainable Resource Development.
7. Annual Conservation and Reclamation Reports for the Reporting Year and the two years preceding.
8. Any other technical reports prepared in support of, or relied on for, the MFSP calculations.
9. Any reports prepared by third-party auditors who reviewed the MFSP Annual Report or the technical reports prepared in support of, or relied on for, the MFSP calculations.

¹² The calendar year to which the MFSP Annual Report relates (MFSP Standard section 1(2)(gg)). Note the MFSP Annual Report is submitted in June of the calendar year following the Reporting Year.

¹³ Some MFSP requirements work on a three-year cycle therefore three years of reports are recommended.

¹⁴ Note, some Approval Holders may not file annual financial statements because of their corporate structure. In that case the auditor may want to see the statements of one or more of the corporate entities that form part of the Approval Holder corporate structure (e.g., Canadian Oil Sands Trust in lieu of Syncrude Canada).

10. Reports arising from requirements in National Instrument 51-101 (Standards of Disclosure for Oil and Gas Activities) or 43-101(Standards of Disclosure for Mineral Projects), where applicable¹⁵.

2.2 Other Information Sources

The following additional sources of information will help the auditor and Director evaluate the information found during the audit:

- MFSP Annual Reports from previous submissions of the Approval Holder
- MFSP Annual Reports of other Approval Holders in the sector
- Findings from previous audits and the Approval Holder response to the audit findings
- Records of the Director's decisions for matters described in [section 1.2](#) of this report
- Results of field inspections of mine and plant sites
- Records from other government agencies

Care will need to be taken when comparing the information of different Approval Holder since there are many reasons why costs will vary between sites. In addition, since the MFSP does not prescribe methodology for many of the required calculations Approval Holders may use a variety of approaches that could be acceptable.

The auditor should be asking questions about methodology, the rationale for selecting the methodology and the supporting evidence that the methodology is acceptable (e.g., reference to a standard or best practice document).

2.3 People Expected to be Available for Level 3 and 4 Audits

The auditor is likely to need to discuss the MFSP submission and supporting information with Approval Holder staff and contractors who have knowledge of the following subjects:

1. Corporate financial statements
2. Reserves estimates
3. Mine and plant operations
4. Product sales
5. Mine plans (and tailings plans for oil sands)
6. Reclamation operations

¹⁵ While the information should be contained in the Approval Holder's annual financial report (#2 in the list) it is felt that in the first years of the MFSP audit that an additional test of checking against the National Instrument reports be used, particularly in the case of complex corporate structures.

7. Mine closure plans
8. Plant site decommissioning plans

In addition, the auditor may wish to talk to the corporate executive who certified the MFSP Annual Report¹⁶.

Wherever possible the Director should identify in advance for the Approval Holder the types of people the auditors will need to talk to – preferably this would be done in the Notice of Audit.

2.4 Audits of Joint Venture Projects

Some Approval Holders are operating entities for a consortium of companies called a Joint Venture. This structure makes auditing of the MFSP Assets and MFSP Liability more complicated as there may not be a single, published source of information that the auditor can use to verify MFSP information. As a result, the auditor may need to access information and staff in one or more of the related companies (for example if there is a discrepancy between the MFSP numbers and the numbers in the annual financial statement of one of the related companies).

The Canadian Auditing Standards – CAS600 guidelines¹⁷ for audits of groups is helpful. Like IFRS, the auditor treats each member of the venture as an identified component of the whole. Thus there should be:

- Alignment between the MFSP numbers and the numbers in the annual financial statement of one of the related companies.
- Examination of business risks associated with MFSP across components.
- Evaluation of MFSP information and legal structures (including income tax and liabilities).

At a minimum, the auditor of a Joint Venture project will want to question the operating entity about how they calculated the MFSP values (for example, did they use published values for one entity and multiply the value by the proportionate share of that entity).

2.5 Documenting the Audit

Documenting the personnel, procedures and results of the audit will ensure that the requirements of the MFSP Standard are met and that the follow-up actions required by the Approval Holder are clear.

¹⁶ OSRIN will be releasing a separate report on corporate certification of the MFSP Annual Report.

¹⁷ See <http://www.cica.ca/applying-the-standards/cas/site-utilities/item63624.pdf> for more information.

2.5.1 Participants

The person conducting the Level 1 and 2 audit should be noted in notes to file (Level 1) or the letter sent to the Approval Holder (Level 2) as well as the date(s) of any communications related to the audit.

