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TERMS AND DEFINITIONS

berm	containment structure, resembling a curb or dike that is designed to contain the leachate associated with the contaminated soil as well as keep surface water from coming in contact with the berm contents.
contamination	matter that has concentrations of materials, substances or chemicals that exceed applicable federal, state or provincial legislation.
company representative	company employee or appointed company representative responsible for the inspection of the work.
competent worker	worker who is competent based on appropriate education, training, skills and experience.
contaminated soil	soil that has concentrations of materials, substances or chemicals that exceed applicable federal, state or provincial legislation.
contract worker	person hired for extended periods of time working under the direct supervision of a company employee.
contractor	company hired to complete specific work and paid directly by the company.
contractor personnel	employee of a contractor or subcontractor working under the direct supervision of the contractor.
environmental record	includes memos, letters, agreements, maps, drawings and photographs, that relate to environmental matters (e.g., wildlife management, air quality and emissions, water quality, waste management, land, vegetation management).
excavation	any mechanical disturbance of surface soil including, but not limited to, topsoil salvage and trenching.
field employee	Operations employee who works in the field; may include employee who works in a regional office.
field office employee	Operations employee who works in a regional office.
hazardous waste	waste, by reason of its properties, considered a hazard to human health or the environment, and therefore, requires special management. Hazardous waste classification varies by applicable jurisdictional waste legislation.
high risk area	any area with a significant number of underground facilities and a high potential for historical contamination (e.g., manifolds, tank lot, underground storage tanks).
leachate	liquid that originates and drains from a stockpile of contaminated soil.

liner	impermeable barrier used to keep contaminated soil and any leachate originating from it away from the ground surface.
low risk area	any area with limited underground facilities and a low potential for historical contamination (e.g., ROW and buried electrical facilities).
must	indicates mandatory; no variance is permitted without authorization from the appropriate vice-president.
Operations employee	generic term used to refer to all Operations employees.
overflow protection	prevention of tanks being overfilled through continuous supervision, or other monitoring, of the filling operation.
portable/cargo tank	closed container that is designed to be movable while containing liquid, which is equipped with skids, mountings or accessories to facilitate handling of the tank and is not permanently attached to a transport vehicle.
potable water	water that is suitable for human use and consumption (i.e., drinking, cooking, dishwashing, hand washing).
project manager	person responsible for coordinating and managing the project.
secondary containment	structures used for spill control such as: <ul style="list-style-type: none"> • a double walled container (or tank within a tank design) • a steel or concrete container (a tank within a box design) capable of containing 110% of the volume being stored • an earth or clay dike which is lined with an impermeable geomembrane material and is capable of containing 110% of the volume being stored
service vehicle	any vehicle on the ROW with the purpose of servicing mobile equipment including, but not limited to, backhoes and dozers.
should	indicates discretionary; supervisors may exercise judgment in applying the standard, bearing in mind that any deviation must be carefully considered.
site supervisor	generic term that refers to the employee responsible for the location (e.g., PLM coordinator/supervisor, technician and terminal supervisor) or designate.
spill control	site selection, techniques and structures for diverting or containing spills.
stormwater	includes rainwater, snow melt, and surface runoff and drainage.
TDG Classification	description of the dangerous goods that includes shipping name, class, UN number, packing group, etc.

tank vehicle	any vehicle with a cargo tank mounted or built as an integral part of the vehicle and used for the transportation of fuel, including tank trucks and trailer units.
tarp	impermeable barrier placed on top of a contaminated soil pile to keep precipitation from the pile surface.
tertiary containment	structures used for spill containment as a result of loss of secondary containment.
waste	any substance or material, which is no longer used for its original purpose, that is discarded or that the holder intends to discard.
waste characterization	process of determining waste properties through laboratory analysis and/or generator knowledge.
waste classification	process of determining if a waste is hazardous or non-hazardous.
waste storage	the holding of waste for a temporary period of time until the waste is transported, treated or disposed.
waterbody	area holding permanent or seasonal water including, but not limited to, drainage channels, ditches, sloughs, wetlands, dugouts, ponds, creeks, streams, rivers or lakes.
waterwashed soil/hydrovac slurry	soils that have been excavated with high pressure water and a vacuum system. Other common terms include potholing and hydrovacating. Soils excavated this way are typically left in a saturated state or slurry that cannot be stockpiled or otherwise easily stored. Due to the liquid state of waterwashed soil, any contamination that is present is easily mobilized.
worker	company employee, contract worker or contractor personnel.



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**Purpose**

To support compliance with corporate and regulatory requirements and promote the operation and maintenance of the pipeline in an environmentally responsible manner.

Scope

This applies to workers when planning or executing work on existing pipelines and facilities.

NOTE: For environmental practices, standards and procedures when planning and constructing pipelines and facilities, see Environmental Guidelines for Construction (EGC) and/or the Environmental Mitigation Plan (EMP).

**Purpose**

To identify operations and maintenance activities/projects at facilities or on the right-of-way (ROW) that require review by Environment and may require environmental permits, licenses and approvals before beginning work to ensure regulatory compliance.

Responsibilities**Regional Operations/Project Managers**

Regional operations/Project Managers are responsible for:

- being aware of activities or projects that may require environmental review and regulatory approvals/permits
- consulting with Environment regarding activities that may require environmental review or regulatory approvals/permits
- ensuring compliance with approval/permit conditions
- supporting environmental permitting activities

Environment

Environment is responsible for:

- reviewing the activity or project to determine applicable environmental assessment/protection plan requirements
- communicating results of review in writing to regional operations or project manager
- assessing whether permits and approvals are required for planned activities
- coordinating necessary regulatory notifications and obtaining applicable regulatory approvals/permits
- explaining regulatory approval/permit conditions to regional operations or project manager
- coordinating field screening visit and pre-access sampling as required (e.g., clubroot, soybean cyst nematode)

Requirements**Notification**

Give early notice to Environment of the proposed operations and maintenance activity or project during its planning phase to allow enough time to obtain regulatory approvals/permits, which varies by jurisdiction.

NOTE: In general, 2 weeks is required for Environment to conduct a review of the applicable requirements. This does not include the time required for permit acquisition which can take up to 6 months or more.

Review by Environment

Activities that require review by Environment and may require environmental permits and/or regulatory approvals include:

- constructing new facilities and modifying existing facilities (SPCC, EPCRA in USA)
- changing equipment (e.g., tanks, engines and generators) that affect air emissions

- removing a tank from service
- disturbing the soil or clearing vegetation on or off the ROW or outside facility boundaries
- disturbing the environment in or adjacent to an environmentally sensitive areas (e.g., waterbodies, wetlands, cultural resources, endangered species, parks and nesting/denning areas)
- generating, storing, and disposing of hazardous waste
- entering any land within regional land claims
- entering land under agricultural production (sampling requirements)
- withdrawing water for hydrotests
- dewatering
- discharging stormwater, hydrotest water or other wastewater
- burning


Compliance

Do not begin operations and maintenance activities or projects until Environment has communicated the results of the review and/or provided the Environmental Clearance.

Follow all regulatory approval/permit conditions.

If approvals/permits require closure, notify Environment when the activity or project is complete.



Purpose	To ensure that company and regulatory requirements are met when conducting right-of-way (ROW) maintenance activities involving mechanical excavation. This provides a standardized approach for the environmental screening and authorization of integrity digs and operations and maintenance (O&M) activities.
Legislation	<p>Canada Applicable federal, provincial, territorial and municipal legislation</p> <p>United States Applicable federal, tribal, state and local agencies and entities</p>
Related Standards	<p>Company</p> <ul style="list-style-type: none"> • Environmental Guidelines for Construction (EGC) • High Consequence Area (HCA) Program • Species at Risk Atlas • Environmental Mitigation Plan (EMP) • Environmental Review and Compliance Assurance Plan for Pipeline Maintenance • National Forest Operation and Maintenance Plans • Enbridge Club Root Sampling Protocol
 USA	}
Responsibilities	<p>Project Manager Project Manager is responsible for:</p> <ul style="list-style-type: none"> • being aware of environmental requirements that may be applicable to the project and that require an internal environmental screening • supporting environmental permitting activities • ensuring permit requirements are followed • prohibiting work from commencing prior to clearance <p>Environment Environment is responsible for:</p> <ul style="list-style-type: none"> • conducting environmental screenings in a thorough and timely manner • conducting necessary notifications • obtaining applicable regulatory approvals/permits • communicating permit requirements to the project manager • assigning contract environmental inspectors (EI) to monitor and ensure permit and best management practices (BMP) compliance

Requirements**Environmental Clearance**

The following steps must be performed in order to obtain an environmental clearance and to execute the project in accordance with regulatory authorizations:

1. Project Manager provides Environment with a project description and schedule using a completed Screening Work Package Scope [CAN] or Project Environmental Review Worksheet [USA].

