

Directive 058—Addendum 2015-01-14

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Oilfield Waste Management Facility Approvals—Notification and Amendment Procedures

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1 Introduction

Alberta Energy Regulator (AER) *Directive 058: Oilfield Waste Management Requirements for the Upstream Petroleum Industry* details the information to be submitted in an application for approval to construct and operate a new oilfield waste management facility. However, it does not address the information to be submitted to modify an existing facility. This addendum to *Directive 058* sets out a notification procedure for minor modifications to existing oilfield waste management facilities and identifies those modifications that require an application to amend the oilfield waste management facility approval (WM approval). It details the information that must be submitted in a notification or an application for amendment. This addendum also sets out the application process to obtain approval to conduct one-time operations or pilot projects on existing oilfield waste management facilities. As such, the scope of this addendum is limited to oilfield waste management facilities for which the AER has issued a WM approval. This addendum is issued as a companion to *Directive 058* and will be added to *Directive 058* in due course.

This January 2015 addendum, which replaces the December 2008 addendum, contains amendments to section 3.2.6.

Modifications must comply with all AER requirements, including

- *Oil and Gas Conservation Act and Rules (OGCR),*
- *Directive 001: Requirements for Site-Specific Liability Assessments in Support of the EUB’s Liability Management Programs,*
- *Directive 047: Waste Reporting Requirements for Oilfield Waste Management Facilities,*
- *Directive 051: Injection and Disposal Wells—Well Classifications, Completions, Logging, and Testing Requirements,*
- *Directive 055: Storage Requirements for the Upstream Petroleum Industry,*
- *Directive 056: Energy Development Applications and Schedules (section 2),*
- *Directive 058: Oilfield Waste Management Requirements for the Upstream Petroleum Industry,*
- *Interim Directive (ID) 96-3: Oilfield Waste Management Requirements for the Upstream Petroleum Industry,*
- *ID 99-4: Deposition of Oilfield Waste into Landfills,*
- *ID 2000-3: Harmonization of Waste Management,*
- *ID 2000-4: An Update to the Requirements for the Appropriate Management of Oilfield Wastes,* and
- all other applicable requirements of the AER.

2 Notification Process for Minor Modifications to Approved Oilfield Waste Management Facilities

The notification process is limited to the following facility modifications:

- 1) addition or removal of storage tanks within an existing tank farm;
- 2) replacement of or upgrades to existing tank farms and bulk pads;
- 3) addition of a new tank farm or expansion of an existing tank farm that does not exceed criteria set out in table 1, “Addition of tanks”;
- 4) addition of a new disposal well to which the facility will direct wastes for deep well disposal;
- 5) redesignation of tanks; and
- 6) addition or removal of an oilfield waste stream.

If any of the above modifications includes the addition of a new waste management activity, an application for amendment must be submitted (see section 3.2.3). For example, a new storage area for custom treating tanks must be approved if custom treating is not already occurring at the facility.

Routine replacement of existing equipment (pumps, heaters, treaters, etc.) and tanks (exchanging a tank for another tank of the same volume, provided that the dimensions of the new tank do not affect the required volumetric capacity of the dike) does not require notification.

For minor facility modifications not listed above, the approval holder must contact the AER Waste and Storage Section to discuss whether a notification is to be submitted for the modification.

Approval holders must submit notifications through the AER's Digital Data Submission (DDS) system a minimum of 15 business days prior to commencing additions or changes to the oilfield waste management facility. The AER will review all notifications within 15 business days. The 15-business-day period begins once the notification has been received and acknowledged by the AER Waste and Storage Section.

The information that must be addressed in a notification is set out in sections 2.1 and 2.2. **The AER will return notifications that do not address *all* of the required information to the approval holder and will consider commencement of any activity associated with the notification as a noncompliance event, in accordance with *Directive 019: Compliance Assurance*.**

Notifications that appropriately address all required information will be filed in the appropriate oilfield waste management facility file, and a copy will be forwarded to the appropriate AER field centre. In most situations, the WM approval will not be updated, nor will a response be sent from the AER. However, the AER may request further information regarding the notification. If the notification appears to be beyond the scope of a minor modification (e.g., the proposed modification will result in an increase to emissions, risk, or public impact), the AER may require that the proposed modification be processed as an application for amendment. The AER will notify approval holders within 15 business days of receipt and acknowledgement of a notification when such situations arise.

Any modification made to a facility without proper notification to the AER will be considered as a noncompliance event, in accordance with *Directive 019*. ~~If during a facility audit or inspection, the AER determines that additions to an oilfield waste management facility identified in a notification do not meet all applicable requirements or are different from that described in the notification, the AER will initiate enforcement in accordance with *Directive 019* and will require the approval holder to take appropriate corrective action. Corrective action may include reconstructing or removal of those areas that do not meet requirements.~~ Approval holders are required to maintain copies of all notifications at the facility site.