Level 3 and 4 audits will likely be conducted by a team of people with specialized knowledge of the various aspects of the MFSP. The team for a Level 4 audit will likely include both the third-party auditor and at least one government person. The Director should provide the name of the third-party auditor and their lead auditor in advance of the audit to the Approval Holder, preferably in the Notice of Audit.

The Level 3 and 4 audit team should have a designated lead auditor and should also have a person designated to take notes so that there is a clear record of the discussions during the audit and the documentation reviewed. The lead auditor should be the point of contact with the Director who will ultimately be providing direction to the Approval Holder following the audit.

Record the following information for each member of the Level 3 and 4 audit team:

- Government – name, department/agency, title, contact information, area of expertise and role in audit.
- Third-party auditor – name, title, contact information, area of expertise and role in audit.

2.5.2 Chronology

To facilitate tracking the progress of the audit and to ensure compliance with the requirements in the MFSP Standard it is advisable for the auditor to keep track of all procedural steps taken.

For a Level 1 or 2 audit, the information recorded would include:

- Date of contact(s) and format (e-mail, phone, letter).
- Date(s) of responses (and any follow-up).

For a Level 3 or 4 audit, the information recorded would include:

- Date of the original Notice of Audit.
- Date(s) of the audit.
- Date(s) of the letter(s) of direction from the Director to the Approval Holder.
- Date(s) of the Approval Holder response(s).

2.5.3 Information Reviewed and People Interviewed

The auditor should document all of the information that is reviewed during the audit (document title and author, document date, other relevant labeling information). Similarly the auditor should record the name and contact information of each person who is interviewed during the audit and the subject areas they were interviewed about.

2.5.4 Findings

The auditor should record information that is relevant to support recommendations to the Director. This is particularly relevant where the recommendation to the Director is that the MFSP security amount requires revision. Note that *findings* are both positive and negative; that is, the Approval Holder needs to know where they have done a good job as well as where improvements are warranted. Wherever possible the documentation should include:

- Reference to the specific section in the MFSP Standard or MFSP Guide to which the finding applies.
- Person interviewed or document source which formed the basis for the finding.
- Nature of the issue (e.g., assumption, data, format, calculation, etc.)
- Specifics of the issue and supporting information (e.g., MFSP Annual Report states planned reclamation is X ha but the approved Mine Reclamation Plan states Y ha).
- Recommended action.

The auditor may also wish to document matters that the Director may raise with industry, such as revisions required to the MFSP Guide to support better understanding of the MFSP requirements. This should be done in a separate report.

2.5.5 Response(s) to Letter of Direction

The auditor or the Director should record the name(s) and position(s) of the people that respond to the Director's Letter of Direction.

3 GENERAL AUDIT QUESTIONS

The general audit questions apply to many or all of components of the audit. Although it may seem self-evident, one of the auditor's key tasks is to ensure that all calculations have been done correctly.

What technical reports are available to support the MFSP calculations?

What experts, internal to the Approval Holder and external, were used to prepare the information supporting the MFSP calculations?

When is the plant scheduled to stop production?

When is the plant scheduled to be fully reclaimed?

When is the site (mine and plant) fully reclaimed (i.e., when does MFSP Liability reach zero)?

When is the final reclamation certificate scheduled to be issued?

What has changed since the last MFSP Annual Report?

4 MFSP ASSET AUDIT

The audit of the MFSP Asset value focuses on the netback, reserves, forward price factor and the special cases described in the MFSP Guide (sections 2.3 to 2.5). MFSP Assets are calculated as follows (MFSP Guide; section 2.1):

$$\text{MFSP Assets} = N * R * F$$

Where

N = 3-year average of Annual Netbacks

R = Gross Proven and Probable Reserves

F = Forward Price Factor

Questions on MFSP Assets

Has the MFSP Assets value changed in a direction and by an amount that is consistent with the changes in site conditions?

Has the MFSP Assets value changed in a direction and by an amount that is consistent with unplanned events that may have occurred such as mine or plant outages?

Has the MFSP Assets value changed in a direction and by an amount that is consistent with the changes in economic conditions?

4.1 Netback

MFSP Guide Section 2.1

MFSP Standard Section 3, Schedule 1 Sections 1(1), 1(2)

Since the netback deals directly with the company's income and expenditures, the auditor will need to review the company's financial statements in detail and the annual revenue and operating costs.