NOTE: In general, 2 weeks is required for Environment to conduct an environmental review of the applicable requirements. This does not include the time required for permit acquisition which can take up to 6 months.

2. Project Manager provides additional information to Environment based on subsequent field verification and/or scope changes as needed.
3. Field screening conducted by Environment, documenting sensitivities, permit triggers, conducting pre-access sampling as required (club root, soybean cyst nematode).
4. Environment reviews project to determine applicable federal, state/provincial and local environmental requirements (e.g., wetland and waterbody crossing permits, stormwater, threatened and endangered species, protected and cultural and heritage areas).
5. Environment provides Project Manager with environmental clearance or communicates that additional environmental approval/permits are required.
6. Environment completes the applicable permit applications and makes necessary agency notifications – anticipated permitting timeframes must be communicated to Project Manager. Environmental Clearance released following permit acquisition.
7. Environment reviews specific permit conditions and provides Project Manager with appropriate guidance (e.g., environmental assessment report, best practices, sensitive area locations and reclamation requirements).
8. Project Manager ensures applicable permit conditions, best management practices and other environmental requirements are implemented during the project and communicates compliance status to Environment.
9. Environment conducts a field inspection of maintenance sites as required to support permitting, document permit compliance and site restoration.
10. Project Manager informs Environment when project is complete and provides relevant documents (e.g., inspection forms, permits, photos).

11. Environment submits any necessary notifications to formally close applicable approvals/permits.

Records**Environmental Approvals/Permits Record**

Environmental approvals and permits must be retained at the project site until the project is complete. After project completion, environmental approvals and permits must be retained by Environment for 6 years from the expiration date of the approval/permit.


Public Consultation/Environmental Screening Record [CAN]

Retain Consultation/Environmental Screening records in Environment-CAN for 7 years.

Project Environmental Review Worksheet Record [USA]

Retain Project Environmental Review Worksheet records in Environment-USA for 7 years.



Purpose	To maintain an organized and accessible environmental recordkeeping system at facilities and regional offices.
Scope	This applies to electronic or physical records required by law, regulations, permits or company standards to exist at a facility.
Related Standards	<p>Company Enbridge Records Classification and Retention Schedule Policy</p>
Responsibilities	<p>Regions Regions are responsible for:</p> <ul style="list-style-type: none"> • providing a dedicated location for environmental records • ensuring environmental documents are received and retained in a dedicated filing system at the facility or in the regional office as required • creating and maintaining records in accordance with the Enbridge Records Classification and Retention Schedule Policy <p>Environment Environment is responsible for:</p> <ul style="list-style-type: none"> • supporting and recommending updates to file structures • providing guidance to regions concerning document retention
Requirements	<p>File Structure Create separate files or folders for the following physical records, as applicable:</p> <ul style="list-style-type: none"> • waste manifests, bills of lading and other shipping documents • waste storage records • air operating and/or construction permits • air monitoring documents • air emission inventories • stormwater permits • stormwater release and monitoring records • potable water sampling results • Spill Prevention, Control and Countermeasure (SPCC) Plan and inspections • wildlife management plans • agency/regulatory inspection reports • Environment audit reports • vegetation management records <p>  USA — Create additional files to address other environmental matters (e.g., spill cleanup) as required. </p>



Purpose	To monitor, identify and control permit compliance and potential environmental issues at facilities.
Scope	This applies to Environment, Health and Safety (EH&S) and security inspections at all field locations.
Related Standards	<p>Company</p> <p>Book 1: General Compliance Reference</p> <ul style="list-style-type: none"> • Tab 02 Reporting and Investigation
Responsibilities	<p>Region</p> <p>Regional operations are responsible for:</p> <ul style="list-style-type: none"> • completing EH&S Field Inspections • communicating environmental incidents in accordance with <i>Book 1: General Compliance Reference, Tab 02 Reporting and Investigation</i>
Requirements	<p>Field EH&S Inspection</p> <p>Field environmental inspections must be completed on the entire facility, including boneyards and other similar areas on facility property.</p> <p>Affected workers must be advised of any unsatisfactory field inspection results and/or hazards that have not been controlled or eliminated.</p> <p>Guidelines for Field Inspections – Environmental Protection</p> <p>Regional operations must follow the environmental protection guidelines located in section 13 of the Field Inspection Report when conducting field inspections.</p> <p>Inspect location, at a minimum, for the following environmental protection features when applicable:</p> <ul style="list-style-type: none"> • waste is stored in approved containers • incompatible wastes are segregated • waste containers, including waste bins, are identified with correct/legible labels • waste is stored in a dedicated waste storage area • secondary spill containment is present under all containers, equipment and tanks containing waste liquids and petroleum-based products • secondary containment valves are closed • drain plugs are secured • waste storage record forms are complete and accurate • spills and leaks are cleaned up and have been reported, if required • spill containment and/or spill kits are in place and appropriately stocked • plans and records are complete and accurate • applicable permits are complete • site stormwater drainage valves are closed

- stormwater discharge is controlled and monitored
- stormwater in containment structures is clear and free of sheen and foam
- contaminated soil and/or water is contained and is reported to Environment if necessary
- soil erosion is controlled and berms are maintained
- vegetation, including weeds, are adequately controlled
- withering vegetation and bare areas outside perimeter fence line are reported to Environment

Report environmental incidents in accordance with Book 1: General Compliance Reference, Tab 02 Reporting and Investigation.

Records

Field Inspection Report

Retain the Field Inspection Report in the Health & Safety Forms database for 5 years.

NOTE: Completed Field Inspection Reports may be reviewed as part of Environment's Environmental Review Program.

**Purpose**

Erosion control is necessary to:

- contain excavated soil onsite
- prevent and minimize erosion
- prevent sediment from entering wetlands or waterbodies
- prevent pipe exposure

Related Standards**Company**

- Environmental Guidelines for Construction (EGC)
- Environmental Mitigation Plan (EMP)

Responsibilities**Operations**

Operations must notify Environment when ground disturbance is anticipated as part of the planned project.

Environment

Environment must coordinate the necessary environmental work and obtain the appropriate permits to conduct the proposed work.

Requirements**Soil Erosion*****By Wind***

To minimize drifting soils and loss of topsoil by wind in areas prone to wind erosion:

- limit the time between topsoil stripping and final cleanup
- suspend topsoil stripping and backfill operations during high winds
- apply a tackifier to the topsoil pile
- install wind barriers (e.g., slat fences and snow fences)
- spread wood chips or straw crimping
- sow a fast growing ground cover
- walk down tree and shrub debris over exposed soils

By Water

Use temporary erosion control measures (e.g., silt fencing, sandbags, logs or straw bales) on undisturbed pasture or well-sodded right-of-way (ROW) during cleanup. Use the permanent erosion control measures on disturbed steep slopes during restoration especially if heavy runoff, spring breakup or heavy storms are likely and there is a risk of significant soil erosion:

- install silt fencing
- install trench breakers
- install cross ditches and diversion berms
- walk down tree and shrub debris over exposed soils
- armor berms and ditches with logs, polyethylene or sandbags
- install netting or filter cloth
- apply tackifier
- install and stake sod
- hydromulch

- hydroseed, spread straw and crimp
- seed an annual crop of barley, fall rye or oats
- plant native shrubs or willow cuttings
- install slope breakers
- install straw bale dams
- use sediment logs
- lay down erosion control blankets

NOTE: For information on installing berms and ditches and stream bank protection, see the Environmental Guidelines for Construction (EGC) and/or the Environmental Mitigation Plan (EMP).