2.1 General Information Required for Notifications

All notifications must include

- 1) date of notification;
- 2) name, address, phone number, and fax number (including area codes) of the approval holder;
- 3) name of the oilfield waste management facility and its WM approval number;

- 4) legal land description of the facility;
- 5) proposed date of commencement of the activity;
- 6) purpose and description of the modification;
- 7) area of the facility where the proposed activity will occur;
- 8) an updated facility plot plan that clearly identifies the amended area or modification (if applicable);
- 9) an updated process flow diagram (PFD) for the entire facility (if applicable);
- 10) justification as to whether or not additional financial security will be required; if additional financial security is required, provide information regarding the financial security adjustment, in accordance with Part 16.6 of the *OGCR* and *Directive 001*;
- 11) confirmation that *Directive 055* requirements will be met by providing a written description of the containment system(s) (i.e., specifications of primary and secondary containment systems, leak detection systems, and leachate collection systems), secondary containment capacity calculations, and appropriate engineering diagrams (if applicable); and
- 12) any other information the AER may require.

2.2 Specific Information Required for Different Modifications Covered Under Notification

The following subsections outline the specific information required to be submitted for each type of notification. This information must be provided in addition to the items listed in section 2.1.

2.2.1 Addition or Removal of Storage Tanks Within an Existing Tank Farm

The additional information that must be submitted with the notification includes

- 1) number of tanks being added or removed; note that the addition of tanks must not exceed the requirements specified in table 1, “Addition of tanks”;
- 2) capacity of each storage tank being added or removed;
- 3) overall change in capacity of the facility;
- 4) updated notation and designation for the tank(s) (if applicable);
- 5) for addition of a storage tank(s), confirmation that the existing tank farm has sufficient secondary containment capacity (in accordance with section 5.3.2.1[a] of *Directive 055*) to accept the additional tank(s) without modification; and
- 6) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in

Directive 058, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this notification and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

If the approval holder identified the additional tanks in the original application (i.e., future tanks), it is not required to submit notification to the AER or conduct public consultation. The AER reminds the approval holder of its responsibility to ensure that its approval is reflective of the facility (e.g., storage tanks, pads, equipment, and infrastructure) and that the AER has an up-to-date site plan and PFD.

The addition of a new waste management activity to an existing oilfield waste management facility requires an application for amendment. For example, the addition of tank(s) associated with custom treating can only occur under notification if custom treating is identified as an approved process on the WM approval for the facility and the tank farm has the capacity to accommodate the additional tank(s). If not, an application for amendment must be submitted addressing the addition of the custom treating process, as well as the storage tanks associated with custom treating (see section 3.2.3).

Table 1. Addition of tanks

Number of tanks within an existing tank form ^a	Number of tanks permitted to be added to the tank farm ^a	Maximum volume that can be added
1–2	1	Volume of the largest tank
3–5	2	240 m ³
6–10	3	360 m ³
11–15	4	480 m ³
16–20	5	600 m ³
>20	6	720 m ³

^a The volume of each additional tank must not exceed the volume of the largest tank within the tank farm.

The volume of each additional tank must not exceed the volume of the largest tank within the tank farm. For example:

- An existing tank farm with 13 tanks where the largest tank has a volume of 100 m³ may add up to four 100 m³ tanks; this addition must not exceed the 480 m³ limit.
- An existing tank farm with 13 tanks where the largest tank has a volume of 360 m³ may add up to four tanks if the combined volume of the four tanks does not exceed 480 m³ and the individual volume of any of the tanks does not exceed 360 m³.

2.2.2 Replacement of or Upgrades to Existing Tank Farms and Bulk Pads

This section addresses situations where an existing tank farm or bulk pad is to be replaced or upgraded to meet current *Directive 055* requirements but the capacity of the replacement or upgraded tank farm or bulk pad does not change.

The additional information that must be submitted with the notification includes

- 1) updated tank notation and designation, if applicable;
- 2) confirmation as to whether the replacement (new) tank farm or bulk pad will be constructed in exactly the same area or a different area of the facility; if the areas are different, the updated facility plot plan required in section 2.1(8) must clearly identify the area for both the old and new tank farm or bulk pad; and
- 3) if the replacement (new) tank farm or bulk pad is constructed on a different area of the facility,
 - a) commitment that materials stored in the old tank farm or bulk pad will be removed within 30 days of the completion of the new tank farm or bulk pad,
 - b) a description of the timeframe in which the old tank farm or bulk pad will be dismantled and the next intended use of the area, as well as a discussion as to how any contamination resulting from the old tank farm or bulk pad will be addressed, and
 - c) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this notification and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

Approval holders anticipating difficulty complying with the requirement to remove materials from old tank farms and bulk pads that have been replaced with new ones must submit notification pursuant to section 2.2.3 for the addition of a new tank farm or expansion of an existing tank farm or section 3.2.2 for an application for amendment for the addition of a bulk pad or expansion of an existing bulk pad. Adjustment of financial security to reflect the removal of capacity can only occur after the materials have been removed from the old storage system. Further adjustment of financial security to reflect abandonment of the storage structures and decontamination of the areas resulting from the storage systems can only occur after the respective work has been completed.