Verifying sales figures, used to determine the netback, will require the auditor to interview the Marketing Manager and to cross-check statements about sales volumes and prices with actual revenue accrued to the company in the same period.

If the Approval Holder does not have production for any of the three years used to calculate the average the Reporting Year, the auditor will need to ascertain that the company used the Deemed Netback approved in writing by the Director.

Questions on Netback

Were there any events in the Reporting Year that resulted in a change in production levels from previous years?

Does the Annual Netback adequately reflect the change(s)?

What are the gross revenues and operating costs included in the Annual Netback calculations?

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, what are they and 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?

Were ARO accruals, exploration expenses and future reclamation costs excluded from the MFSP Asset Calculations?

4.2 Reserves

MFSP Guide Section 2.2

MFSP Standard Schedule 1 Section 1(3)

National Instruments NI 51-101 (Alberta Securities Commission n.d. a) and NI 43-101 (Alberta Securities Commission n.d. b) require that Gross Proven plus Probable Reserves are prepared by an independent qualified reserves auditor or evaluator. The auditor needs to ensure that the reserve estimate also follows the MFSP rules.

At times a qualified reserves auditor or evaluator might declare a level of uncertainty regarding the reserves data. In such a case the MFSP auditor will have to determine the cause of the uncertainty as well as the nature and magnitude of its impact on the MFSP assets calculated.

Questions on Reserves

When was the reserves estimate prepared?

Who prepared the reserves estimate and what are their qualifications?

Was the reserves estimate prepared specifically for MFSP lands?

If not, was it taken in whole from another document or was it taken from another document and modified to meet MFSP requirements?

Have the reserves been calculated using constant dollar or forecasted prices?

If forecasted prices, what assumptions were used to generate the forecast?

What areas have been included in calculating reserves?

Is the reserves map attached to the MFSP Annual Report?

Are there any exclusions?

What drill spacing or other investigative data are available to support the reserves estimate?

If the approval is for a mine-mouth coal mine does the mine have a contract in place for the reserves?

4.3 Forward Price Factor

MFSP Guide Section 2.1

MFSP Standard Schedule 1 Sections 1(4), 1(5)

Coal and oil sands Approval Holders determine their respective Forward Price Ratios differently:

- Coal calculations are based upon the weighted average coal price for the Submission Year and the Reporting Year. Thus, for coal, the MFSP auditor will have to obtain information on how the prices were determined.
- Oil sands calculations are based on 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. Currently the raw data and calculated Forward Price Ratio and Forward Price Factor are provided to Alberta Environment and Sustainable Resource Development by industry and all Approval Holders are supposed to report the same value provided to Alberta Environment and Sustainable Resource Development.

Questions on Forward Price Factor

Was the approved oil sands Forward Price Factor used?

How have the average coal prices been determined?

What are the effective dates of the contract(s)?

What documents support the numbers?

4.4 Special Cases

4.4.1 *Integrated In-situ Production and Reserves*

MFSP Guide Section 2.4

The MFSP auditor will need to *confirm whether the in-situ facilities included by the Approval Holder are heat-integrated as defined in the Guide*. The auditor will require the assistance of the facility's operations engineers in ascertaining the actual integration and an examination of the integrated facility's process flow diagrams and piping and instrumentation diagrams.

4.4.2 *Third-party Production*

MFSP Guide Section 2.5

The MFSP currently restricts the contribution of Third-party Production to 10% of the Approval Holder's own production unless otherwise authorized in writing by the Director. Verification of actual Third-party Production estimates may require discussions with both the Approval Holder and the third-party.

Questions on Third-party Production

Was production from third-party reserves included in the MFSP Assets?

If so, what was the source of the third-party reserves?

How much product came from third-party reserves?

What proportion of the Approval Holder's production does the Third-party Production amount to?

4.4.3 Suspended Mines

If the mine was suspended during the Reporting Year the auditor will need to *confirm that the Netback was set to zero* as specified in the MFSP Guide (section 2.3).

5 MFSP LIABILITY AUDIT

An Approval Holder's total MFSP Liability is the sum of the estimated cost required to settle the suspension, abandonment, remediation and reclamation requirements (ARO Liability) for the MFSP site, plus Other Liability. The ARO Liability is the value reported in the notes pertaining to Asset Retirement Obligations¹⁸ in the Approval Holder's publicly filed and audited annual financial statements. The Other Liability value captures all of the remaining liabilities under the MFSP that are not adequately captured by the ARO Liability value.