 Subject
Contaminated Soil Identification, Temporary Storage and Disposal

Purpose	To effectively manage and communicate contaminated soil in compliance with applicable laws and regulations.
Scope	This applies to all company activities.
Legislation	<p>Canada NEB Remediation Process Guide</p> <p>Applicable federal, provincial and territorial waste legislation</p> <p>United States Applicable federal and state waste legislation</p>
Related Standards	<p>Company Book 1: General Compliance Reference</p> <ul style="list-style-type: none"> • 02-02-01 Incident Reporting - CAN • 02-02-02 Incident Reporting - USA <p>Environmental Guidelines for Construction</p> <p>Waste Management Plan/Program</p>
Responsibilities	<p>Regions and Projects Regional operations and project teams are responsible for:</p> <ul style="list-style-type: none"> • communicating to Environment: <ul style="list-style-type: none"> – the presence and location of contaminated soil at facilities that cannot be cleaned up immediately and exceeds 3 m³(3 yd³) total volume – any contaminated soil on the right-of-way (ROW) • disposing of contaminated soil at a facility registered/approved to receive that type of waste in accordance with the Waste Management Plan/Program and/or otherwise approved by Environment <p>Environment Environment is responsible for:</p> <ul style="list-style-type: none"> • coordinating environmental site assessments • identifying historical release locations as they apply to the project or operational activity • providing interpretation of applicable regulatory requirements • mobilizing adequate resources to sample and document the impacted area • supporting or coordinating contaminated soil disposal, including waste characterization sampling and soil disposal applications • liaising with regulatory authorities

- reporting contamination to the applicable federal, state or provincial agency
- managing the Contaminated Site Remediation Program

Regional Right-of-Way Agent

The Regional Right-of-Way Agent is responsible for all landowner notifications and liaising with affected landowners.

Requirements

Identification

Hydrocarbons

Hydrocarbons are the most common contaminant of concern. Consider soil potentially contaminated with hydrocarbons if:

- free product is present
- soil is a notably different color than surrounding soil (i.e., black, various shades of grey, blue, green)
- hydrocarbon odors are present
- a sheen is on excavation water

Other Contaminants

Other potential contaminants (e.g., salts, metals, herbicides) exhibit no visual or olfactory evidence when present in soil.

Consider soils potentially contaminated if:

- a known release has occurred in the area
- stressed or poor vegetative growth in areas with otherwise healthy vegetation

Immediate Action

Shut down all equipment in the vicinity and assess the situation. Review the Environmental Clearance to determine if the contamination potentially originates from a historical release.

- if a historical release is identified in the area and there is no free (i.e., liquid) oil:
 - engage Regional Operations to review the situation and authorize work to proceed
 - notify Environment for followup assessment and regulatory reporting
 - proceed with work while ensuring appropriate atmospheric testing is in place
 - do not contact the control center as a line shutdown is NOT required
- if a historical release is not identified in the area OR there is free oil:
 - contact the control center to shut down the line
 - engage regional on-call personnel
 - notify Environment
 - proceed with work only after the situation has been reviewed by Operations

Soil Segregation

Store contaminated soil and potentially clean soil separately. Do not mix contaminated soil with clean soil.

Storage

Place all contaminated soil within a secure containment area (e.g., roll offs, soil cells, vacuum boxes) to ensure the contaminants are not spread through erosion or leachate. Containment area capacity must allow for containment of stormwater due to precipitation if exposed to weather.

Use a liner to prevent the underlying soil or surface water from being affected. Liner material can vary:

- use light duty liner for one time short term temporary storage
- use heavy duty liner for medium term remediation projects where soils are actively stored and removed from the storage cell

For long term storage cells, engineered plans, secondary liners and leachate collection for may be required.

At a minimum, berm and line the soil containment area with an impermeable liner (i.e., polyethylene sheeting, silage tarps). Contact Environment if you require further directions regarding liner materials and storage cells.

If the containment area is constructed in an agricultural setting, ensure the topsoil beneath the cell is salvaged and stored for reclamation activities.

All containment areas must be kept at least 100 m (330 ft) from all waterbodies and/or wetlands unless authorized by Environment.

Water in the containment area must be monitored, managed and disposed of appropriately.

Soil Sampling

Contact Environment to get direction regarding landfill characterization and acceptance or to coordinate third party contractors for soil assessment and confirmatory sampling.

Transport and Disposal

When preparing waste for transport and disposal, consider:

- waste classification
- preferred treatment/disposal method
- province of origin
- location of the receiver/approved waste contractors

Consult the Waste Information Sheets (WIS) within the Waste Management Plan/Program.

NOTE: The transport of waste materials may be subject to Transportation of Dangerous Goods (TDG) regulations or other jurisdictional legislation.

Contact Environment to understand shipping and documentation requirements prior to transporting any waste or with any questions about disposal methods or approved disposal facilities.

Notifications

Notification to the applicable environmental regulators may be required if contaminated soils:

- result from a new release
- exceed a reporting threshold for contaminant concentrations
- impact groundwater
- cause other adverse environmental effects

If the contamination is from a historical release, Environment will determine if reporting thresholds or adverse effects have triggered regulatory reporting.

If the contamination is a result of a new release, *see Book 1: General Compliance Reference, 02-02-01 Incident Reporting – CAN or 02-02-02 Incident Reporting – USA* for incident reporting requirements.

Landowners

Notify the landowner, as soon as possible, when Operations or Environment confirms that suspect material is likely contaminated.

Follow-up with the landowner upon receipt of the laboratory analysis that confirms the presence or absence of contamination.

Update and communicate with the landowner throughout the site assessment and remediation activities.

Records

Contaminated Site Assessment and Reporting Documentation

Environment must retain all documents associated with contaminated site assessment and report to Environment regulators for the life of the asset.

Contaminated Soil Transportation and Disposal Records

Retain records associated with transportation and disposal of contaminated soils at the facility or region office for a minimum of 2 years [CAN] or 3 years [USA] in accordance with the Waste Management Plan/Program or as outlined in the facilities operating approval.

Landowner Correspondence Records

Retain all documents associated with landowner communications and settlements.



Purpose	To effectively manage waterwashed soil in compliance with applicable laws and regulations.
Scope	This applies to waterwashed soil generated at facilities and on the right-of-way (ROW) during operations and maintenance activities.
Legislation	<p>Canada Canadian Environmental Protection Act</p> <p>Applicable provincial and territorial waste legislation</p> <p>United States Applicable state waste legislation</p> <p>Applicable state environmental waste legislation</p>
Related Standards	<p>Company Book 8: Environment</p> <ul style="list-style-type: none"> • <i>01-02-06 Contaminated Soil Identification, Temporary Storage and Disposal</i> <p>Environmental Guidelines for Construction</p> <p>Waste Management Plan/Program</p>
Responsibilities	<p>Regions Regional operations are responsible for:</p> <ul style="list-style-type: none"> • identifying high and low risk areas • coordinating storage area construction • segregating contaminated and uncontaminated material • communicating the presence and location of contaminated materials to Environment <p>Environment Environment is responsible for:</p> <ul style="list-style-type: none"> • supporting operations managing hydrovac material to meet regulatory objectives • providing interpretation of applicable federal, state or provincial regulatory requirements • mobilizing adequate resources to sample and document the impact area • supporting or coordinating contaminated soil disposal including waste characterization sampling if necessary • liaising with regulatory authorities

Requirements**Low Risk Area**

The work area is identified as a low risk area if there are limited underground facilities and a low potential for historical contamination (e.g., ROW locations with no known historical releases and buried electrical facilities).

If the work area is identified as a low risk area, the likelihood of finding contamination is low. In low risk areas, construct an unlined but bermed containment area or identify comparable containment (e.g., open top tank) to hold the waterwashed soil in an upland area. Once the soil is drained and dry, it may be reused as fill.

If contamination is encountered, construct the containment area as per the High Risk Area Guidance and contact Environment.