2.2.3 Addition of a New Tank Farm or Expansion of an Existing Tank Farm

The additional information that must be submitted with the notification includes

- 1) dimensions of the new or expanded tank farm;
- 2) number of storage tanks being added (note that the addition of tanks must not exceed the requirements set out in table 1, “Addition of tanks”);
- 3) capacity of each storage tank being added;
- 4) updated notation and designation for each tank (if applicable);
- 5) overall change in capacity for tank storage for the entire facility;
- 6) confirmation that the new or expanded tank farm will not result in an increase to emissions, risk, or public impact;
- 7) for expansion of existing tank farms, details as to how the existing containment system (i.e., dikes, liners) will be tied into the new system (including engineering diagrams) and how the integrity of the dike or liners will be ensured where the existing and new containment systems are joined; and
- 8) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this notification and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

An application for amendment must be submitted if a new tank farm or an expansion to an existing tank farm does not meet the above requirements or the design of the storage system is an alternative to the requirements set out in *Directive 055* (see section 3.2.13 of this directive).

2.2.4 Addition of a New Disposal Well

Notification for the addition of a new disposal well is limited to those facilities currently approved for fluid disposal. Notification for the addition of a new disposal well must only be submitted after all of the applicable licensing and approval requirements for the disposal well have been completed.

The additional information that must be submitted with the notification includes

- 1) surface location of the well;
- 2) well licence number and disposal scheme approval number;

- 3) classification of the well (i.e., class Ib or Ia);
- 4) statement on whether existing tanks at the facility will be associated with the new well; if redesignation of existing tanks will be required, include information outlined in section 2.2.5; and
- 5) statement on whether additional storage tanks will be added to the facility to accommodate the new well; if so, refer to sections 2.2.1 and 2.2.3.

The addition of a cavern to an existing oilfield waste management facility approved for cavern disposal may be done through notification, provided that all of the applicable licensing and approval requirements for the cavern have been completed. If the facility is not currently approved for cavern disposal, an application for amendment must be submitted (see section 3.2.3).

2.2.5 Redesignation of Tanks

Notification for the redesignation of tanks is limited to those activities already authorized by the WM approval (e.g., an oilfield waste management facility is approved for waste processing and custom treating, and existing waste processing tanks are being redesignated as custom treating tanks).

The additional information that must be submitted with the notification includes

- a list of tanks to be redesignated, including their previous notation and new notation (if numbering of tanks is to change) and the previous use and new use.

2.2.6 Addition or Removal of an Oilfield Waste Stream

The additional information that must be submitted with the notification includes

- 1) oilfield waste stream(s) being added or removed (include waste code, in accordance with appendix 3 in *Directive 047*); and
- 2) for the addition of an oilfield waste stream,
 - a) indicate the approved waste management activities to which the oilfield waste will be subjected (e.g., waste processing, fluid disposal, storage, transfer), and
 - b) confirm that the facility has the capability to manage the new waste stream.

Note that a notification may not be submitted to receive waste streams laden with naturally occurring radioactive material (NORM), waste streams requiring special handling, or non-oilfield wastes. In such cases, an application to amend the WM approval must be submitted.

3 Applications for Amendment of Oilfield Waste Management Facility Approvals

An application for amendment is required for the following modifications:

- 1) addition of a new tank farm or expansion of an existing tank farm that exceeds criteria set out in table 1, “Addition of tanks,” or the addition of a new bulk pad or expansion of an existing bulk pad;
- 2) addition of a new waste management activity (e.g., deep well disposal, cavern disposal, custom treating, waste transfer, waste processing, biodegradation [biopile/biocell], landfill, tank wash, clean oil terminal);
- 3) change in status of a facility (e.g., active to suspended);
- 4) change in ownership of a facility;
- 5) acceptance of non-oilfield wastes or the importation of wastes generated from the exploration and production of oil and gas outside of Alberta;
- 6) acceptance of material requiring special handling;
- 7) addition or closure of a landfill cell and closure of a landfill;
- 8) change in soil or groundwater monitoring programs;
- 9) change from sweet to sour facility;
- 10) expansion of lease boundaries;
- 11) disposition of residual wastes by an alternative method not authorized by the WM approval;
and
- 12) requests for alternative storage (storage system that is designed or operated alternative to the requirements set out in *Directive 055*).