Questions on MFSP Liability?

Has the MFSP Liability value changed in a direction and by an amount that is consistent with the changes in site conditions?

Has the MFSP Liability value changed in a direction and by an amount that is consistent with the changes in economic conditions?

Does the MFSP Liability value include values reported for both ARO Liability and Other Liability?

If not, why not?

What standards and techniques for abandonment, remediation and reclamation were used to calculate costs for the plant¹⁹ and site infrastructure?

What standards and techniques for managing waste products (e.g., sulphur and coke for oil sands; ash for coal) were used to calculate costs?

¹⁸ Note, although the MFSP Guide and Standard refer to "ARO" or Asset Retirement Obligation, it is understood that companies are now following IFRS or International Financial Reporting Standard requirements. For more information, see Schneider, T., 2011. [Accounting for Environmental Liabilities under International Financial Reporting Standards](#). OSRIN Report TR-9. 16 pp.

¹⁹ See Morton Sr., M., A. Mullick, J. Nelson and W. Thornton, 2011. [Factors to Consider in Estimating Oil Sands Plant Decommissioning Costs](#). OSRIN Report No. TR-16. 62 pp. for further information.

What standards and techniques for remediation and reclamation were used to calculate costs?

What standards and techniques for filling water bodies were used to calculate costs?

What standards and techniques for treating water to meet water quality criteria for release were used to calculate costs?

Are any roads or other infrastructure components left in place (unreclaimed)?

Was a cost allocated to monitoring and maintenance after final reclamation but prior to final reclamation certification of the site?

Are the estimated costs consistent with the Current Mine Reclamation Plan and the Mine Closure Plan?

Are the estimated costs consistent with the tailings management plan submitted to the ERCB under Directive 074 (Energy Resources Conservation Board 2009)?

Have contingency values been included in the total MFSP Liability estimate?

If so, what contingencies were used and how were these accounted for?

Where are they reported – in ARO Liability or Other Liability or both?

What evidence is there that the costs reflect actual third-party costs that the government would pay?

5.1 ARO Liability

MFSP Guide Section 3.1

MFSP Standard Schedule 1 Section 2(1)

The auditor may need to review the documents constituting the basis for the financial statements such as the Approval Holder's asset acquisition and retirement policy. The auditor will also need to review the Mine Reclamation Plan and the Mine Closure Plan.

Questions on ARO Liability

Is the MFSP ARO Liability the same as the basis for the ARO number reported in the financial statement for the Reporting Year?

If not, why not?

Is the ARO Liability based on undiscounted and unescalated values?

5.2 Other Liability

MFSP Guide Section 3.1

MFSP Standard Schedule 1 Section 2(2)

The auditor should ensure that any suspension, abandonment, remediation and surface reclamation costs required under the MFSP that are not included in the ARO Liability are included here.

Questions on Other Liability

Have costs for facilities operated by another Approval Holder been included in the Other Liability estimate?

If so, which facilities and who holds the approval?

Does the estimate incorporate reasonable costs to revise the Mine Reclamation Plan and the Mine Closure Plan?

Does the estimate include costs for all facilities that have been deemed to have an indeterminate life²⁰?

Does the estimate include a residual value for the costs to revegetate any lands that have been reclaimed but have not yet received a reclamation certificate (MFSP Guide Section 4.5)?

6 BASE SECURITY DEPOSIT AUDIT

MFSP Guide Section 4.1

MFSP Standard Schedule 1 Section 3

The Base Security Deposit for an oil sands Approval Holder is specified in the MFSP Standard therefore the auditor need only *confirm that the correct value has been included in the MFSP Annual Report.*

If a coal mine or coal processing plant Approval Holder does not elect to provide full financial security, the auditor will need to *confirm that the Approval Holder has used the Base Security Deposit approved by the Director.*

7 OPERATING LIFE DEPOSIT AUDIT

MFSP Guide Section 4.3

MFSP Standard Schedule 1 Section 4

The Operating Life Deposit provides financial security as the project nears the end of its life as defined by the Reserve Life Index. The Operating Life Deposit is adjusted to account for the Base Security Deposit so that the Approval Holder only provides financial security in the amount that exceeds the Base Security Deposit. The Base Security Deposit will have been audited under [section 6](#) of this report.