Do not discharge waterwashed soil on to topsoil. The soil contained in the slurry will degrade the quality of the topsoil and negatively affect vegetative growth.

High Risk Area

The work area is identified as a high risk area if there are a significant number of underground facilities and a high potential for historical contamination (e.g., manifolds, tank lot and underground storage tanks).

If the work area is identified as a high risk area, contain the waterwashed soil in a bermed and lined containment area or comparable containment structure (e.g., open top tank). Segregate the apparently clean and contaminated materials.

High risk areas have the potential for exposure to atmospheric hazards. Use a portable gas detector.

If there is hydrocarbon odor, staining or sheen, consider the waterwashed soil contaminated and contact Environment for direction with sampling and disposal.

If there is no hydrocarbon odor, staining or sheen, consider the waterwashed soil uncontaminated and reuse onsite. Do not transport waterwashed soil off site for any purpose other than disposal at an approved facility.

NOTE: If waterwashed soil requires disposal as a waste, it is most economical to allow the soils to dry and dispose of them as a solid. Disposal of waterwashed soil as slurry can be significantly more expensive than disposal as dry soil.

Records**Contaminated Soil Transportation and Disposal Records**

Retain records associated with transportation and disposal of contaminated waterwashed soil at the facility or region office for a minimum of 2 years [CAN] or 3 years [USA] in accordance with the Waste Management Plan/Program or as outlined in the facility operating approval.

**Purpose**

To control the growth of brush, trees and noxious weeds on company property and the right-of-way (ROW) in order to:

- facilitate operating and maintenance activities
- ensure regulatory compliance
- ensure clear visibility and access along the ROW
- maintain good public relations with landowners
- minimize fire hazards

Related Standards

CAN

USA

Company

- Vegetation Management Guide
- Vegetation Management Guideline

Responsibilities

Regional Operations are responsible for:

- selecting vegetation control methods
- coordinating vegetation control activities
- retaining herbicide application records

NOTE: For assistance in evaluating appropriate vegetation control methods, contact Environment.

Requirements**Scheduling**

Plan annual vegetation control activities early and/or late in the year.

Plan and schedule vegetation control activities to suit local conditions considering wildlife, wetlands and land usage.

Notification

Unless prior landowner approval is in place, notify landowners before beginning any weed or brush control program or before applying herbicides on the ROW.

Mechanical Control

Mechanical control of weeds and brush (i.e., physically disrupting plant growth by mowing, cutting, tillage, flooding, mulching, hand pulling or hoeing) is preferred to chemical control.

Use mechanical control for vegetation beside cultivated agricultural land and water-bodies (see Terms and Definitions).

Control brush growth by chipping or mulching.

Minimize clearing vegetation next to watercourses and wetlands. Hand-cut trees and brush close to the ground (leaving roots intact) and leave a 16 m (50 ft) buffer of undisturbed vegetation between the area of disturbance and the watercourse or wetland. Use a mechanical device only when ground conditions will allow its use without creating ruts or depressions.

Cut woody vegetation to just above the ground surface (15 cm [6 in.]) leaving the roots intact.

Work within 30 m (100 ft) of a wetland or waterbody that involves soil disturbance may require regulatory notification or approval. Do not conduct work in these areas without determining regulatory requirements.

Frequent shallow tillage (10-15 cm [4-6 in.]) is effective for controlling weeds.

Mow sloping lands or soils that are subject to erosion.

Chemical Control

Herbicides must be applied by licensed applicators. Retain a copy of the applicator's license at the facility or in the regional office.

Company personnel may use over-the-counter non-residual herbicides (e.g., Roundup) for small spot applications (area no larger than 1 m² [10 ft²]) only on company property.



To apply for approval to use residual herbicides, complete a Residual Herbicide Application Form.

Select a herbicide that will control only those weeds growing on a particular site and apply it at the minimum rate needed for effective control.

Alternate the use of herbicides to avoid developing resistance to specific herbicides.

Before applying herbicides, (a) obtain approval from the site supervisor and (b) review the product label and MSDS information. Follow all manufacturer instructions.



Before applying herbicides within the boundaries of national forests and native reservations, obtain approval from forest and tribal authorities.

Apply herbicides (e.g., weather conditions and application rate) in accordance with the manufacturer's instructions.

Fire Water Ponds

Contact Environment for approval to use herbicides/aquacides to control vegetation and algae in fire water ponds.

Botanical Control

Seed grass is recommended as a vegetative cover to control erosion and provide competition for weeds.

Use Canada or U.S. No.1 seed or equivalent to minimize weed content and ensure good germination and healthy growth.



Use seed approved by the NWT Department of Environment and Natural Resources. Encourage natural re-vegetation as much as possible when erosion is not a concern.

Short grasses are virtually maintenance-free, and are not as much of a fire hazard as taller species.

Physical Control

Use surface cover fabrics (e.g., geotextiles, gravels, concrete and paving) or thermal methods (e.g., controlled burns, flaming and steaming) to protect sites from erosion and to control vegetation growth.

Regional management must approve the use of thermal methods to control vegetation growth.

Noxious Weeds

NOTE: Infestations of noxious weeds are usually identified by local land use authorities or the landowner when they are notified of upcoming vegetation control activities.

To avoid introducing or to minimize spreading undesirable weed species when working in areas that are or may be affected by invasive noxious vegetation:

- ensure equipment is free of soils, vegetation or debris, before arriving at and leaving from the site
- minimize the equipment used, and limit the number of equipment passed through infested areas
- place mats over infested areas to minimize equipment transporting weed or plant material; before removal from the site, ensure mats are free of vegetation and debris an
- strip the full ROW width during grading, and contain the spoil pile containing noxious weeds to prevent mixing it with the surrounding soil during re-grading and cleanup

Records

Herbicide Applicator License

Retain copies of the herbicide applicator's license in the region for a minimum of 5 years.

Herbicide Application Record

Retain copies of the herbicide application in the region for a minimum of 5 years.



Purpose To ensure potable water is safe for human use and consumption, including drinking, cooking, dishwashing, hand washing, showering or other domestic purposes.

Scope This applies at facilities that are not connected to a licensed municipal water supply whether the potable water source is from an onsite well or hauled from an offsite water source.

NOTE: If bottled water is provided for drinking water purposes and water is available for other domestic purposes (e.g., cooking, dishwashing, showering and hand washing), this standard applies and potable water testing is required.

Responsibilities

Regional Operations

Regional operations are responsible for:

- coordinating and administering water quality testing
- obtaining water quality samples according to laboratory instructions
- sending a copy of laboratory results to Environment
- if the potable water source is hauled water:
 - ensuring the water hauling company is licensed
 - confirming the tank truck is used only for hauling potable water
 - confirming the hauler has a tank decontamination/disinfection program

Environment

Environment is responsible for:

- identifying annual potable water testing requirements
- monitoring water quality testing
- reviewing facility potable water analytical test results
- providing a written evaluation of analytical test results to regional operations
- providing direction to facilities with abnormal test results

Requirements

Test Frequency

Sample and test potable water annually unless more frequent testing is warranted. Conditions that may warrant more frequent testing include:

- change in water clarity, color, odor or taste
- spill in the vicinity of a water well
- change in the surrounding land use
- change in the water hauling company

Annual potable water testing at the facility is required even when source water test results are obtained from the potable water supplier.



At isolated or remote work areas (e.g., campsites and remote maintenance bases), regions are responsible for determining frequency of sampling and testing potable water.

Test Parameters

Test potable water for the parameters in Table 1. If the stored water is in a below grade tank, also test for BTEX.

**Table 1
Potable Water Quality Parameters**

Water Source	Parameters
well water	<ul style="list-style-type: none"> • routine potable water, at a minimum: chloride, iron, nitrate and pH • benzene, toluene, ethyl benzene and xylenes (BTEX) • total and fecal coliform
hauled water from licensed or non-licensed municipal supply	<ul style="list-style-type: none"> • total and fecal coliform • routine potable water

For new wells, water must be tested for all necessary parameters to ensure it is acceptable in accordance with applicable regulations. Contact local authorities for further information.