For facility modifications not listed above, the WM approval holder must contact the AER for the application requirements. Approval holders must submit an application for amendment if the proposed modification will result in an increase to emissions, risk, or public impact.

An application for amendment must be submitted through the AER’s DDS system. If an activity requiring a facility ID code is added to the facility (e.g., waste processing, custom treating, or clean oil terminalling), the approval holder must obtain the facility ID code from Canada’s Petroleum Information Network (PETRINEX) and include it with the application. All applications for amendment must address the implications of the change with regard to financial security for the site. Applications that do not include this information will be deemed incomplete and may be returned to the approval holder.

3.1 General Information Required for Applications for Amendment

All applications for amendment must include

- 1) date of the application;
- 2) name, address, phone number, and fax number (including area codes) of the approval holder;
- 3) name of the oilfield waste management facility and its WM approval number;
- 4) legal land description of the facility;
- 5) proposed date of commencement of the activity;
- 6) description of the facility amendment or modification;
- 7) area of the facility where the proposed activity will occur (if applicable);
- 8) an updated facility plot plan that clearly identifies the amended area or modification (if applicable);
- 9) an updated PFD for the entire facility (if applicable);
- 10) justification as to whether or not additional financial security will be required; if financial security is required, information regarding the financial security adjustment, in accordance with Part 16.6 of the *OGCR* and *Directive 001*;
- 11) confirmation that *Directive 055* requirements will be met by providing a written description of the containment system(s) (i.e., specifications of primary and secondary containment systems, leak detection systems, and leachate collection systems), secondary containment capacity calculations, and appropriate engineering diagrams (if applicable), or alternatively, identify that the application is for an alternative storage system; the information to address is identified in section 3.2.13 and must be included in the application;
- 12) discussion of any new tracking, record keeping, or reporting requirements that will be implemented (if applicable); and
- 13) any other information the AER may require.

3.2 Specific Information Required for Different Modifications Requiring an Application for Amendment

The following subsections detail the specific information required for each activity requiring an application for amendment. This information must be provided in addition to the items listed in section 3.1.

3.2.1 Addition of a New Tank Farm or Expansion of an Existing Tank Farm That Exceeds Criteria Set Out in Table 1

The additional information that must be submitted with the application includes

- 1) dimensions of the new or expanded tank farm;
- 2) number of storage tanks being added (if applicable);
- 3) capacity of each storage tank being added (if applicable);
- 4) updated notation and designation for tank(s) (if applicable);
- 5) overall change in tank storage capacity, as applicable, for the facility (as a percentage);
- 6) for expansion of existing tank farms, details as to how the existing containment system (i.e., dikes, liners) will be tied into the new system (including engineering diagrams) and how the integrity of the dike or liners will be ensured where the existing and new containment systems are joined; and
- 7) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this amendment and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

3.2.2 Addition of a Bulk Pad or Expansion of an Existing Bulk Pad

The additional information that must be submitted with the application includes

- 1) dimensions of the new or expanded bulk pad;
- 2) maximum storage capacity of the new or expanded bulk pad (if applicable);
- 3) overall change in bulk pad storage capacity, as applicable, for the facility (as a percentage);
- 4) for expansion of existing bulk pads, details as to how the existing containment system (i.e., dikes, liners) will be tied into the new system (including engineering diagrams) and how the integrity of the dike or liners will be ensured where the existing and new containment systems are joined; and
- 5) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission

of this amendment and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

3.2.3 Addition of a New Waste Management Activity

An application for the addition of a new waste management activity must include all of the required information detailed in the applicable sections of Part E of *Directive 058* specific to the type of activity being added (e.g., for addition of a transfer station to an existing oilfield waste processing facility, the application must address the transfer station application requirements in section 22 of *Directive 058*).

The approval holder must also conduct public consultation in accordance with *Directive 056* and include the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c) as part of the application. (Note that public consultation must occur prior to the submission of an application and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified and if concerns were identified, provide details regarding resolution of the concerns.)

The AER may require the application for the addition of a new waste management activity to be advertised (i.e., that a notice of application be placed in local and major newspapers). It will contact the approval holder in these circumstances.

For the addition of a new waste management activity, the application must identify whether the current groundwater or soil monitoring program requires augmenting and include additional site assessment information, if necessary. For facilities not currently required to perform groundwater monitoring, the approval holder should refer to the applicable sections of *Directive 058* specific to the type of activity being added to determine if a groundwater program must be implemented.

