

Directive 006

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Licensee Liability Rating (LLR) Program

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1 Purpose of the LLR Program

The purpose of the Alberta Energy Regulator (AER) LLR Program as set out in this directive is to

- prevent the costs to suspend, abandon, remediate, and reclaim a well, facility, or pipeline in the LLR Program from being borne by the public of Alberta should a licensee become defunct, and
- minimize the risk to the Orphan Fund posed by the unfunded liability of licences in the program.

Inquiries regarding this directive should be directed by email to inquiries@aer.ca or by phone to the AER’s Customer Contact Centre at 403-297-8311 or toll-free at 1-855-297-8311.

2 What’s New in This Edition

Components related to licence transfer applications and their security collection have been removed. The title of the directive has been changed accordingly. Revised requirements are now in *Directive 088: Licensee Life-Cycle Management*.

3 Scope of the LLR Program

The LLR Program applies to all upstream oil and gas wells, facilities, and pipelines included within the scope of the expanded Orphan Fund. A description of the AER-approved well, facility, and pipeline types included in the LLR Program is in appendix 1.

4 Definitions

For the purpose of this program:

- **Eligible producer licensee** is a licensee whose deemed assets from production volumes reported to Petrinex have fallen below its deemed liabilities in the LLR Program and is therefore eligible to have any deemed assets from midstream activities in the LLR, LFP, and OWL programs included in its liability management rating deemed asset calculation.

- **Large Facility Liability Management Program (LFP)** is the liability management program governing the large upstream oil and gas facilities specified in appendix 1 of *Directive 024*.
- **Liability assessment** is an assessment conducted by a licensee to estimate the cost to suspend, abandon, remediate, and reclaim a site.
- **Liability Management Rating (LMR)** is the ratio of a licensee’s eligible deemed assets in the LLR, LFP, and Oilfield Waste Liability (OWL) programs to its deemed liabilities in these programs.
- **Licensee Liability Rating (LLR) Program** is the liability management program governing most conventional upstream oil and gas wells, facilities, and pipelines, as specified in appendix 1 of *Directive 006*.
- **Midstream activity** is the handling of third-party volumes for a fee or other consideration by a well or facility included in the LLR Program. For the purpose of this program, midstream activities include the operation of a nonsulphur recovery gas plant, gas storage scheme, custom processing facility, water or gas injection or disposal well, gas gathering, transportation or compression scheme, gas storage scheme, marketing, and/or any other activity determined by the AER to be a midstream activity.
- **Netback** is earnings before interest, taxes, and depreciation and is equal to gross margin (midstream revenue less cost of goods sold) less direct operating costs and applicable general and administrative expenses.
- **Nonproducer licensee (NPL)** is a licensee whose deemed assets from midstream activities in the LLR, LFP, and OWL programs exceed its deemed assets from production volumes reported to Petrinex or a licensee having only facilities included in the LFP or OWL programs.
- **Oilfield Waste Liability (OWL) Program** is the liability management program governing oilfield waste management facilities specified in appendix 1 of *Directive 075*.
- **Producer licensee** is a licensee whose deemed assets from production volumes reported to Petrinex exceed its deemed liabilities in the LLR, LFP, and OWL programs.
- **Site-specific liability** is the estimated cost to suspend, abandon, remediate, and reclaim a facility in the LLR Program.

5 Liability Management Rating Assessment

The AER’s LMR assessment is a comparison of a licensee’s deemed assets in the LLR, LFP, and OWL programs to its deemed liabilities in these programs. Any security deposit provided to the AER as a result of the operation of these programs is considered in determining a licensee’s “security-adjusted” LMR. The LMR assessment is designed to assess a licensee’s ability to address its suspension, abandonment, remediation, and reclamation liabilities. This assessment is conducted

monthly. The determination of deemed assets and deemed liabilities in each of these programs is documented in

- this directive and *Directive 011: Licensee Liability Rating (LLR) Program—Updated Industry Parameters and Liability Costs*, for licences included in the LLR Program;
- *Directive 024*, for licences included in the LFP;
- *Directive 075*, for licences and approvals included in the OWL Program; and
- *Directive 001: Requirements for Site-Specific Liability Assessments in Support of the ERCB's Liability Management Programs*, for licensees required to provide a site-specific liability cost estimate.

If a licensee's deemed liabilities in these three programs exceed its deemed assets in these programs plus any previously provided security deposits (including facility-specific security deposits), it has a security-adjusted LMR below 1.0 and is required to provide the AER with a security deposit for the difference.

A security deposit determined as a result of an LMR assessment is required to minimize the possibility of the licensee's suspension, abandonment, remediation, and reclamation costs being borne by the Orphan Fund.

For LMR calculation purposes, 100 per cent of the deemed assets and 100 per cent of the deemed liabilities of a well or facility for which it is the licensee are attributed to the licensee.

6 LMR Security Deposit Requirements

The AER conducts its LMR assessment on the first Saturday of each month, following receipt of updated production information from Petrinex.

A licensee required to provide the AER with a security deposit as a result of a monthly LMR and transfer assessment will be advised in writing of the amount of the security deposit required and the date by which the security deposit must be received. The date specified for payment of a monthly LMR assessment is ordinarily the Friday before the first Saturday of the following month.

If a licensee in the LLR, LFP, or OWL programs becomes defunct:

- any non-facility-specific LMR security deposit held by the AER will be allocated to address its unfunded suspension, abandonment, remediation, or reclamation liability in each program in which it had liability in proportion to its deemed liability in each program; and
- any facility-specific security deposit held by the AER will be applied first to the facility for which it was collected, with any surplus being available for any unfunded liability held by the licensee.

The AER's requirements with respect to the form, use, and refund of security deposits provided under a liability management program are in *Directive 068: ERCB Security Deposits*.

A licensee can view information on the type and amount of any security deposit it has with the AER through Systems & Tools > Digital Data Submission > Reports > Liability Rating on the AER website, www.aer.ca, using its DDS Logon ID and password.

7 Orphan Program and Fund

The Orphan Fund will pay the costs to suspend, abandon, remediate, and reclaim a well, facility, or pipeline included in the LLR Program if a licensee or working interest participant (WIP) becomes defunct.