Sampling

Obtain sterile sample bottles, analysis request forms, shipping coolers and sampling instructions from the laboratory conducting the testing.

For hauled water from a licensed municipal supply, obtain sample from a tap inside the facility. Remove aerators and strainers from taps prior to sampling.

For well water, obtain sample from the faucet closest to the onsite well.

Follow laboratory sampling instructions closely for each bottle type.

Additional Sampling Instructions

- wear latex or nitrile gloves
- keep the sample bottled, sealed and closed until it is to be filled
- avoid leaky faucets, dirty taps and taps where water dribbles down the tap outside surface
- disinfect outside of tap with alcohol wipe
- run water for at least 3 to 4 minutes prior to collecting the sample
- never rinse the bottle prior to collecting the sample
- do not touch, or otherwise contaminate, the inner surface of the cap and/or neck of the sample bottle
- use only cold water for sampling

- deliver the sample to the laboratory, keeping the sample cool at all times. Samples cannot exceed a time period of 24 hours from sampling to receipt at the laboratory

Test Results

Laboratory test results will identify samples that exceed acceptable drinking water levels.

When laboratory test results are received, forward a copy to Environment. Environment will provide a written evaluation of the analytical results to the region within 2 weeks of receiving the analytical test results.

Interim Health Measures

If potable water test results exceed health-based parameters:

- stop using the water for drinking, handwashing, dishwashing and showering
- post signs at all taps and outlets advising that the water cannot be used for drinking, handwashing, dishwashing and showering
- retest the water immediately.

If, after retesting, water continues to exceed health-based parameters:

- do not use the source as potable water
- post permanent signs indicating that the water source is contaminated and must not be used for drinking, washing hands, dishes or foods (e.g., fruit); if possible, shut off valves to sink taps and shower stalls
- provide alternative potable water source (e.g., bottled water) for drinking, washing and cooking
- check safety equipment used for emergency purposes (e.g., eye wash stations, bottles) and change out water
- in conjunction with Environment, investigate to determine the source of contamination

Health Investigation

If, after retesting, the potable water test results exceed health-based parameters, an investigation must be conducted to determine the source of contamination:

- review past records to determine if the abnormal test result has been a recurring problem
- contact local water authority expertise to identify and initiate appropriate actions
- contact appropriate OHS and/or Public Health personnel if required
- investigate possible contamination sources (e.g., spring runoff, septic tanks or systems and facility or hauler water tank contamination)

Records

Potable Water Laboratory Test Results

Retain laboratory test results and correspondence as follows:

- region for a minimum of 5 years
- Environment (copy)



Purpose	Facility containment structures (e.g., berms and retention ponds) are designed to contain product and to minimize impacts offsite in the event of a release at a facility. This standard includes the requirements for managing and discharging stormwater accumulated in facility containment structures in a manner that does not adversely affect the environment by releasing pollutants or by causing erosion to receiving lands.
Related Standards	Company Waste Management Plan/Program
Responsibilities	<p>Regions Regions are responsible for managing stormwater including:</p> <ul style="list-style-type: none"> • inspecting • discharging • sampling (if required) • maintaining records <p>Environment Environment is responsible for:</p> <ul style="list-style-type: none"> • reviewing • coordinating (where applicable) • communicating analytical results • providing written evaluation (where applicable)
Requirements	<p>Prevention To minimize the risk of surface water contamination:</p> <ul style="list-style-type: none"> • keep the site clean and orderly • store hazardous materials in accordance with the Waste Management Plan/Program and/or using secondary containment • clean up spills immediately and store wastes in appropriate containers in accordance with the Waste Management Plan/Program <p>Discharging Discharge stormwater accumulated in containment structures after significant rainfalls or as often as practical to maximize containment capacity in the event of a release at the facility.</p> <p>Facility stormwater drain valves should be closed at all times except when actively discharging stormwater.</p> <p>Each time stormwater is released offsite, complete the Stormwater Release Form for the specific facility containment structure.</p> <p>Permits Where facilities have existing permits that regulate discharging stormwater offsite, follow all conditions in the permit.</p>

Visual Inspection/Discharge

Before discharging accumulated stormwater within a containment structure, visually inspect for an oily sheen and suspended solids and/or foam.

If visual inspection indicates no evidence of contaminated stormwater (i.e., only precipitation is present), (a) follow the conditions specified in the permit/license, where required, to discharge stormwater offsite; otherwise, (b) open the valves to discharge stormwater offsite ensuring:

- discharge is conducted in a controlled manner using a slow flow rate to prevent soil erosion and damage to streambanks and streambeds of waterbodies
- the discharge valve is closed after the discharge is complete

For containment structures that automatically discharge stormwater, visually inspect the accumulated stormwater weekly.

Sampling

Stormwater Systems with Permits, Approvals or Regulations

Follow the sampling protocol and schedule outlined in the applicable permit.

Stormwater Systems without Permits, Approvals or Regulations

When a facility does not have a facility permit, approval or regulation, sample the stormwater pond(s) semi-annually in the spring and fall.

Analysis includes: benzene, toluene, ethyl benzene and xylenes (BTEX), hydrocarbon fractions F1 and F2, pH, chloride and total suspended solids (TSS).



Stormwater release is not contingent on receipt of laboratory results provided the water meets the visual inspection. However, if laboratory results exceed guidelines, the water must be sampled again and no releases will be permitted until subsequent results meet applicable guidelines. Environment will provide a written evaluation of the results upon receipt of the analytical data.

Records

Stormwater Release Record

Retain Stormwater Release Forms, analytical results and written evaluations (where applicable) in the region for 5 years.



Purpose	To identify appropriate waste storage requirements.
Scope	This applies to both hazardous and non-hazardous waste generated at facilities and on the right-of-way (ROW), excluding domestic-type waste.
Legislation	<p>Canada Applicable provincial/territorial waste legislation</p> <p>United States Code of Federal Regulations (CFR), Title 40 – Protection of Environment:</p> <ul style="list-style-type: none"> • Part 262 – Standards Applicable to Generators of Hazardous Waste <p>Applicable state waste legislation</p>
Related Standards	<p>Company Book 1: General Reference</p> <ul style="list-style-type: none"> • Tab 02 Incident Reporting <p>Book 8: Environment</p> <ul style="list-style-type: none"> • 01-02-03 Environmental Records <p>Engineering Equipment Specifications:</p> <ul style="list-style-type: none"> • EES53 - Skid Mounted, Self Framing Hazardous Waste Storage Buildings <p>Waste Management Plan/Program</p>
Responsibilities	<p>Regions Regional operations, inspectors and contractors are responsible for:</p> <ul style="list-style-type: none"> • identifying, collecting and storing waste in appropriate labeled containers • taking adequate health, safety and environmental precautions during the handling and storage of waste • reporting incidents related to waste storage to the appropriate regional operations personnel • maintaining good housekeeping practices at waste storage areas <p>Regional operations are responsible for:</p> <ul style="list-style-type: none"> • characterizing and classifying waste so that the components and volumes are known and the environmental and safety hazards are identified • providing employees with appropriate training on requirements for hazardous and non-hazardous waste (i.e., TDG, HAZMAT) • providing adequate waste handling and storage facilities at facilities and field locations

- providing the required occupational health and safety information (WHMIS/NFPA)
- managing waste storage areas (e.g., housekeeping, labeling and conducting/documenting required inspections)
- retaining adequate records (e.g., manifests, bills of lading, scale tickets and inspection logs) in the facility environmental file of all necessary waste information
- tracking the storage of all waste using the Waste Storage Form [CAN] or equivalent [USA]

Environment is responsible for:

- reviewing and commenting on waste characterization data
- providing guidance regarding waste storage and disposal

Requirements

Storage Area Location and Design

A dedicated waste storage area must be provided at facilities and at locations along the ROW.

Whenever practical, transport wastes to a secure facility that is equipped with a waste storage building.