3.2.4 Change in Status of Oilfield Waste Management Facilities

The WM approval for an oilfield waste management facility must accurately reflect the status of the facility. Approval holders wishing to change the status of an oilfield waste management facility or a portion of it (e.g., change status from active to suspended, abandoned, or undergoing closure) must submit an application for amendment to the AER. Adjustment of financial security will only be considered after documentation has been submitted demonstrating that the work associated with the status change has been completed.

Applications requesting a change in the status of a facility or a portion of it must contain the following information:

- 1) For a facility or portion of a facility undergoing suspension, provide
 - a) a description of the work that will be taken to
 - i) eliminate all inventories—include discussion on the types of facilities to which the inventories will be sent for treatment, disposal, or recycling and the volumes of each waste type or material in inventory sent to the facilities, and
 - ii) secure the facility or portion of it to ensure that no further waste management activities will occur in the suspended area;
 - b) the timeframe in which the facility or portion of it will be abandoned, decontaminated, and surface land reclaimed; and
 - c) a commitment that all work associated with suspension activities will be documented, retained for final closure, and made available to the AER upon request.
- 2) For a facility or a portion of a facility undergoing abandonment, provide
 - a) a response to the applicable items under 3.2.4(1) above if the WM approval for the facility does not already reflect a suspended status (e.g., the intent of the application is to suspend the facility and follow with abandonment activities);
 - b) a description of the work that will be taken to remove associated equipment and structures and to abandon wells and pipelines, and a commitment that appropriate assessment work will be conducted to determine the extent, if any, of impacts caused by the waste management activity being abandoned;
 - c) if the facility or portion of it is to be left in an abandoned state, a description of the procedures that will be taken to secure the area and a discussion as to when the facility or portion of it will undergo decontamination and surface land reclamation work; and
 - d) a commitment that all work associated with suspension activities will be documented, retained for final closure, and made available to the AER upon request.
- 3) For a facility or a portion of a facility undergoing closure, provide
 - a) a response to the applicable items under 3.2.4(1) and (2) above if the WM approval for the facility does not already reflect a suspended or abandoned status (e.g., the intent of the application is to suspend, abandon, decontaminate, and undergo surface land reclamation of the facility or portion of it);
 - b) a closure plan that describes the environmental site assessment work (developed to target all potential sources, nature, and extent of contamination) and the reclamation work that

- will be undertaken to return the site to equivalent land capability, as well as the predicted timeframe required to conduct the work;
- c) indication of whether any structures or buildings will remain on site and the reason why;
 - d) identification of the next intended land use (agricultural, etc.);
 - e) if only a portion of the facility is undergoing closure, identification of whether the reclaimed area will be removed from the facility footprint and be used for the next intended land use; and
 - f) a commitment that all work associated with closure activities will be documented, retained for final closure, and made available to the AER upon request.
- 4) For a facility or a portion of a facility that has undergone closure, provide a closure report that includes
- a) a summary of the suspension and abandonment work undertaken;
 - b) the results from the environmental site assessment, including a discussion regarding the type and extent of any contamination found;
 - c) a summary of the work undertaken to decontaminate the site, if necessary, including confirmatory environmental site assessment work where necessary;
 - d) a summary of the surface land reclamation work;
 - e) a statement as to whether a post-closure monitoring program is necessary and, if so, the length and type of monitoring that will be required; and
 - f) independent verification to ensure that reclamation objectives were achieved (based on the concept of equivalent land capability) and that the site is suitable for the next intended land use.
- 5) For resuming operation of a facility or a portion of a facility currently suspended, provide
- a) information confirming that all requirements in the applicable sections of *Directive 058* and *Directive 055* have been met; and
 - b) if resumption of operation of an entire facility that has been suspended for more than one year is sought, confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this application and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed

development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

The AER may require the application to be advertised (i.e., that a notice of application be placed in local and major newspapers). It will contact the approval holder in these circumstances.

Note that because oilfield waste management facilities are not included in the definition of “specified lands” set out in the *Conservation and Reclamation Regulation* under the *Environmental Protection and Enhancement Act (EPEA)*, they are not subject to the reclamation certification process required under that legislation. The AER will consult with Alberta Environment and Sustainable Resource Development (ESRD) if the site is on public lands to ensure that upon closure of a facility, all applicable work has been successfully completed. Once the AER is satisfied that the closure report contains the necessary documentation to verify that all closure requirements have been met, the WM approval will be amended to identify that closure of the facility has been completed. Through a condition of the amended approval, the approval holder will continue to be liable for the facility and site if it becomes apparent that future work is necessary as a result of activities that occurred on the site while the facility was in operation or while it was undergoing suspension or closure.