The Orphan Fund is fully funded by licensees in the LLR Program and licensees holding Waste Management (WM) approvals and licences included in the OWL Program through a levy administered by the AER.

The Orphan Fund is administered by the Alberta Oil and Gas Orphan Abandonment and Reclamation Association (OWA), a nonprofit society incorporated under the *Societies Act* on March 20, 2001.

7.1 Orphan Site

A well, facility, or pipeline in the LLR program is eligible to be declared an orphan when the licensee of that licence becomes insolvent or defunct. Once it determines a well, facility, or pipeline meets the criteria outlined in section 70(2) of the *Oil and Gas Conservation Act*, the AER will designate it as an orphan. The well, facility, or pipeline will then be considered to be an orphan for all aspects of this program: suspension, abandonment, remediation, and reclamation.

7.2 LLR and OWL Orphan Levy Base and Formula

A licensee in the LLR or OWL Program is responsible for its percentage of any orphan levy calculated as the sum of the deemed liability of its licences in the LLR and OWL programs to the total liability of all licences in the LLR and OWL programs as of the date the levy is calculated, in accordance with the following formula:

$$\text{Licensee's share of levy} = \frac{A}{B} \times \text{Required levy amount}$$

where

- A is the licensee's deemed liability in the LLR and OWL programs on the date the levy is calculated, determined in accordance with this directive and *Directive 075*, and
- B is the deemed liability of all licences in the LLR and OWL programs on the date the levy is calculated, determined in accordance with this directive and *Directive 075*.

The deemed liability of licences in the LFP is tracked and, as required, assessed separately, as the LFP has a separate and distinct orphan levy base.

7.3 OWL NPL Levy

NPLs in the OWL Program are subject to an additional transitional levy, which is detailed in *Directive 075*.

8 LLR Program Administration

8.1 Program Operation

Detailed information on the operation of the LLR Program is in appendices 2 through 6.

8.2 Confidentiality

The AER will hold as confidential the information submitted to or acquired by the AER for the purpose of conducting an LMR assessment. The AER will post only the licensee's security-adjusted LMR on its website.

8.3 Program Review

The AER will continually monitor the LLR Program to ensure that it is achieving its desired outcome and is protecting both the public interest and the Orphan Fund.

Appendix 1 Licence Types Included in the LLR Program and Protected by the Orphan Fund

1 LLR Program and Orphan Fund Inclusions

The following upstream oil and gas wells, facilities, and pipelines are protected by the Orphan Fund and included in the LLR Program:

Wells (code from *Directive 056: Energy Development Applications and Schedules* provided in brackets)

- oil, gas, and bitumen wells (140, 150, 280, 290, 360, 370, 570, 610, 620, 621, 622)
- injection wells
- disposal wells Class I(b), II, III, and IV
- gas storage wells
- oilfield source water wells (141)
- observation wells
- brine wells
- liquefied petroleum gas (LPG) wells

The following upstream oil and gas wells, while protected by the Orphan Fund, are not administered in the LLR Program:

- oil and gas wells drilled by industry and transferred as a farm gas well
- unlicensed sites associated with oilfield activities (e.g., remote sumps)

Facilities (*Directive 056* code provided in brackets)

- gas, oil, and bitumen batteries, single or multiwell (020, 030, 031, 310, 311, 320, 321, 330, 331, 410, 411, 420, 421, 430, 431)
- gas processing and fractionating plants (010, 011, 300, 301, 400, 401)
- sulphur recovery gas plants licensed under *Directive 056* as a Facility Category Type 300 (producing less than 1 ton of sulphur per day)
- oil sands central processing facilities having a design capacity of less than 5000 cubic metres (m³) per day
- compressor stations, except those that are part of an oil or gas transmission pipeline (040, 340, 440)
- custom treating facilities (080)

- injection/disposal facilities—water (090)
- injection/disposal facilities—enhanced oil recovery (EOR) (091)
- oil and bitumen satellites, single or multiwell (070, 071, 350, 351, 450, 451)
- line heaters (352, 470)
- oilfield waste management components that do not require a waste management approval

Pipelines

- oil and gas pipelines other than transmission lines

2 LLR Program and Orphan Fund Exclusions

The following wells, facilities, and pipelines are excluded from the LLR Program and Orphan Fund:

Wells (*Directive 056* code provided in brackets)

- wells designated as contaminated under section 110 of the *Environmental Protection and Enhancement Act*
- water wells less than 150 m (licensed in error)
- municipal water wells
- domestic and farm water wells
- test holes
- industrial waste disposal wells, Class 1(a)
- oil sands evaluation (OV Lahee Class 11)
- farm and domestic gas wells **not** drilled by industry as an oil or gas well
- training wells (if there is no penetration of a hydrocarbon formation and they are used solely for the testing of downhole tools and/or training of personnel to use such tools)

Facilities (*Directive 056* code provided in brackets)

- facilities designated as contaminated under section 110 of the *Environmental Protection and Enhancement Act*
- mine site or coal processing plant as defined in the *Coal Conservation Act*
- mine site or processing plant as defined in the *Oil Sands Conservation Rules*
- oil sands central processing facilities having a design capacity of 5000 m³/day or greater

- sulphur recovery facilities (600), except those licensed under *Directive 056* as a Facility Category Type 300 (producing less than 1 ton of sulphur per day)
- oilfield waste management facilities that require a Waste Management Approval (see *ID 2000-03*)
- standalone straddle plants (200, 302)
- refineries as defined in the *Pipeline Act*
- sites on which a sulphur recovery straddle plant or oil sands central processing facility having a design capacity of 5000 m³/day or greater previously existed
- facilities listed in the *Oil and Gas Conservation Rules* as exempt from this program

Pipelines

- gas transmission pipelines and associated compression and measurement facilities licensed to the licensee of the pipeline
- oil transmission pipelines and associated storage, pumping, and measurement facilities licensed to the licensee of the pipeline

Appendix 2 Licence Status Change Notification Process

The AER requires accurate information on the operational status of wells, facilities, and pipelines to correctly determine their abandonment and reclamation liability in monthly LMR and transfer assessments and for use in the orphan levy calculation. Accordingly, licensees must notify AER Liability Management within 30 days when a gas plant licence is amended to an operating function other than a gas plant (i.e., compressor station, battery). The liability cost of a gas plant is based upon the current submitted site-specific liability assessment (SSLA). A gas plant's liability cost does not change when the licence is amended, the liability only changes when a new SSLA is accepted by the AER.