The storage area must:

- be at least 100 m (330 ft) from any waterbody including wetlands, ditches and drainage channels
- provide secondary spill containment under all containers and tanks containing waste liquids
- provide overhead protection for storage containers if possible
- provide litter fencing, as appropriate, to minimize windblown litter

NOTE: For more information on design requirements for hazardous waste storage buildings, see Engineering Equipment Specification EES53.

Segregation

Segregate waste types to ensure non-hazardous wastes are not contaminated by hazardous wastes. Do not mix waste types.

Identification

Post signs that identify the storage area, safety warnings and any general storage instructions.

Label all non-hazardous waste containers with descriptive names of contents and start date of accumulation.

When storing hazardous waste containers, identify the containers with:

- appropriate transportation safety marks or descriptive name of contents and a warning sign with 'Caution – Hazardous Waste'
- start date of waste accumulation

Storage Time Limits and Quantities

Extended storage of waste should be avoided. Some jurisdictions have specific limits on the length of time wastes can be stored.

NOTE: For more information, see the Waste Management Plan/Program or contact Environment.

Monitoring and Inspection

Waste storage areas are a part of active operating areas and must be inspected at least monthly. Inspect waste storage areas for:

- leaky and corroded containers
- signs of spills, overflows or release
- proper identification and labeling of containers
- accurate and current waste storage inventories
- appropriate storage container use
- adequate secondary containment, including closed valves and secure drain plugs
- damage to hazardous waste storage building
- improper segregation

Record completion of waste storage area inspections in Maximo Job Plan OP1491. If a corrective action is required, record the action taken and the date the action was completed in Maximo.

Record waste storage area inspections on the Waste Storage Form. Record corrective action required, corrective actions taken along with the date the actions were taken and file all records in accordance with [01-02-03 Environmental Records](#).

Incident Reporting and Emergency Notification

Report all leaks and spills to regional management and follow the emergency notification process.

NOTE: For more information on incident reporting requirements, see *Book 1: General Reference, Tab 02 Incident Reporting*.

Records

Waste Storage Record

Retain the Waste Storage Record onsite for a minimum of 2 years [CAN] or 3 years [USA] in accordance with the Waste Management Plan/Program.



Purpose	<p>To ensure that waste shipments are handled in a manner that:</p> <ul style="list-style-type: none"> • meets all regulatory requirements • prevents spills and releases • poses no threat to the health and safety of employees, the public or the environment.
Scope	<p>This applies to both hazardous and non-hazardous waste generated at facilities and on the right-of-way (ROW) during operations and maintenance activities and identifies only the general requirements that employees must follow when transporting waste.</p> <hr/> <p>NOTE: For more detailed information, contact Environment.</p>
Legislation	<p>Canada Transportation of Dangerous Goods (TDG) Regulations</p> <p>Applicable provincial and territorial waste legislation</p> <p>United States Code of Federal Regulations (CFR), Title 49 - Transportation:</p> <ul style="list-style-type: none"> • Part 100-185 Pipeline and hazardous Materials Safety Administration <p>Applicable state waste legislation</p>
Related Standards	<p>Company Waste Management Plan/Program</p>
Responsibilities	<p>Regions Regional operations are responsible for:</p> <ul style="list-style-type: none"> • characterizing waste with support from Environment as required • retaining adequate records (e.g., manifests, bills of lading, scale tickets and inspection logs) in the facility environmental file of all necessary waste information • providing employees with appropriate training on requirements for hazardous and non-hazardous waste (e.g., TDG, HAZMAT, etc.) shipments. • maintaining training records • taking immediate action in the case of a discharge to protect human health and the environment • following the Waste Management Plan/Program <p>Environment Environment is responsible for:</p> <ul style="list-style-type: none"> • assisting regional operations as needed in the event of a release • providing guidance and coordinating characterization, transport and disposal of wastes

Requirements

Classification

Classify the waste as hazardous or non-hazardous by using waste information sheets supplied in the Waste Management Plan or support from Environment.

Characterization

If the waste is made up of unknown contaminant levels (e.g., contaminated soil, contaminated groundwater and/or used drilling mud), contact Environment for guidance and/or sampling assistance.

Packaging and Labeling

Package all wastes properly and in accordance with TDG and/or DOT regulations. If the waste is not a dangerous good or hazardous waste, label the container with a descriptive name of the contents.

Waste containment must be designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release.

Special packaging requirements may apply to certain waste types (e.g., PCBs and asbestos).



Small Containers

If it is a dangerous good, unless otherwise specified in the regulations, each container should have:

- hazard label
- shipping name
- UN number

Put these safety marks on at least one side of each small container (e.g., drums, pails, cans, aerosols and cylinders).

Large Containers

Use proper placards prior to vehicle loading. Ensure that all 4 sides of large containers (e.g., transport trailers, portable and bulk tanks and bins) have placards. If a large container with placards is loaded on a vehicle and the placards are not visible, the vehicle must be placarded as well.

Handling, Loading and Unloading

Handle all wastes in a manner that prevents spills or releases.

Secure all vehicles prior to loading, and secure the load within or on the vehicle prior to transport.

Waste Generator/Carrier/Receiver Identification Numbers

Use a waste generator number for the shipment of all hazardous wastes. Consult the Waste Management Plan/Program for the appropriate waste generator number. If one is not available, contact Environment for assistance in obtaining a new one.

Ensure that companies collecting, storing, recycling, transporting or disposing of waste are appropriately permitted to manage the waste type.

Documenting a Waste Transfer

Appropriately document and track all transfers of non-hazardous and hazardous wastes for treatment, disposal or recycling.

Non-Hazardous Wastes

Transport all non-hazardous wastes using a standard truck ticket, waybill, non-hazardous manifest, bill of lading or pro-bill.



Wastes that meet the definition of a dangerous good but are classified as non-hazardous waste (i.e., waste asbestos) according to local legislation still need to meet all TDG requirements.

Hazardous Wastes

Special shipping documents (e.g., hazardous waste manifest, movement document/manifest and oilfield waste manifest) are required when transporting hazardous waste. Special waste documents meet the requirements of a TDG shipping document [CAN].



Records

Waste Documentation

Retain waste records at the facility or regional office for a minimum of 2 years [CAN] or 3 years [USA]. These records may include:

- TDG shipping documents, hazardous waste manifests or oilfield waste manifests
- non-hazardous waste shipping documents
- waste storage records
- waste contractor correspondence and contracts
- liability and indemnification forms
- waste production records
- waste audit/inspection reports



Purpose	To ensure vehicles, equipment and vessels are fueled and serviced in a manner that protects the environment from spills.
Scope	This applies to fuel storage and handling practices at facilities and on the right-of-way (ROW) for operations and maintenance activities.
Related Standards	<p>Company Book 1: General Reference</p> <ul style="list-style-type: none"> • Tab 02 Incident Reporting <p>Book 8: Environment</p> <ul style="list-style-type: none"> • 01-02-10 Stormwater Management <p> USA — Facility-Specific Spill Prevention, Control, and Countermeasure (SPCC) Plans</p> <p>Industry National Research Council of Canada (NRCC):</p> <ul style="list-style-type: none"> • National Fire Code of Canada (NRCC 47667)
Responsibilities	<p>Regions Regional operations are responsible for:</p> <ul style="list-style-type: none"> • ensuring workers are trained to contain spills or leakage from equipment • ensuring all fuel handling and storage is done in a safe and proper manner in accordance with this standard • storing all fuels and other hazardous substances in secondary containment • responding to spills <p> USA —</p> <ul style="list-style-type: none"> • following all requirements of SPCC plan, where applicable
Requirements	<p>Transportation of Fuel Deliver fuel to the site by an approved tank vehicle or in an approved portable tank or container.</p> <p>Tank vehicles and vehicles with portable tanks carrying fuel must not access any sections of the ROW where risk of a fuel accident is high.</p> <p>Consider the risk high if:</p> <ul style="list-style-type: none"> • there are steep slopes • within 30 m (100 ft) from excavation • there are soft, unfrozen sections • within 30 m (100 ft) of surface water or wetland

Spill Kits

Equip fuel storage areas and vehicles transporting fuel to pipeline facilities and/or ROW sites with appropriate spill containment materials sufficient to contain and absorb an accidental release. Spill containment supplies may include:

- a polyethylene container (e.g., bucket, pail or drum) with lid
- absorbent socks and pads
- disposable hazmat bags
- nitrile gloves
- 50 lbs-granular absorbent
- impervious tarp
- shovels

NOTE: Pre-packaged spill kits are commercially available.