The MFSP requires an Approval Holder to provide financial security based on a percentage of the MFSP Liability value; the appropriate percentage is based on the Reserve Life Index (MFSP Standard; Schedule 1, section 4(2)). The MFSP Liability value will have been audited under [section 5](#) of this report.

²⁰ Under IFRS companies cannot avoid accounting for the fair value of asset because the asset has an indeterminate life. During the transitional period to IFRS this estimate of facility costs becomes an important audit test.

The Reserve Life Index depends on the Gross Proven plus Probable Reserves and the average annual sales volume for three years:

$$\text{RLI (years)} = (\text{Gross Proven plus Probable Reserves}) / (\text{3-year average annual sales volume})$$

These factors will have been audited under [section 4.2](#) and [section 4.1](#) of this report, respectively.

Questions on the Operating Life Deposit

Has the appropriate percentage of the MFSP Liability value been used in determining the Operating Life Deposit?

Has the Base Security Deposit been subtracted from the Operating Life Deposit – Initial value to calculate the Operating Life Deposit?

Are the reserves and sales based on the same resource/blend of resources?

Have there been any significant changes to reserves and/or sales volumes that would change the Reserve Life Index (e.g., new mine area added, unplanned plant shutdown)?

Have the OLD values changed from the previous MFSP Annual Report in a direction and by an amount that are consistent with the site conditions?

8 ASSET SAFETY FACTOR DEPOSIT AUDIT

MFSP Guide Section 4.2

MFSP Standard Schedule 1 Section 5

The Asset Safety Factor Deposit is used to adjust the Approval Holder's Asset-to-Liability balance to meet the 3:1 ratio specified in the MFSP.

The following calculations apply to the Asset Safety Factor Deposit:

$$\text{ASF} = \text{MFSP Assets} / \text{MFSP Liability}$$

$$\text{AASF} = \text{MFSP Assets} / (\text{MFSP Liability} - \text{OLD} - \text{BSD})$$

$$\text{ASFD} = \text{MFSP Liability} - \text{OLD} - \text{BSD} - (\text{MFSP Assets} / 3)$$

Questions on the Asset Safety Factor Deposit

Have the Asset Safety Factor (ASF), Adjusted Asset Safety Factor (AASF) and Asset Safety Factor Deposit (ASFD) been calculated correctly?

Have the values changed from the previous MFSP Annual Report in a direction and by an amount that are consistent with the site conditions?

9 OUTSTANDING RECLAMATION DEPOSIT AUDIT

MFSP Guide Section 4.4

MFSP Standard Section 4, Schedule 1 Section 6

The Outstanding Reclamation Deposit collects financial security based on reclamation performance against targets proposed by the Approval Holder and approved by the Director. The Outstanding Reclamation Deposit for oil sands mines is calculated based on a flat rate Reclamation Cost of \$75,000/ha for the 2012, 2013 and 2014 Reporting Years (MFSP Guide; section 4.4) multiplied by the Cumulative Reclamation Balance in the Reporting Year.

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 Outstanding Reclamation Deposit calculation prior to submission of the MFSP Annual Report.

9.1 Planned Reclamation and Actual Reclamation Values

The auditor will need to review the Approval Holder's Current Mine Reclamation Plan and Conservation and Reclamation Annual Report to confirm that the values used in the Outstanding Reclamation Deposit calculations are correct. The auditor will also need to compare the current MFSP Annual Report against the previous MFSP Annual Report to confirm the correct values have been transferred from the previous year's report to the current year's report.

Questions on Reclamation and Actual Reclamation Values

Is the Planned Reclamation consistent with the Mine Reclamation Plan and the previous MFSP Annual Report?

Is the Actual Reclamation value consistent with the Conservation and Reclamation Annual Report?

9.2 Annual Reclamation Balance and Cumulative Reclamation Balance

The auditor will need to confirm that the Cumulative Reclamation Balance reflects the Approval Holder's performance since the Standard came into effect (i.e., reflects the sum of all Annual Reclamation Balances) as well as since the last audit.

Has the Annual Reclamation Balance been calculated correctly?

Has the Cumulative Reclamation Balance been calculated correctly?