1 Electronic Submission of Notification

A licence status change notification must be submitted electronically through the AER's Digital Data Submission (DDS) system and the appropriate subsystem. Facility abandonment notifications, linked facility notifications, and well licence name change notifications are submitted using the Licence Notification System (LNS) subsystem, while multiwell pad notifications are submitted on the Multi Licence Pad (MLP) subsystem.

2 Well and Facility Abandonment Notification

A licensee must notify the AER within 30 days of the completion of the abandonment of a licensed well or facility. A licensee is required to identify all WIPs in the well or facility at the time of abandonment, with WIP participation totalling 100 per cent.

3 Linked Facility Notification

Directive 056 permits a licensee to "link" a nonproduction reporting facility to the first downstream production reporting facility to which it delivers product. A nonproduction reporting facility can only be linked to one production reporting facility at a time, while a reporting facility may have more than one nonproduction reporting facility linked to it.

4 Well Name Change Notification

The AER does not use well names and encourages licensees not to submit a well name change notification. At this time, however, a licensee remains able to submit a well name change notification to the AER through the LNS subsystem. A proposed well name change must be consistent with the *Oil and Gas Conservation Rules*. The AER does not accept notification of facility name or facility name changes.

5 Multiwell Pad Notification

A licensee may establish a multiwell pad for those sites on which it has more than one well on a single surface lease. Both the well licences and the surface lease must be held by the same licensee.

The establishment of a multiwell pad provides for a reduction in the reclamation liability of the wells located on the pad. (Refer to appendix 5, “Deemed Liabilities,” for details of this calculation.)

Appendix 3 LMR and LLR Assessment Formulas

1) Calculation of LMR Rating

The following LMR formula is applicable to producer licensees in the LLR Program:

$$\text{LMR} = \frac{\text{DA in LLR}}{\text{DL in LLR} + \text{DL in LFP (if any)} + \text{DL in OWL (if any)}}$$

where

DA = deemed assets

DL = deemed liabilities

The following LMR formula is applicable to NPL and eligible producer licensees in the LLR:

$$\text{LMR} = \frac{\text{DA in LLR} + \text{DA in LFP (if any)} + \text{DA in OWL (if any)}}{\text{DL in LLR} + \text{DL in LFP (if any)} + \text{DL in OWL (if any)}}$$

The calculation of a licensee's deemed assets and deemed liabilities in the LLR are detailed in appendix 4, "Deemed Assets," and appendix 5, "Deemed Liabilities."

2) Calculation of LLR

The following LLR formula is applicable to producer licensees in the LLR Program:

$$\text{LLR} = \frac{\text{m}^3\text{OE} \times \text{Industry netback} \times 3 \text{ years}}{\text{Sum of the deemed liabilities}}$$

The following LLR formula is applicable to NPLs and eligible producer licensees in the LLR Program:

$$\text{LLR} = \frac{(\text{NPL vol.} \times \text{Licensee netback} \times 3 \text{ years}) + (\text{m}^3\text{OE (if any)} \times \text{Industry netback} \times 3 \text{ years})}{\text{Sum of the deemed liabilities}}$$

Appendix 4 Deemed Assets

The deemed assets of a producer licensee, eligible producer licensee, and nonproducer licensee (NPL), while based on the same principles and methodology, are determined using different parameters and volumes.

1 Producer Licensee

The deemed assets of a producer licensee is the cash flow derived from oil and gas production reported to Petrinex from wells for which it is the licensee. Deemed assets are calculated by multiplying a licensee's reported production of oil and gas from the preceding 12 calendar months in cubic metres oil equivalent (m^3 OE) by the 3-year average industry netback by 3 years, where

- m^3 OE is defined as the 12-month production of oil plus gas volumes reduced by a *shrinkage factor* (sales gas) and a *gas/oil (m^3 OE) conversion factor*. Crude oil, bitumen, and field condensate are treated as oil. Natural gas liquid revenue is included in the gas revenue. Sulphur is excluded.
- The *shrinkage factor* is a rolling 3-year provincial industry average.
- The m^3 OE *conversion factor* is a rolling 3-year provincial industry average.
- *Industry netback* is a rolling 3-year provincial industry average netback.

The current *shrinkage factor*, m^3 OE *conversion factor*, and *industry netback* factors are in *Directive 011*. These parameters will be updated as appropriate and in conjunction with updated deemed liability parameters.

The AER's use of production information reported to Petrinex results in a 2-month delay between the last day of a production month and the date that month's production is available for use in the LLR calculation. This delay accommodates the late submission of production information and subsequent data corrections.

2 Eligible Producer Licensees

The deemed asset of an eligible producer licensee is the sum of its cash flow derived from oil and gas production reported to Petrinex from wells for which it is the licensee calculated in accordance with section 1, and the cash flow derived from midstream activity from wells or facilities for which it is the licensee calculated in accordance with section 3.

3 Nonproducer Licensees

Due to the limited number of licensees in this industry subsector and the mix of public and private companies, the determination of an industry average netback is not possible. As a result, each NPL must calculate its own netback and have it reviewed and approved by the AER annually.

An NPL must submit its request for an approval of a netback to the AER on the designated form (appendix 11), together with all required supporting documentation. The AER treats financial information submitted in support of an NPL netback as confidential. An approved netback is valid for a 12-month period, commencing the month it was approved by the AER. An NPL must submit a request for approval of its netback for the following year 30 days before the expiry of its approved 12-month period.

Failure to submit or to obtain AER approval of its netback will result in the NPL's netback being set at \$0.00 and the requirement for the NPL to place a security deposit with the AER to offset all of the NPL's calculated deemed liability.

An NPL not prepared to provide the financial information required by the AER to verify a netback calculation must submit a security deposit for 100 per cent of its deemed liability.

The deemed asset of an NPL is the sum of the cash flow derived from facility throughput of water injection/disposal, oil processing, and gas processing reported to Petrinex from facilities for which it is the licensee, and the cash flow derived from oil and gas production reported to Petrinex from any well for which it is the licensee.