Include spill contingency materials suitable for use near/on water (e.g., sorbent pads and sorbent boom and rope) if site is within 30 m (100 ft) of a waterbody.

Fuel Storage

Avoid storing fuel tank, container or stationary equipment within 100 m (330 ft) of a waterbody, including a wetland. Provide secondary containment regardless of container size. If the fuel tank is double-walled, provide tertiary containment. Prior to discharge, visually inspect rain water or snow melt accumulated in the secondary or tertiary containment in accordance with *01-02-10 Stormwater Management*.

When storing fuel ensure:

- containers and tanks are in good condition (i.e., not damaged, rusting or leaking)
- containers are sealed properly with proper fitting lids, caps, bungs or valves

Keep hoses off the ground and close valves on fuel tanks. If fuel tank is not located in a secure facility, lock the valve.

Store fuel dispensing hoses inside the containment berm where applicable.

Physically protect fixed aboveground storage tanks containing fuel against collision damage (e.g., posts, guardrails). Fire extinguishers must be available

Signage

Post temporary or weather-resistant signs in fuel storage and dispensing areas indicating that ignition sources must be turned off and smoking is not permitted in the vicinity of the dispenser. The sign is permitted to display the international 'No Smoking – Ignition Off' symbol not less than 100 mm in diameter.

Clearly label fuel storage tanks and portable containers indicating the contents as per WHMIS/TDG requirements. Label fixed fuel storage tanks on 2 sides.

Spill/Overfill Protection

Aboveground storage tank systems must have spill containment devices (e.g., catch basins or spill boxes) at the fill/delivery connection or have tertiary containment to minimize spills while filling the tank.

For fuel systems that deliver through a hose, install a spill control device (e.g., tray, trough or pan) underneath the dispenser to collect any releases. The fuel system must be designed to minimize any releases.

Dispensing/Transferring Fuel

The following requirements apply when dispensing/transferring fuel:

- refuel in a designated safe area where smoking is prohibited
- suspend operation of moving equipment within 5 m (16 ft) of the fueling operation
- shut down engines of small equipment and let cool prior to refueling operation; refuel diesel-powered equipment with the engine running only if this is in accordance with the manufacturer's specification
- identify product transfer points for tank-truck loading and unloading to prevent errors in product handling (e.g., interstitial space port from tank port)
- confirm fuel levels (e.g., dipstick, gauge, fuel delivery records) to ensure the volume available in the tank is greater than the volume of product to be transferred when dispensing to a tank; do not rely solely on automated overfill and spill prevention devices
- verify that there is a proper connection between the fuel fill hose and the fill pipe of the tank vehicle, tank or equipment being filled; verify that the fill valve is open where applicable
- monitor the transfer operation constantly to prevent overfilling and spilling; ensure that the delivery person never leaves the site unattended
- control static electrical charges
- scan the area adjacent to the fueling operation for possible leaks or spills
- bonding is required between the fuel source and the vehicle or equipment being refueled.
- never fill a gas can in the bed of a truck that has a bed liner in it because the liner may build up static electricity causing an ignition of the gas can.

- leave room for expansion; tanks, containers and equipment must not be overfilled; do not fill beyond a safe-filling level corresponding to approximately 90% capacity
- where stationary equipment is required to operate within 100 m (330 ft) of a waterbody including wetlands ensure that:
 - all fuel nozzles are equipped with automatic shutoffs
 - operators are stationed at both ends of the hose during fueling unless the ends are accessible by one operator
 - fuel remaining in the hose is returned to the storage container or tank

Monitoring and Servicing Equipment

Inspect hydraulic, fuel and lubrication systems of equipment to ensure systems are in good condition. Maintain hoses, nozzles and fittings for fuel transfer in serviceable condition.

Inspect piping systems (e.g., fittings, valves, joints, flanges) and storage tank systems. Transfer lines and hoses must be compatible with the material transferred and have leak-proof connections.

Place an impervious tarp with edges raised as required to produce secondary containment, or use an appropriate drip pan when servicing equipment and vehicles with the potential for accidental spills (e.g., oil changes, servicing of hydraulic systems).

Incident Reporting and Emergency Notification

Report all leaks and spills to regional management and follow the emergency notification process.

NOTE: For more information on incident reporting requirements, see Book 1: General Reference, Tab 02 Incident Reporting.

Contact Environment for guidance and assistance with contaminated soil and/or water characterization and disposal.

**Purpose**

To ensure effective and timely inspection of Ozone Depleting Substance (ODS)-containing equipment, appropriate documentation of inspection records and appropriate notification of an ODS release.

Legislation**Canada**

Environment Canada

- Federal Halocarbon Regulations (SOR/2003-289) and Regulations Amending the Federal Halocarbon Regulations, 2003 (SOR/SOR/2009-221)
- Ozone Depleting Substances Regulations (SOR/99-7)
- Environmental Code of Practice for the Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems

Alberta

Alberta Environment and Sustainable Resource Development

- Ozone Depleting Substances and Halocarbon Regulation (181/2000)

Saskatchewan

Saskatchewan Ministry of Environment

- Halocarbon Control Regulations (E-10.21 Reg. 2)

Manitoba

Manitoba Conservation and Water Stewardship

- Ozone Depleting Substances and Other Halocarbons Regulation (103/94)

Ontario

Ministry of the Environment

- Ozone Depleting Substances and Other Halocarbons (463/10)

Quebec

Sustainable Development, Environment, Wildlife and Parks

- Environment Quality Act - Regulation respecting the application of the Environment Quality Act
- Regulation Respecting Halocarbons (c. Q-2. R.15.01)

Northwest Territories

Government of the Northwest Territories

- Environmental Guideline for Ozone Depleting Substances and Halocarbon Alternatives

United States

Code of Federal Regulations (CFR), Title 40 – Protection of Environment:

- Part 82 – Protection of Stratospheric Ozone, Subpart F: 82.166

Related Documents

Company

Book 1: General Compliance Reference

- [02-02-01 Incident Reporting – CAN](#)

Ozone Depleting Substance Environmental Management Plan (ODS EMP)

Responsibilities

Regions

Regions are responsible for:

- maintaining a log of ODS-containing equipment and annually submitting, in January, to the responsible Environmental Lead
- testing and tagging ODS-containing equipment in accordance with requirements
- reporting ODS releases
- retaining service and test records

Environment

Environment is responsible for:

- supporting operations in the identification and reporting process
- providing interpretation of applicable regulatory requirements and their updates, including advise on phase-out requirements and replacement of current Freons and Halocarbons
- submitting notifications to the applicable provincial, state or federal authority

Requirements

New Equipment

Ensure equipment is installed and serviced by a qualified/certified technician in accordance with ODS EMP, Section 9.3 and that a technician certificate number is entered into the log sheet and recorded on the service tag attached to the equipment. Ensure the service technical is familiar with the Environmental Code of Practice for the Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems.

Affix a service tag to cooling equipment < 19 kW and ensure the tag is accessible and visible at all times.

In-Service Equipment

Maintain the ODS-containing equipment inventory ‘Coolers, Chillers, Vehicles AC, Others’ (applicable to only those items owned or maintained by the company as rental or leased ODS-containing equipment is not required to be inventoried).

Identify equipment that is < 19 kW and schedule annual leak tests in accordance with ODS EMP, Section 9.5, Appendix C.

Annually update the inventory using Maximo or other suitable method.


Ensure the technician certificate number is retained with any service tag or leak reports related to the equipment.