9.3 Carryover

Every three years, coinciding with the Director's approval of a new Mine Reclamation Plan, the Approval Holder carry's over the previous Cumulative Reclamation Balance to a new ORD Calculation table in Schedule 2 (MFSP Standard). At the same time, as the new Mine Reclamation Plan is being approved, the MFSP allows for adjustment to the Cumulative

Reclamation Balance following review and approval by the Director of the Approval Holder's rationale for the adjustment.

Questions on Carryover

Has the appropriate Cumulative Reclamation Balance been carried over to the new ORD Calculation table?

Has the approved adjustment to the Cumulative Reclamation Balance been incorporated into the Cumulative Reclamation Balance?

10 MFSP ANNUAL REPORT AUDIT

This portion of the audit focuses on ensuring the right Schedule in the MFSP Standard has been used and that all of the information required in the Schedule has been provided.

10.1 Schedule 2 – Mine Financial Security Program Annual Report

The following audit questions apply to an Approval Holder who has not elected to provide full financial security.

Has Schedule 2 been used?

Is all of the Approval Holder Information provided and correct?

Is all of the Report Information provided and correct?

Is the corporate year end a date other than December 31 (if so, checking against corporate annual reports will be difficult)?

Is all of the MFSP Asset Information provided and correct?

Are the data carried over from previous years consistent with the previous MFSP Annual Report (e.g., Netback(s), products)?

If not, is there an explanation?

Is the MFSP Asset value rounded off or is it fully disclosed (the latter is expected)?

Has the MFSP Assets value changed in a direction and by an amount that is consistent with the changes in site conditions?

Has the MFSP Assets value changed in a direction and by an amount that is consistent with the changes in economic conditions?

Are the Years labeled and consistent with the appropriate three year period?

Are there any Deemed Netbacks claimed?

Is the Netback calculated correctly as the average of the three years?

Are the products for the Netback consistent with the products in the Gross Proven and Probable Reserves information?

Is the reserves area map attached, legible and consistent with approvals area information?

Are exclusion areas marked on the map consistent with the MFSP Guide?

Are both the Forward Price Ratio and Forward Price Factor provided and correct?

Is all of the MFSP Liability Information provided and correct?

Is the MFSP Liability value rounded off or is it fully disclosed (the latter is expected)?

Are both ARO Liability and Other Liability numbers provided?

If not, is there a rationale given for why one is missing?

Has the MFSP Liability value changed in a direction and by an amount that is consistent with the changes in site conditions?

Has the MFSP Liability value changed in a direction and by an amount that is consistent with the changes in economic conditions?

Is all of the Outstanding Reclamation Deposit Information provided and correct?

Is the source of the Planned Reclamation value checked off and consistent with the status of the Mine Reclamation Plan?

Was there an approved adjustment to the Cumulative Reclamation Balance?

If so, was the amount of the adjustment (ha) noted and is it used in the ORD Calculation table?

Are all of the values required to be reported in the ORD Calculation table provided?

Is the Planned Reclamation value consistent with the Mine Reclamation Plan and the previous MFSP Annual Report?

Is the Actual Reclamation value consistent with the Conservation and Reclamation Annual Report?

Were the Annual Reclamation Balance and the Cumulative Reclamation Balance calculated correctly?

Was a Carryover value reported?

If so, is it the start of a new three-year cycle and does it correctly reflect any adjustment to the Cumulative Reclamation Balance?

Is the appropriate Reclamation Cost used?

Was the ORD value correctly calculated?

Is all of the Financial Security Deposit Information provided and correct?

Have Base Security Deposit values been reported for the previous and current year and is the previous year value consistent with the previous year's MFSP Annual Report?

Have the Asset Safety Factor and Adjusted Asset Safety Factor values been provided?

Have Asset Safety Factor Deposit values been reported for the previous and current year and is the previous year value consistent with the previous year's MFSP Annual Report?

Has the Reserve Life Index value been reported and is it consistent with the previous Reserve Life Index value and known changes to the site?

Have Operating Life Deposit – Initial values been reported for the previous and current year and is the previous year value consistent with the previous year's MFSP Annual Report?

Have Operating Life Deposit values been reported for the previous and current year and is the previous year value consistent with the previous year's MFSP Annual Report?

Have Outstanding Reclamation Deposit values been reported for the previous and current year and is the previous year value consistent with the previous year's MFSP Annual Report?

Are the Deposit Totals values provided and are they correctly calculated?

Is the MFSP Liability value reported and is it consistent with the value reported in the MFSP Liability Information section?

Are the Security Amount Total values provided and are they correctly calculated?