The deemed asset of an NPL is calculated by multiplying the NPL volume from the preceding 12 calendar months by the NPL's netback by 3 years, where

- *NPL volume* is defined as the 12-month volume of oil, gas, and water processed or injected through the licensee's facilities (an NPL processing oil or gas from wells for which it is the licensee must subtract these volumes in its NPL deemed asset calculation), and
- *NPL netback* is defined as the NPL's net profit per unit of volume processed or injected.

If an NPL has oil or gas production, the cash flow derived from those volumes will be determined in accordance with section 1 using the **industry average netback** and will be included in the deemed asset calculation.

4 Calculating Deemed Assets—Gas Storage Operators

Because gas storage wells may report either production or injection on a monthly basis, a means of including an appropriate asset value in the calculation of deemed assets is needed. A licensee operating a gas storage facility is required to identify storage wells that form part of a particular storage facility and to report the minimum operating pressure and the storage facility production rate at that pressure as part of its annual storage filing with the AER.

A licensee operating a gas storage facility is to add its m³ OE for AER-approved storage facilities, instead of its actual production from these wells, to its m³ OE.

m³ OE for AER-approved storage facilities is defined as the production rate that a licensee's storage facilities would be capable of at the minimum reservoir pressure experienced in the previous storage facility reporting period.

5 Gas Plants Having a *Directive 001* Liability Assessment

An NPL having a gas plant on which the AER has accepted a liability assessment meeting the requirements of *Directive 001* may calculate the deemed asset value of that gas plant using a facility-specific netback. An NPL exercising this option must provide the AER with a completed Facility Netback Calculation Form (appendix 11) and required supporting documentation. Should an NPL exercising this option already have an approved licensee netback, it must provide the AER with an updated Nonproducer Licensee Netback Calculation Form (appendix 9) that excludes any volumes associated with that facility, as well as any required documentation.

Appendix 5 Deemed Liabilities

The deemed liability of a producer licensee, eligible producer licensee, and nonproducer licensee (NPL) is determined in the same manner. The deemed liability of a licensee is the sum of the costs to suspend, abandon, remediate, and reclaim all wells and facilities for which it is the licensee, adjusted for status (active, inactive, abandoned, and problem site designation).

1 Definitions

For the purpose of the LLR Program, terms are defined as follows:

- *Active well* is a well that has reported an operation (production or injection) to Petrinex in the last 12 calendar months or is classified as an observation well by the AER.
- *Active facility* is a facility that has reported an operation (throughput) to Petrinex in the last 12 calendar months or is a nonproduction reporting facility linked to an active facility.
- *Inactive well* is a well that has not reported an operation (production or injection) to Petrinex in the last 12 calendar months.
- *Inactive facility* is a facility that has not reported throughput to Petrinex in the last 12 calendar months or is a nonproduction reporting facility that has not been linked or that has been linked to an inactive facility.
- *Abandoned unreclaimed well* is a well that according to the records of the AER has been “surface abandoned” but is not in receipt of a reclamation certificate or its equivalent from the appropriate regulatory authority.
- *Abandoned unreclaimed facility* is a facility that according to the records of the AER has been abandoned but is not in receipt of a reclamation certificate or its equivalent from the appropriate regulatory authority.
- *Gas plant* is a facility licensed by the AER through *Directive 056* as a gas processing or gas fractionating plant (codes 010, 011, 300, 301, 400, 401) that is not included in the Large Facility Liability Management Program.
- *Potential problem site* is a site identified by the AER as having
 - a potential abandonment liability equal to or greater than 4 times the amount normally calculated for that type of site in that regional abandonment cost area, or
 - a potential reclamation liability equal to or greater than 4 times the amount normally calculated for that type of site in that regional reclamation cost area.
- *Designated problem site* is a site designated by the AER on the basis of a cost estimate determined from an assessment conducted according to *Directive 001* that shows that the site’s

- abandonment liability equals or exceeds 4 times the amount normally calculated for that type of site in that regional abandonment cost area, or
 - reclamation liability equals or exceeds 4 times the amount normally calculated for that type of site in that regional reclamation cost area.
- *Facility Well Equivalent Table* is the table below that provides the well equivalent for each facility based on its category or fluid type and licensed design capacity:

Facility Well Equivalent Table

Category/Fluid Type	Licensed Design Capacity	Well Equivalent
Oil/bitumen processing or injection/disposal facility	0-50 m ³ fluid/day	5
	> 50 m ³ ≤500 m ³ /day	10
	> 500 m ³ ≤3000 m ³ /day	20
	> 3000 m ³ /day	40
Oil/bitumen satellite	Any throughput level	2
Line heaters	Any throughput levels	2
Gas processing facility	0-900 10 ³ m ³ gas inlet/day	10
	>900 10 ³ m ³ /day ≤2500 10 ³ m ³ /day	20
	>2500 10 ³ m ³ /day	40
Gas (compressor, dehydration, etc.) facility	Any throughput level	5

- *New well* is a well that has not been abandoned within 12 calendar months of its finished drilling date.
- *New facility* is a facility that has not reported throughput or been abandoned within 12 calendar months of its licence approval date.
- *Non-gas plant* is any facility licensed by the AER through *Directive 056* not having a facility type description of gas processing plant or gas fractionating plant.
- *Abandonment cost estimate acceptable to the AER* is an abandonment cost estimate based on a site-specific liability assessment conducted according to *Directive 001* and submitted to the AER in the specified level of detail.
- *Reclamation cost estimate acceptable to the AER* is a reclamation cost based on a site-specific liability assessment conducted according to *Directive 001* and submitted to the AER in the specified level of detail.

- *Regional Abandonment Cost Map* is the map provided as appendix 7. This map illustrates the boundaries of the geographic regions for which average well abandonment costs are determined.
- *Regional Reclamation Cost Map* is the map provided as appendix 8. This map illustrates the boundaries of the geographic regions for which average well and facility well equivalent costs are determined.

2 Calculation of Deemed Liability

While the deemed liability of a well or facility includes the costs to suspend, abandon, remediate, and reclaim the site, this liability is captured under the terms abandonment and reclamation.

2.1 Deemed Liability of a Well

The deemed liability of a well is the sum of its abandonment and reclamation liability. The liability for an abandoned but uncertified or unreclaimed well is solely its reclamation cost.

