Map of AER Offices and Field Centres



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Facilities

Conduct an inspection of facilities and surrounding area to verify that spill prevention and preparedness measures are in place.

- Verify that a facility walk-around is conducted prior to the operator leaving a facility.
- Ensure current tank integrity assessments are done and documented.
- Ensure tanks and dikes are of regulation size to hold the production volumes during unattended hours of operation.
- Confirm that pop tanks are of adequate size and kept empty.
- Ensure dikes and liners are adequately maintained.
- Consider more diking if the facility is located in an environmentally sensitive area.
- Check for containment around chemical storage areas.
- Consider bulk storage to replace chemical drums.
- Check chemical pumps daily.
- Determine whether "no-flow" controls are installed on recycle pumps.
- Ensure leaks and drips from recycle pumps are contained and collected.
- Ensure all lines indicate flow direction and contents.
- Check that all valves are tagged to prevent wrong operation.
- Ensure spill control devices are installed on truck loading lines.

- Ensure truck loading lines terminate inside the tank dike.
- Determine if the line goes into the top of the tank for truck unloading.
- Check the proper pump packing is used for the type of service.
- Where possible, ensure that 24-hour alarms are installed.
- Ensure site glass valves are protected and kept closed when not in use.
- Check if the scrubber drain is tied into a common drain system or tank.
- Determine if there is a bypass on the discharge side of all high-pressure positive-displacement pumps.
- Verify that fired equipment is inspected regularly.
- Ensure internal protection programs are conducted on vessels during turnarounds.
- Ensure steps are taken to eliminate operational problems when internal corrosion is found in a vessel.
- Check whether there is a procedure in place to conduct daily mass balances on produced products and waste liquids.
- Ensure adequate vandalism prevention methods are in place.
- Confirm that an adequate training program is in place for new and existing personnel.
- Ensure all open-ended piping, ports, and dead-end valves are sealed.

Field & Operations Environment Team

Proactive Procedures to Prevent Spills





This brochure provides operators with a quick field reference to aid in spill prevention (it does not replace any rules or regulations)

Alberta Energy Regulator

Applicable AER Documents

Manual

001: Facility and Well Site Inspections

Directive

- 51: Injection and Disposal Wells
- 55: Storage Requirements for the Upstream Petroleum Industry
- 58: Oilfield Waste Management Requirements for the Upstream Petroleum Industry
- 60: Upstream Petroleum Industry Flaring Guide
- 71: Emergency Preparedness and Response Requirements for the Upstream Petroleum Industry

Informational Letter

IL 98-01: Memorandum of Understanding between AEP and AER

IL 98-02: Suspension, Abandonment, Decontamination, and Surface Land Reclamation of Upstream Oil and Gas Facilities

* These documents are available free of charge on the AER website www.aer.ca.

Wells

Conduct an inspection of wells and surrounding area to verify that spill prevention and preparedness measures are in place.

• Confirm adequate lubricant application of the stuffing box on pumping oil wells. In environmentally sensitive areas, consider using a second stuffing box or canister to reduce spills in the event of rod breakage.

- If necessary, check that wellhead stuffing box has built-in BOP capability.
- Address need for a secondary pressure switch.
- Ensure radigan rubbers are checked and replaced, if necessary, each time well is serviced.
- Confirm that vibration switches are installed and working on pump jacks.
- Inspect bridle cables on all pump jacks for fraying; ensure they are replaced, if necessary.
- Ensure wellhead barricades are installed to prevent vehicle collisions.
- Verify that the fluid is properly inhibited on wells with packers and annulus fluid to protect well casing from corrosion.
- Ensure surface casing valve is open and directed away from wellhead; monitor for flow.
- Ensure equipment is grounded.

Pipelines

Conduct an inspection of pipelines and surrounding area to verify that spill prevention and preparedness measures are in place.

- Ensure an effective corrosion monitoring/mitigation plan is in place.
- Check that pipeline warning signs are in place on all road and watercourse crossings, and display correct information.
- Ensure company is a member of Alberta One Call.
- Ensure pipeline rights-of-way are patrolled regularly.
- Check that all aboveground structures are adequately protected.
- Verify that downstream pipeline pressures on lines that cross large watercourses are monitored daily.
- Confirm that periodic underwater inspections of pipeline river and creek crossings are conducted and that isolation valves are installed.
- Conduct regular visual inspections of river and creek crossings.
- Implement a plan to monitor high-risk pipelines.
- Determine if any line's MOP has ever been exceeded.

- Check that annual pressure tests are completed on lines crossing rivers.
- Ensure inlet and outlet pressures are monitored daily. If shut in, pressure test by maintaining pressure and monitoring.
- Determine that all inlet line headers are protected by check valves.
- Confirm that function tests are conducted on ESD systems annually.
- Reduce NOP where possible.
- Ensure cathodic protection is installed on all operating and discontinued lines.
- Confirm that lines in pipeline systems with persistent proration factor problems are checked for integrity.
- Verify that chemical pumps are monitored and adequately maintained.
- Conduct product balance on inlet versus outlet volumes.
- Ensure pressure control valves are installed and working.