3.2.5 Change in Ownership of Oilfield Waste Management Facilities

When a facility changes ownership, an application must be submitted to transfer the WM approval to the new owner. Upon change of ownership of a facility, reimbursement of financial security to the previous owner will only occur after the new owner has posted sufficient financial security and the WM approval has been amended to reflect the new owner.

For those facilities undergoing a change in ownership, the AER must receive

- 1) written confirmation from both parties involved in the ownership change;
- 2) legal documentation (e.g., amalgamation certificate, purchase agreement) to confirm the change in ownership; and
- 3) financial security, pursuant to Part 16.6 of the *OGCR*, posted by the new owner.

Note that a change in ownership of an oilfield waste management facility may require that other licences or approvals (in addition to the WM approval) also be transferred to the new owner (e.g., well licence and disposal scheme approval for a class Ia or Ib well that has the associated surface facilities approved as an oilfield waste management facility). Facility ID codes associated with the facility must also be transferred to the new owner through PETRINEX.

3.2.6 Imported Oilfield Waste and Alberta-Generated Non-oilfield Waste

This section sets out the application requirements for the acceptance of Alberta-generated non-oilfield waste and the acceptance of imported wastes generated from the exploration and production of oil and gas outside of Alberta.

3.2.6.1 Non-oilfield Waste Generated in Alberta

Non-oilfield waste is waste generated from non-upstream petroleum industries in Alberta and therefore does not meet the definition of “oilfield waste” in the *OGCR*.

Non-oilfield waste must be classified as either non-hazardous or hazardous, pursuant to *EPEA*.

An AER-approved oilfield waste management facility may receive non-hazardous and hazardous wastes if an application has been submitted to and approved by the AER. The AER will limit the volume of non-oilfield wastes that may be received (combined annual total of all sources and types of non-oilfield wastes) to no more than 25 per cent of the total annual volume of oilfield wastes received at an oilfield waste management facility. Hazardous wastes received at an oilfield waste management facility must have a recoverable component (i.e., considered to be a recyclable by ESRD).

The additional information that must be submitted with the application to receive non-oilfield wastes generated within Alberta includes

- 1) type of non-oilfield wastes to be received and confirmation that the waste stream has similar characteristics to the oilfield waste currently approved for the facility;
- 2) classification of the non-oilfield waste (i.e., hazardous or non-hazardous);
- 3) source of the non-oilfield waste;
- 4) an estimate of the annual volume of each non-oilfield waste to be received and confirmation that the sum of all non-oilfield waste accepted will not exceed 25 per cent of the total volume of oilfield waste received annually;
- 5) a description of the acceptance procedures and methods used to verify the characteristics and classification of the non-oilfield waste; and
- 6) the approved waste management activities to which the non-oilfield waste will be subjected (e.g., waste processing, fluid disposal, transfer).
 - a) If the non-oilfield waste is classified as hazardous, the management options must be processing for the purpose of producing a recoverable material (e.g., crude oil) or receipt for the purpose of consolidation and transfer to an approved recycling facility.

- b) If the non-oilfield waste is to be received for the purpose of consolidation and transfer to an approved recycling facility, identify the name, location, and approval number of the receiving recycling facility and provide verification that it is authorized for such receipts.

3.2.6.2 Oilfield Waste Generated from the Exploration and Production of Oil and Gas Outside of Alberta (Imported Oilfield Waste)

Imported oilfield waste is waste generated from the exploration and production of oil and gas outside of Alberta. It is, therefore, subject to the waste classification (i.e., non-hazardous or hazardous), manifesting, and personal identification number (PIN) requirements set out in the *Waste Control Regulation* under *EPEA*. Imported oilfield waste does not meet the definition of “oilfield waste” in the *OGCR*. However, an AER-approved oilfield waste management facility may receive hazardous or non-hazardous imported oilfield wastes if an application has been submitted to and approved by the AER and the waste stream has a recoverable component (i.e., considered to be a recyclable by ESRD).

The additional information that must be submitted with the application to receive imported oilfield wastes includes

- 1) written confirmation by the applicant that it will obtain ministerial authorization for importation of hazardous recyclables and the hazardous waste receiver registration (PIN) from ESRD if the wastes are classified as hazardous. The ministerial authorization must be provided to the AER prior to receipt of any imported oilfield wastes;
- 2) the type of imported oilfield wastes to be received (applicable waste code from *Directive 047*, appendix 3) and confirmation that the imported oilfield wastes are generated from the exploration and production of oil and gas;
- 3) an estimate of the annual volume of each imported oilfield waste to be received;
- 4) a description of the acceptance procedures and methods used to verify the characteristics and classification of the imported oilfield waste;
- 5) identification of the recoverable component of the imported oilfield waste and a description of the process used to produce a recoverable material; and
- 6) the approved waste management activities to which the imported oilfield waste will be subjected (e.g., waste processing, transfer).
 - a) If the imported oilfield waste will be received for purpose of consolidation and transfer to an approved recycling facility, identify the name, location, and approval number of the receiving recycling facility and provide verification that it is authorized for such receipts.