The abandonment liability of a well is determined on a site-specific basis using the AER's licence cost processing program. It estimates the cost to abandon a well based on the depth of the well, the number of events requiring abandonment, the requirement for groundwater protection, and whether there is gas migration or surface casing vent flows. The wellbore configuration is based on the current operational status of the well (e.g., "crude oil pumping" considers the well to have tubing and rods) or, in the case of a suspended well, the last reported operational status issued. The requirement for groundwater protection is included in the calculation if the surface casing depth is less than the deepest aquifer requiring protection.

The reclamation liability of a well is the cost specified by the Regional Reclamation Cost Map for the area in which the well is located.

2.1.1 Deemed Liability of a New Well

A new well, as defined in this directive, will not have its deemed liability included in its LLR calculation until the earlier of its abandonment date or 12 calendar months from its finished drilling date.

2.1.2 Deemed Liability of a Multiwell Pad

The abandonment liability for wells located on a multiwell pad is the sum of the abandonment liability calculated for each well located on the pad. The reclamation liability for wells located on a multiwell pad is 100 per cent of the reclamation cost specified for a well in the Regional Reclamation Cost Map area in which the pad is located for the first well plus 10 per cent of that value for each additional well on the same pad.

2.2 Deemed Liability of a Non-Gas Plant Facility

The deemed liability of a non-gas plant facility is the sum of its abandonment liability plus its reclamation liability. The liability for an abandoned but uncertified or unreclaimed facility is solely its reclamation cost.

The abandonment liability of a non-gas plant facility is determined by multiplying its well equivalent, determined from the Facility Well Equivalent Table, by the well equivalent cost.

The reclamation liability of a non-gas plant facility is determined by multiplying its well equivalent, determined from the Facility Well Equivalent Table, by the cost specified by the Regional Reclamation Cost Map for the area in which the facility is located.

2.3 Deemed Liability of a Gas Plant

The cost estimates must be the total undiscounted current-day estimates for suspension, abandonment, remediation, and reclamation.

The deemed liability of a 40-well-equivalent gas plant is the cost estimate based on a site-specific liability assessment meeting the requirements of *Directive 001* provided by the licensee and accepted by the AER.

The deemed liability of a 20-well-equivalent gas plant is the cost estimate based on a site-specific Phase I environmental site assessment, with additional work to a Phase II environmental site assessment standard where required by the results of the Phase I assessment, that is provided by the licensee and accepted by the AER.

The deemed liability of a 10-well-equivalent gas plant is the cost estimate based on a site-specific liability assessment meeting Canadian Institute of Chartered Accountants (CICA) standards that is provided by the licensee and accepted by the AER.

Gas Plant Cost Estimates

All site-specific liability assessments provided for gas plants must be completed using the Facility Liability Declaration Form (appendix 10) and submitted electronically to the AER through its DDS system.

Gas plant cost estimates must reflect the total undiscounted current-day cost to suspend, abandon, remediate, and reclaim the site, and identify any seller-retained liability.

The AER will review submitted Facility Liability Declaration Forms; if the AER considers that a facility cost estimate deviates significantly from that of similar facilities, it may require the licensee to provide all supporting documentation on which the cost estimate was based and conduct a detailed review of the cost estimate and documentation.

2.4 Deemed Liability of a Facility

2.4.1 Deemed Liability of a Linked Facility

In accordance with *Directive 056*, a nonproduction reporting facility (satellite, compressor) **may** be “linked” to the first downstream production reporting facility to which it delivers product. The linked nonproduction reporting entity receives the active or inactive status of the production reporting entity to which it is linked. A nonreporting facility that is not linked to a production reporting entity will be identified as inactive.

2.4.2 Deemed Liability of a New Facility

A new facility, as defined in this directive, will not have its deemed abandonment and reclamation liability included in its LLR calculation until the earliest of its first reported throughput, abandonment date, or 12 calendar months from its licence approval date.

2.5 Pipelines

A pipeline licence is not considered in the calculation of deemed liabilities unless it is a designated problem site.

2.6 Problem Sites

2.6.1 Potential Problem Site

A “potential problem site” is identified by the AER through an on-site inspection. This inspection may be conducted in the course of normal AER field activities or in response to a request from a landowner. If an inspection indicates that a site’s abandonment or reclamation liability equals or exceeds 4 times the amount normally calculated for that type of site in that abandonment or reclamation region, the site will be classified as a potential problem site. See *Directive 001* for conditions that may result in this classification.

The AER will advise a licensee of any site identified as a potential problem site and provide the licensee with an opportunity to respond to the identification. If a licensee cannot establish that the potential problem site identification was in error, the licensee must have a site-specific liability assessment conducted on the site in accordance with *AER Directive 001* at its expense and within the time period specified by the AER.

If a site-specific liability assessment acceptable to the AER is conducted on a potential problem site and the assessment confirms that site has an abandonment liability less than 4 times the cost determined by the Regional Abandonment Cost Map or a reclamation liability less than 4 times the cost determined by the Regional Reclamation Cost Map, the potential problem site classification will be removed.

If a site-specific liability assessment acceptable to the AER is conducted on a potential problem site and the assessment confirms that the site has an abandonment liability equal to or greater than 4 times the cost determined by the Regional Abandonment Cost Map or a reclamation liability equal to or greater than 4 times the cost determined by the Regional Reclamation Cost Map, the site will be classified as a “designated problem site.” That designation will remain in effect until abandonment or reclamation work has been conducted on the site and a subsequent site-specific liability assessment acceptable to the AER estimates the associated costs at less than 4 times the amounts normally calculated for that site. The deemed liability of a former designated problem site will subsequently be the new estimated amount.

The costs determined from a site-specific liability assessment accepted by the AER will be used in calculating the deemed liability of the assessed site regardless of whether those costs are higher or lower than those that would ordinarily be determined by the LLR formula.

While the liability assessment is being prepared, for monthly LMR assessment purposes the liability of a potential problem site is calculated as if it were not a potential problem site.