Has the appropriate box been checked to denote one or more providers of security?

If multiple providers, have the company names all been listed?

Are their security amounts and forms of security noted?

Does the total amount of security equal the Security Amount Total reported in the table?

Has the Approval Holder provided security in more than one form?

If yes, have the forms and amounts been indicated?

Is there a name and signature in the Corporate Certification section?

Is it clear which of three designations the signatory has?

Is the signature dated?

10.2 Schedule 3 – Mine Financial Security Program Annual Report – Full Financial Security

The following audit questions apply to an Approval Holder who has elected to provide full financial security.

Has Schedule 3 been used?

Is all of the Approval Holder Information provided and correct?

Is all of the Report Information provided and correct?

Is the corporate year end a date other than December 31 (if so, checking against corporate annual reports will be difficult)?

Is all of the MFSP Liability Information provided and correct?

Is the MFSP Liability value rounded off or is it fully disclosed (the latter is expected)?

Are both ARO Liability and Other Liability numbers provided?

If not, is there a rationale given for why one is missing?

Has the MFSP Liability value changed in a direction and by an amount that is consistent with the changes in site conditions?

Has the MFSP Liability value changed in a direction and by an amount that is consistent with the changes in economic conditions?

Is all of the Financial Security Deposit Information provided and correct?

Is the Security Amount Total provided and equal to the reported MFSP Liability value?

Has the appropriate box been checked to denote one or more providers of security?

If multiple providers, have the company names all been listed?

Are their security amounts and forms of security noted?

Does the total amount of security equal the Security Amount Total?

Has the Approval Holder provided security in more than one form?

If yes, have the forms and amounts been indicated?

Is there a name and signature in the Corporate Certification section?

Is it clear which of three designations the signatory has?

Is the signature dated?

10.3 Schedule 4 – Approval Transfer Acknowledgement of MFSP Security

This Schedule is used when an Approval Holder has transferred all or part of an approval to another Approval Holder.

Have the Transferee and Transferor been properly named in the appropriate places in the form?

Are the corporate names provided consistent with the names in the approvals?

Is there a name and signature in the Corporate Certification section?

Is it clear which of three designations the signatory has?

Is the signature dated?

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12 GLOSSARY

12.1 Terms

Approval Holder

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

Auditor

The person (or persons) conducting the MFSP audit. An auditor may be a government employee or an employee of a third-party contracted to conduct the MFSP audit.

Director

The Alberta Environment and Sustainable Resource Development staff member designated as Director under the *Environmental Protection and Enhancement Act* who issues the *Environmental Protection and Enhancement Act* approval for the mine or plant.

Letter of Direction

Written notification from the Director to the Approval Holder of the findings of an MFSP audit. The Letter may specify actions required by the Approval Holder and timelines for the actions to be met. Issued pursuant to section 9(4) of the MFSP Standard.

MFSP Annual Report

The report prepared annually by the Approval Holder and provided to Alberta Environment and Sustainable Resource Development showing MFSP Assets, MFSP Liabilities, Outstanding Reclamation Deposit information and the calculated amounts of security required for each of the four MFSP deposits as well as the total amount of security required.

Notice of Audit

Written notification from the Director to the Approval Holder that an audit of the Approval Holder's MFSP Annual report will be carried out. Issued pursuant to section 9(1) of the MFSP Standard.

Reporting Year

The calendar year to which the MFSP Annual Report relates.

12.2 Acronyms

AASF	Adjusted Asset Safety Factor
ARO	Asset Retirement Obligation
ASF	Asset Safety Factor
ASFD	Asset Safety Factor Deposit
BSD	Base Security Deposit

CSA	Canadian Standards Association
EPEA	<i>Environmental Protection and Enhancement Act</i>
ERCB	Energy Resources Conservation Board
MFSP	Mine Financial Security Program
OLD	Operating Life Deposit
ORD	Outstanding Reclamation Deposit
OSRIN	Oil Sands Research and Information Network
SEE	School of Energy and the Environment
WTI	West Texas Intermediate

LIST OF OSRIN REPORTS

OSRIN reports are available on the University of Alberta's Education & Research Archive at <https://era.library.ualberta.ca/public/view/community/uuid:81b7dcc7-78f7-4adf-a703-6688b82090f5>. The Technical Report (TR) series documents results of OSRIN funded projects. The Staff Reports series represent work done by OSRIN staff.

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