3.2.7 Acceptance of Material Requiring Special Handling

The additional information that must be submitted with the application includes

- 1) a detailed description of the material requiring special handling to be accepted at the facility, including its source;
- 2) a description of the waste acceptance and handling procedures;
- 3) a detailed description of how the waste will be managed at the facility (e.g., waste processing, storage, waste transfer);
- 4) name, location, and approval number of the facility to which the residual wastes will be sent for further treatment or disposal; and
- 5) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this application and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

3.2.8 Addition or Closure of a Landfill Cell and Closure of a Landfill

Oilfield waste management facilities consisting of an oilfield landfill must submit an application for amendment for the addition of a landfill cell, closure of a landfill cell, or closure of the entire landfill.

The additional information that must be submitted with the application includes the following:

- 1) For the addition of a landfill cell, the approval holder must
 - a) provide all of the applicable information detailed in the ESRD *Standards for Landfills in Alberta* (as updated) and section 25.0 of *Directive 058*; and
 - b) conduct public consultation if the new landfill cell will extend beyond the initial footprint of the landfill. Provide confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this application and must allow participants [landowners, occupants, residents, and stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if

concerns were identified, provide details regarding resolution of the concerns. The AER may also require the application to be advertised and will notify the approval holder in these circumstances.)

- 2) For the closure of a landfill cell or an entire landfill, the approval holder must provide all of the applicable information detailed in the ESRD *Standards for Landfills in Alberta* (as updated) pertaining to final closure and post-closure care.

3.2.9 Change in Soil or Groundwater Monitoring Programs

An approval holder that wishes to change a facility's current soil or groundwater monitoring program or propose an alternative monitoring program that differs from what is outlined in *Directive 058* or described in the WM approval must submit an application for amendment.

The additional information that must be submitted with the application includes

- 1) a description of the current monitoring program for the facility and the reasons for the change; and
- 2) a description of the proposed monitoring program, including
 - a) frequency of monitoring,
 - b) parameters that will be tested for (if applicable),
 - c) addition of groundwater monitoring wells (including their location on an updated plot plan) or changes to existing groundwater monitoring wells (if applicable), and
 - d) a description of any alternative monitoring systems that will be used (e.g., soil vapour surveys, soil sampling surveys, shallow geophysical techniques [electrical conductivity, electromagnetic, or ground-penetrating radar surveys]).

3.2.10 Change from Sweet to Sour Facility

The additional information that must be submitted with the application includes

- 1) a description of the waste acceptance procedures for the sour material, including whether sour material will be neutralized prior to unloading;
- 2) a description of the modifications to the facility to accommodate sour material, including provisions to control odours during receiving, processing, and disposing of sour material (e.g., vapours routed through a vapour recovery unit or flare stack); and
- 3) confirmation and documentation that the approval holder has conducted public consultation in accordance with *Directive 056*, including the necessary documentation detailed in *Directive 058*, sections 21.4(a) and (c). (Note that public consultation must occur prior to the submission of this application and must allow participants [landowners, occupants, residents, and

stakeholders] a minimum of 14 calendar days to receive, consider, and respond to the consultation of the proposed development. The approval holder must disclose whether any concerns were identified; if concerns were identified, provide details regarding resolution of the concerns.)

3.2.11 Expansion of Lease Boundaries

The additional information that must be submitted with the application includes

- 1) written confirmation indicating that the landowner has consented to the lease expansion;
- 2) an updated plot plan that clearly identifies the area and dimensions of the expanded lease area;
- 3) a description of the activity proposed to occur in the expanded lease area; and
- 4) a discussion as to whether the lease expansion requires a change in the soil or groundwater monitoring program and, if so, the information set out in section 3.2.9; and
- 5) a detailed account of the required site investigation in the area of the expanded lease to determine the baseline soil conditions. This investigation must include determining the physical characteristics (texture, particle size, evidence of fracturing, internal drainage characteristics, and an estimate of moisture content) and chemical characteristics (pH, electrical conductivity, sodium absorption ratio, major ions [Ca, Mg, Na, Cl, SO₄, K], cation exchange capacity, total metals, benzene, toluene, ethylbenzene, and xylene [BTEX], and petroleum hydrocarbon fractions F1, F2, F3, and F4) of the soil. This information, including the locations in which the samples were taken, must be provided with the application. The approval holder must also determine whether additional groundwater monitoring wells are required as a result of the expansion. If the approval holder considers a site investigation or additional groundwater monitoring wells unnecessary for the lease expansion, the approval holder is required to provide justification in the application.