For licence transfer assessment purposes, the liability calculated for a potential problem site included in an application is

- the sum of its calculated abandonment cost and 20 times the reclamation cost for that type of site in that reclamation cost area where a site-specific reclamation assessment is required, or
- the sum of its calculated reclamation cost and 20 times the abandonment cost for that type of site in that abandonment cost area where a site-specific abandonment assessment is required, or
- the sum of 20 times the abandonment cost for that type of site in that abandonment cost area and 20 times the reclamation cost for that type of site in that reclamation cost where a site-specific abandonment and reclamation assessment is required.

A licensee acquiring a potential problem site will have the site’s liability calculated at this higher rate for monthly LMR and transfer assessments until the potential problem site identification is removed or converted to a designated problem site.

If a licensee of a potential problem site proposes to transfer a well and/or facility licence to another party while remaining the licensee of the potential problem site, the AER will assess whether approval of the transfer will result in the transferor having sufficient deemed assets to address the liability of the potential problem site and whether approval of the proposed licence transfer application is in the public interest.

2.6.2 Voluntary Disclosure of a Potential Problem Site

A licensee may voluntarily advise the AER of a potential problem site and, in so doing, propose its own schedule for completing a liability assessment conducted according to *Directive 001*. Self-disclosure of a potential problem site by a licensee enables the AER to develop a more comprehensive inventory of higher liability sites. A licensee advising the AER of potential problem sites is ordinarily permitted to conduct the site-specific liability assessment on the identified site in accordance with its own schedule and is not required to conduct a site-specific assessment within a specified period of time. The voluntary identification of a potential problem site by a licensee does not preclude the AER from requiring a site-specific liability assessment to be conducted within a specified period if it is in the public interest.

While the liability assessment is being prepared, for monthly LMR assessment purposes the liability of a self-disclosed potential problem site is calculated as if it were not a potential problem site. For transfer assessment purposes, the liability of a self-disclosed potential problem site is calculated in the same manner as a potential problem site identified by the AER. Once reviewed and accepted by the AER, the costs estimated from the site-specific assessment are used in calculating the deemed liability of the assessed site.

2.6.3 Designated Problem Site

If a site-specific liability assessment conducted on a potential problem site confirms that the site has an abandonment liability equal to or greater than 4 times the cost determined by the Regional Abandonment Cost Map or a reclamation liability equal to or greater than 4 times the cost determined by the Regional Reclamation Cost Map, the site will be classified as a designated problem site.

For monthly LMR and transfer assessment purposes, the deemed liability of a designated problem site is the sum of its abandonment liabilities determined by the LMR formula (unless a site-specific abandonment assessment was conducted) and its reclamation liability determined by the LLR formula (unless a site-specific reclamation assessment was conducted). Costs determined from a liability assessment accepted by the AER are used in place of the costs that would ordinarily be determined by the LMR formula.

3 Deemed Liability Parameter Updates

The AER will update and publish

- the costs to be used for each region of the Regional Abandonment Cost Map,
- the costs to be used for each region of the Regional Reclamation Cost Map,
- the costs to be used for the Licence Cost Processor, and
- the facility well equivalent cost

in conjunction with the updating of deemed asset parameters in *Directive 011*.

Appendix 6 Variation of LLR Formula Parameters

1 Licensee-Initiated Request for Variation of an LLR Parameter

The LLR Program is based on the use of provincial and regional averages, and their use may not accurately reflect the deemed assets or deemed liabilities of a particular licensee. As a result, the AER will consider a request by a licensee that does not meet the LMR threshold of 1.0 for a variation of the following LLR parameters.

Any parameter variation request made under this section must be based upon licensee specific data for *all* parameters. This includes both deemed asset and deemed liability parameters for *all* wells and facilities and prevents licensees from only applying for variation of parameters believed to be high.

All site-specific liability assessments must be current and conducted in accordance with *Directive 001*.

The submission of a request for a variation does not eliminate or reduce a security deposit requirement determined by a monthly LMR or transfer assessment.

1.1 Licensee Netback

A licensee may request use of its own netback (including its own shrinkage and m³ OE conversion factors) rather than the industry average netback in the LLR formula if it believes its average three-year netback is higher than the industry average netback.

A licensee requesting a variation of its netback must submit a letter requesting the variation, a completed Licensee Netback Calculation Form (appendix 9), and financial information acceptable to the AER supporting its three-year historical netback, shrinkage, or conversion values. If a licensee does not have three years of history, its netback must include the industry average for those years required to make up the three-year period.

If a licensee-specific netback is approved as a result of a variation request, the approved netback will be used for the month the variation was approved and for each subsequent month until the industry average netback is updated by the AER. A licensee may request another variation of its netback after the industry netback has been updated, provided that its LMR remains below 1.0.

1.2 Well Abandonment Liability

A licensee may request the use of site-specific well abandonment costs rather than those determined by the AER's licence cost processing program in the LLR formula if it believes these more accurately reflect actual abandonment costs.

Well abandonment costs determined from a site-specific assessment acceptable to the AER will replace those determined by the LLR formula for the wells for the following three calendar years.

1.3 Well Reclamation Liability

A licensee may request the use of site-specific well reclamation costs rather than those determined by the Regional Reclamation Cost Map in the LLR formula if it believes these more accurately reflect actual reclamation costs.

Well reclamation costs determined from a site-specific assessment acceptable to the AER will replace those determined by the LLR formula for the wells for the following three calendar years.

1.4 Facility Abandonment Liability

A licensee may request that the AER accept the use of site-specific facility abandonment costs rather than those determined by the facility well equivalent and well equivalent cost factor in the LLR formula if it believes, and can establish to the AER's satisfaction, that these more accurately reflect actual abandonment costs.

If accepted and permitted by the AER, facility abandonment costs determined from a site-specific assessment acceptable to the AER will replace those determined by the LLR formula for the facilities for the following three calendar years.

1.5 Facility Reclamation Liability

A licensee may request the use of site-specific facility reclamation costs rather than those determined by the Regional Reclamation Cost Map in the LLR formula if it believes these more accurately reflect actual reclamation costs.

Facility reclamation costs determined from a site-specific assessment acceptable to the AER will replace those determined by the LLR formula for the facilities for the following three calendar years.

1.6 Outstanding Reclamation Certificate

A licensee may request a 50 per cent reduction in the reclamation liability determined for an abandoned well or facility by the LLR formula if all of the work required to obtain a reclamation certificate or its equivalent from the appropriate regulatory authority has been completed and the delay in obtaining a reclamation certificate is solely to re-establish vegetative cover.

A licensee requesting a variation of this assessment will be required to provide detailed reclamation cost estimates based on a site-specific assessment.

A reduction in a well's or facility's reclamation costs based on an assessment acceptable to the AER will replace those determined by the LLR formula for the well or facility for the next 12

calendar months. Should a reclamation certificate not be received within this period, a licensee may request another variation on such sites if it again does not meet the LMR threshold.

2 AER Review of LLR Parameters

The AER may initiate a detailed review of a licensee's LMR if it believes the LLR formula does not accurately reflect the licensee's deemed assets and/or deemed liabilities.

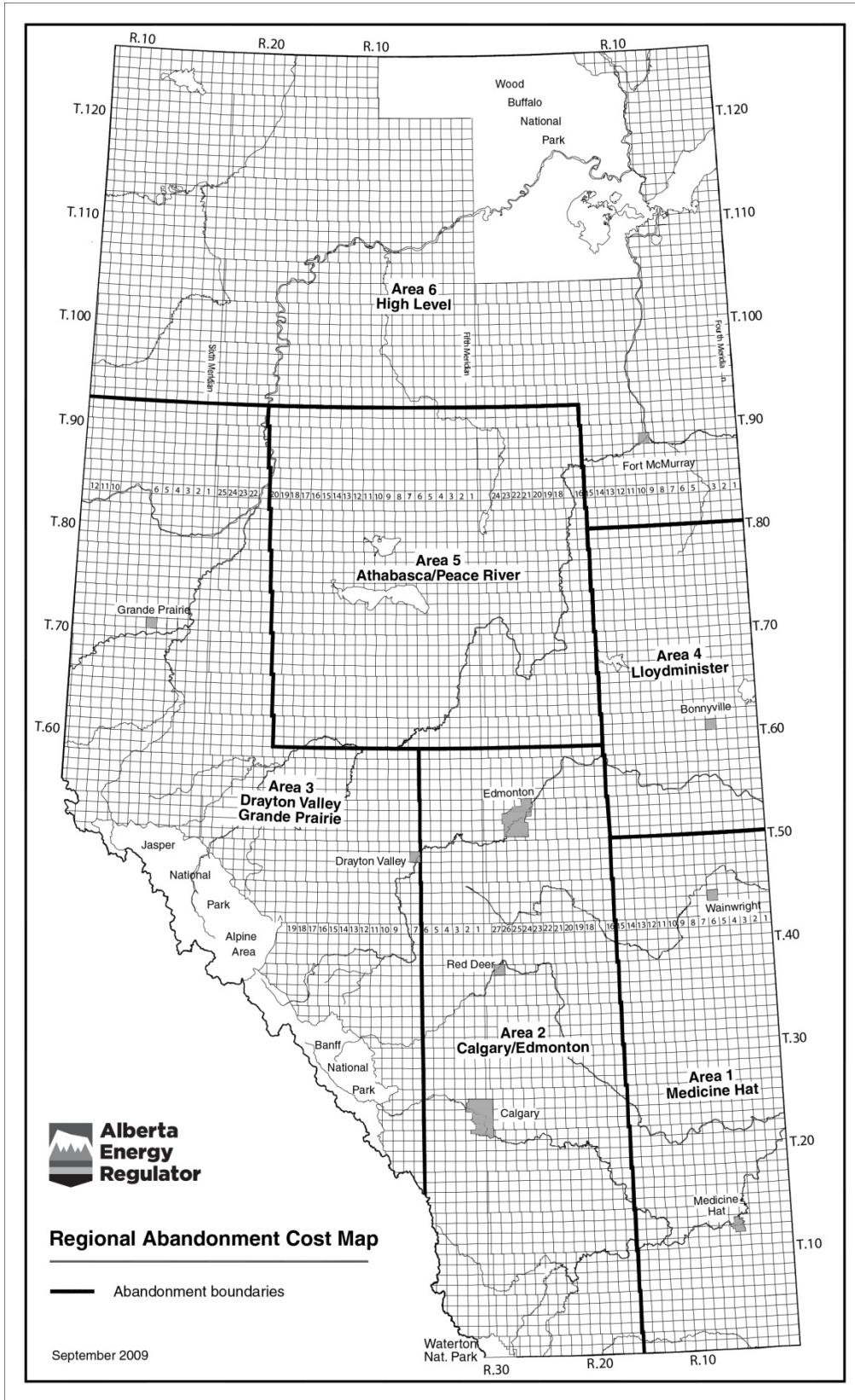
As part of its detailed review process, the AER may require information on all factors used by a licensee in determining its netback. If as a result of a detailed review the AER determines that a licensee's use of the industry average netback is not warranted, the licensee's netback will be used to calculate its LMR until the industry average netback is updated.