3.2.12 Disposition of Residual Wastes by an Alternative Method Not Authorized by the WM Approval

The additional information that must be submitted with the application includes

- 1) a description of the residual wastes to be disposed of by the alternative method, including the characterization and classification of the material;
- 2) the estimated annual volume of residual material to be disposed of by the alternative method; and
- 3) the name, location, and operator of the alternative treatment or disposal facility, a description of how the residual wastes will be managed there, and confirmation that the facility is approved to accept the material.

3.2.13 Alternative Storage Systems

An approval holder wishing to implement storage systems alternative to the requirements in *Directive 055* must submit an application for amendment. The alternative storage design must provide a level of environmental protection and safety equivalent to the original in order to meet the objectives and intent of *Directive 055*.

The additional information that must be submitted with the application for an alternative storage system includes

- 1) a description of the waste streams or materials that will be stored within the system;
- 2) methods for receiving and removing materials from the storage system to ensure that spills, leaks, and tracking of material outside the system will be prevented;
- 3) design of the primary and secondary containment systems, leak detection systems, and leachate collection systems, including details of the construction materials and any liner specifications;
- 4) detailed engineering diagrams, including cross-sectional diagrams, showing the primary and secondary containment, leak detection, and leachate collection systems to comply with the information requirement in section 3.1(11) of this directive;
- 5) total storage capacity of the system (in cubic metres); and
- 6) details of the storage system safety features, such as overflow/release protection measures (e.g., high-level shutdown, alarms at an attended facility).

If the alternative storage system involves the addition of a new storage area, tank farm, or bulk pad or an expansion to an existing tank farm or bulk pad, the approval holder must provide a project-specific information package to the landowners, occupants, and residents who may be directly and adversely affected by the activity and indicate whether any concerns were identified. If concerns were identified, the approval holder must provide details regarding resolution of the concerns. Public consultation must occur prior to the submission of an application and must allow participants a minimum of 14 calendar days to receive, consider, and respond to notification of the proposed development.

4 One-time Approvals and Pilot Projects on Approved Oilfield Waste Management Facilities

An application for a one-time approval is required for a temporary activity that is not currently approved, such as the acceptance of a waste stream resulting from an emergency or unique situation.

An approval holder interested in testing a new waste management process or technology or an existing waste management process or technology with a unique waste stream on an AER-approved oilfield waste management facility must submit an application requesting approval for a pilot

project. Pilot project and one-time applications must obtain written approval prior to commencement.

Pilot project and one-time applications will be registered in the Integrated Application Registry. Once an approval has been granted, any changes or amendments to a pilot project or one-time approval must be approved by the AER. Notifications will not be accepted. Approval holders wishing to permanently integrate the process or technology tested through a pilot project must submit an application for amendment (see section 3.2.3) and obtain the amended WM approval prior to continuation of the activity.

4.1 Applications for One-time Approvals and Pilot Projects

Applications for one-time approvals and pilot projects must include

- 1) date of the application;
- 2) name, address, phone, and fax number (including area codes) of the approval holder;
- 3) name of the oilfield waste management facility and its WM approval number;
- 4) legal land description of the oilfield waste management facility;
- 5) proposed date of commencement of the activity;
- 6) duration of the one-time activity or pilot project (e.g., 6 months) and amount of material to be tested or treated (e.g., 1000 m³);
- 7) a description of the pilot project, including its purpose and the criteria to be used to measure success of the project (pilot projects only);
- 8) a description of the waste acceptance procedures, as well as the procedures used to verify composition, volume, characterization, and waste classification;
- 9) a discussion of the methods to be used to manage residual liquids and/or solids;
- 10) a site plan identifying the location of all infrastructure (e.g., storage systems, equipment) associated with the one-time activity or pilot project (if applicable);
- 11) a PFD (if applicable);
- 12) a discussion of how the infrastructure associated with the one-time activity or pilot project will meet *Directive 055* requirements to ensure environmental protection (if applicable);
- 13) engineered design diagrams (if applicable); and
- 14) a description of the record keeping program to be implemented.

4.2 Completion of a Pilot Project

Upon completion of a pilot project, the approval holder must submit a report detailing

- 1) total volume of each waste type managed by the pilot project;
- 2) volume of products and residuals generated, as well as the disposition location of these materials;
- 3) any operational problems encountered and how they were overcome;
- 4) whether the pilot project was successful, including the data and rationale used to make this determination; and
- 5) indication of intention to permanently incorporate the process or technology. If positive, include the potential timing for submission of an application. If negative, include the timing for dismantling and removal of equipment associated with the pilot project.