3 LLR Parameter Formula Variation Requests

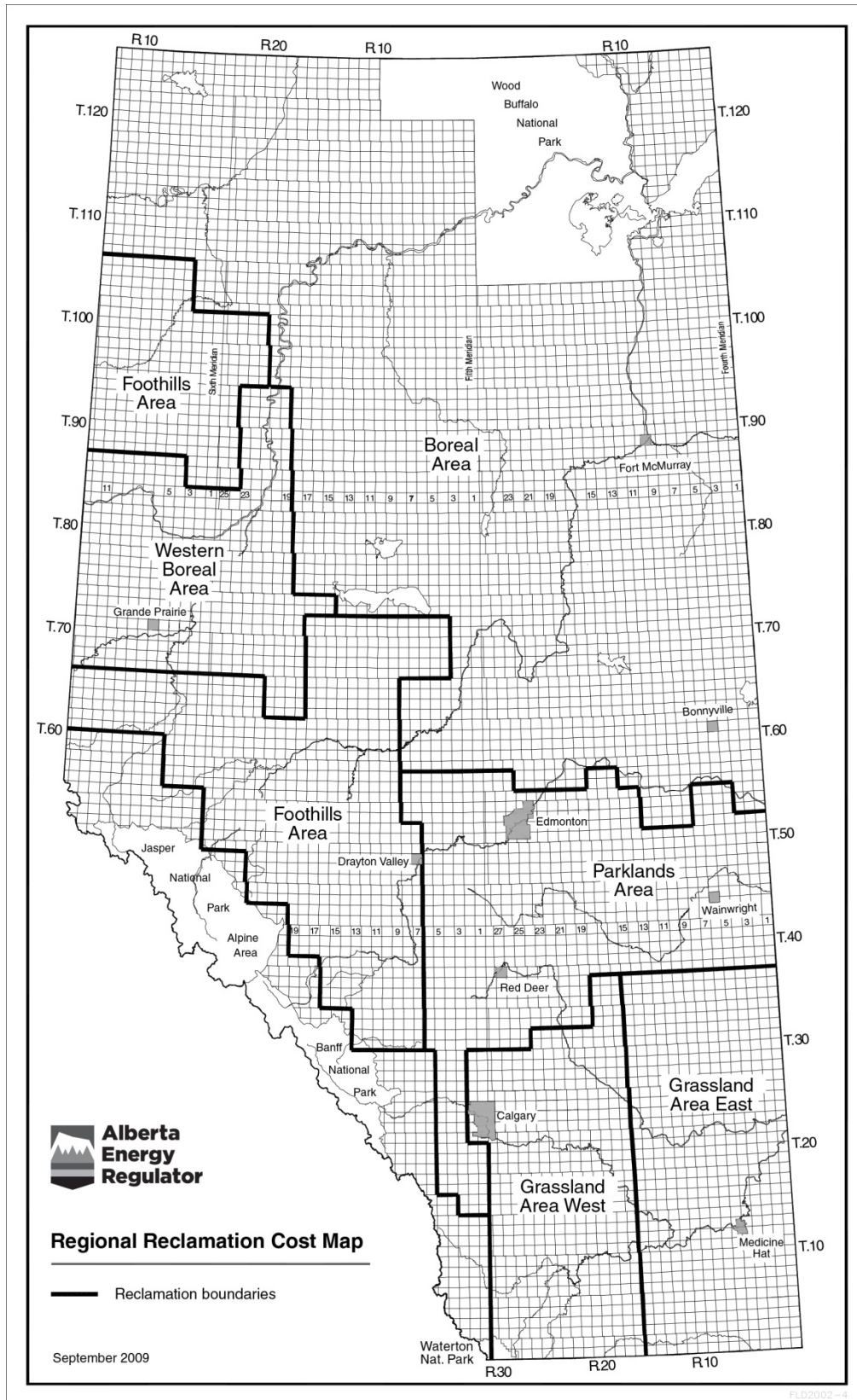
A licensee requesting a variation of LLR formula parameters must direct a written request and supporting documentation to the section leader of Liability Management.

Licensees requesting an LLR variation are not eligible for a waiver under section 4.2 of *Directive 001* when a Phase II ESA is required as part of a site-specific liability assessment.

Appendix 7 Regional Abandonment Cost Map



Appendix 8 Regional Reclamation Cost Map



Appendix 9 Licensee Netback Calculation Form

The form is available at Regulating Development > Rules and Directives > AER Forms > Directive Forms > *Directive 006* > [Appendix 9](#).

Appendix 10 Facility Liability Declaration Form

The form is available at [Regulating Development > Rules and Directives > AER Forms > Directive Forms > Directive 006 > **Appendix 10**](#).

Appendix 11 Facility Netback Calculation Form

The form is available at Regulating Development > Rules and Directives > AER Forms > Directive Forms > *Directive 006* > [Appendix 11](#).

Completing the Netback Calculation Form

- The AER must be able to clearly track the financial information provided on the Facility Netback Calculation Form back to the financial statements provided. An in-house profit-and-loss statement and/or an explanation of the methodology used to come up with the entries on the Facility Netback Calculation Form may be required.
- All entries reported on the Facility Netback Calculation Form must correspond to the same accounting time period as the company's corporate year-end financial statements.
- Excluded revenues are to be recorded in the "Other revenue or expense" column to reconcile totals with the company's corporate year-end financial statements.
- If the licensee's net revenue is negative for all the facilities that would normally be recorded on the Facility Netback Calculation Form, no netback submission is required, as an asset value will not be generated for a negative net revenue value.
- For the purpose of the netback submission, net revenue refers to earnings before interest, taxes, and depreciation and is equal to gross margin (midstream revenue less cost of goods sold) less direct operating costs and applicable general and administrative costs.
- The netback under liability management programs is intended to represent the net revenue value that a similar midstream licensee could achieve if it operated the same midstream facility. Therefore, revenue and expense items that would not be typical of facility operations should be excluded from the netback calculations.
- "Corporate Officer" is a position listed in the corporation's bylaws and ordinarily includes president, vice president, treasurer, and secretary.

NPL Volumes

- *Directive 006* (LLR) and *Directive 024* (LFP) – "NPL volumes" refers to the total received inlet volumes reported to Petrinex against the reporting facility ID codes attached to your facility licences. Report only third-party volumes from which you generate revenue. Volumes from a licensee's own production are not to be included.
- *Directive 075* (OWL) – "NPL volumes" refers to the volume of material that has been removed from a facility and/or disposed of permanently at a facility via deep well disposal that was initially received as industrial or oilfield waste.

Large Facility Program (LFP)

- *Directive 024* LFP submissions for straddle plants require a five-year average netback. List each of the five years separately using the format in Part B. Submit the corresponding financial documentation for the most recent year-end. If five years' worth of financial information is not available for a facility, the AER will use the average for the number of years that a licensee has owned the facility until such time as a five-year average is available.

Oilfield Waste Liability (OWL) Program

- The first waste management (WM) facility that receives the waste volumes is the facility that is to record the revenue for netback calculation purposes. The volumes reported must correspond to the same accounting period as the licensee's most recent year-end.
- Under Petrinex, produced water going to a waste plant (WP) gets reported to the WP. Therefore, for those instances where the produced water is reported to a WP, the first WM facility that receives the produced water is the facility that is to record the volume and corresponding facility-specific netback for those volumes. The netback would not be reflected in the LLR Program in these instances.

Direct any questions by email to LiabilityManagement@aer.ca or by phone to the Liability Management help line at 403-297-3113.