Out-of-Service Equipment

When taking ODS-containing equipment out of service, ensure the following:

- service is provided by a certified technician
- certificate is kept in file
- halocarbons are recovered by a certified technician in accordance with ODS EMP, Section 9.7.2
- leaks are reported in accordance with Book 1: General Compliance Reference, Tab 02 Reporting & Investigations
- an equipment disposal plan is in place after recovering all ODS
 - equipment should not be stored onsite for more than 5 years after being taken out of service
 - arrangements should be made for appropriate disposal of equipment through an approved certified service contractor
- servicing and leak testing records are retained in Maximo or other appropriate location



Purpose	To ensure company and regulatory requirements are met when material burning is necessary.
Responsibilities	<p>Regional Operations Regional Operations are responsible for:</p> <ul style="list-style-type: none"> • obtaining permits • safety procedures • verifying with regional engineering the burn area clearance requirements (i.e., depth of cover, distance from valves) • obtaining firefighting equipment <p>Environment Environment is responsible for proving guidance with existing approvals, permit applications, applicable materials and waste management.</p>
Requirements	<p>Permits When it is necessary to burn materials, regions must submit permit applications to the authority of jurisdiction and follow all permit conditions.</p> <p> ENB (NW) Burn permits are required for fires outside municipal boundaries between May 1 and September 30. Permits are obtained from local Environment and Natural Resources offices. For fires within municipal boundaries, contact the municipality. A burning permit is not required outside the restricted period for fires ignited in an approved burning container, however, before burning, contact the Renewable Resources Officer.</p> <p>Fire Prevention To minimize the potential to cause fires:</p> <ul style="list-style-type: none"> • do not burn on peat or muskeg areas, agricultural land or in windy conditions • tend fires until they are fully extinguished <p>Only non-hazardous, benign wastes may be considered (e.g., timber, unpainted wood products, food scraps).</p> <p>Equipment Firefighting equipment must be available at the burning site before ignition. Use approved burning containers where applicable.</p> <p>NOTE: For further information on construction-related burning, see the Environmental Guidelines for Construction.</p>



Purpose	To ensure the safe handling of electrical equipment containing PCBs over a regulatory threshold.
Scope	This applies to all electrical equipment with mineral insulating oil that has the potential to contain PCBs over the regulated 50 ppm threshold (Saskatchewan's regulated threshold limit for PCBs is 5ppm). Common examples include, but are not limited to: transformers, tap-changers, capacitors, oil-filled bushings and oil circuit breakers with mineral insulating oil.
Legislation	<p>Canada</p> <p>Canada Labour Code, Part II:</p> <ul style="list-style-type: none"> • Canadian Occupational Safety & Health (COSH) regulations • National Fire Code, Part 5 (referenced by Canada Labour Code, Part II) <p>CEPA (SOR/2008-273) PCB Regulations</p> <p>Provincial/territorial occupational health and safety regulations</p> <p>Transportation of Dangerous Goods (TDG) regulations</p> <p>Workplace Hazardous Materials Information System (WHMIS) regulations</p> <p>United States</p> <p>Environmental Protection Agency (EPA) PCB Regulations</p> <p>State Environmental and Waste Regulations</p> <p>State occupational safety and health regulations</p>
Related Standards	<p>Company</p> <ul style="list-style-type: none"> • Maximo Job Plan EP2109 • Waste Management Plan
Responsibilities	<p>Regions</p> <p>Regions are responsible for maintaining an inventory of retrofitted transformers and analytical test data that shows PCB concentration in the transformer oil is below the regulatory threshold.</p>
Requirements	<p>Labeling</p> <p>Equipment that contains PCBs must be labeled in accordance with the appropriate federal, state and/or provincial regulations.</p> <p>Testing Insulating Oil</p> <p>Electrical equipment (excluding retrofitted electrical equipment) with accessible mineral insulating oil must be tested once if there is a potential for PCBs.</p>

Consider PCBs potentially present if there is no indication (e.g., manufacturer's name plate or label) that the equipment has no or low PCBs or no analytical test data exists demonstrating PCB concentrations below the regulated 50 ppm threshold.

Retrofitted electrical equipment with accessible mineral insulating oil must be tested every five years. PCB testing can be discontinued if the results of two consecutive tests are similar and neither exceeds 20 ppm. Oil must be replaced with PCB-free oil if test results exceed 40 ppm.

NOTE: Experience has shown that concentrations of PCBs in retrofitted electrical equipment can increase over time as residual PCBs leach out of internal components.

Dispose of oil containing PCBs in accordance with the Waste Management Plan.

Some components of electrical equipment (e.g. bushings) have small quantities of mineral insulating oil that could not be changed at the time of retrofits. The oils within these components may contain PCBs; therefore, check the insulating oil for PCBs at the time of replacement.

Leaks

Report all leaks of PCB materials to Health & Safety and Environment and enter into EnCompass.

Utility-Owned Transformers

Many pump stations have utility-owned transformers onsite. If a utility-owned transformer contains a regulated level of PCBs, the utility must place a PCB warning label on the transformer.

Contact Environment to assist in evaluation of the clean-up efforts.

Report all leaks from onsite utility-owned transformers to:

- the utility company
- Health & Safety
- Environment

To protect the environment and avoid future liabilities, ensure the utility company properly cleans up contaminated soil.

Avoid contact with leaking PCB material and PCB-contaminated soil.

PCBs may be present in older light ballast fixtures.

Records

PCB Records

Retain PCB Records in the region for 5 years.



Purpose	To prevent the spread of clubroot by operational activities.
Scope	This applies to operations activities on the right-of-way (ROW) in the Athabasca region, Western region and Central Region.
Legislation	<p>Canada</p> <ul style="list-style-type: none"> • Agricultural Pest Act [Alberta] • Pest Control Act [Saskatchewan]
Related Standards	<p>Company</p> <ul style="list-style-type: none"> • Book 8: Environment <ul style="list-style-type: none"> – <i>01-02-02 Environmental Clearance for Integrity Digs and O&M Activities</i> • <i>Environmental Guidelines for Construction (EGC)</i>
Responsibilities	<p>Regional Operations</p> <p>Regional Operations is responsible for:</p> <ul style="list-style-type: none"> • obtaining land agent and Environment department support to determine if clubroot is present • implementing appropriate mitigation measures to prevent the spread of clubroot • liaising with the landowner • maintain a log of vehicles that have been Fine Cleaned <p>Environment</p> <p>Environment is responsible for:</p> <ul style="list-style-type: none"> • supporting regional Operations when selecting and implementing mitigation measures • contacting counties or municipalities to determine if clubroot is present within their jurisdiction • facilitating the collection and laboratory analysis of soil samples • maintaining a record of laboratory results
Requirements	<p>Determination of Risk and Control</p> <p><i>At Risk Activity</i></p> <p>Activities are at risk of spreading clubroot if they have the potential to transport topsoil offsite and occur on lands that are cultivated, previously cultivated or used as tame pasture. If the activity is considered at risk, determine the likelihood of clubroot presence and apply the appropriate level of equipment cleanliness, as outlined below.</p> <p><i>Low Risk Activity</i></p> <p>Low risk activities are those that have a low probability of spreading clubroot. These include activities that do not occur on agricultural lands or those that will not transport topsoil to adjacent lands. If the planned works meet this definition, further work under this standard does not apply.</p>

On-facility work is considered a low risk activity.

Determination of Clubroot Presence

If the operational activity is considered at risk for spreading clubroot, Environment must determine if clubroot is present by either contacting the county or municipality where the work area is located or by reviewing past soil sample results.

It is acceptable to conduct county or municipality outreach on an annual basis and obtain a list of clubroot affected properties.

If the review indicates clubroot is not present:

- ensure all equipment arrives clean and implement a Rough Clean

If the review indicates clubroot is present:

- ensure all equipment arrives clean and implement a Fine Clean

If the review is inconclusive and there is no historical soil data, perform one of the following:

- enlist the regional land agent to contact the landowner to ask them if clubroot is present on their lands
- request Environment to sample the work area for clubroot
- choose to implement a Fine Clean

Rough Clean

Rough Clean means reasonable efforts are used to remove excess soil and vegetation debris. Generally this is accomplished with shovels, brooms and/or brushes. Some soil will be present on the equipment following a rough cleaning operation.

When conducting work, ensure all equipment is clean when arriving at the work area for the first time. If the equipment is arriving from clubroot affected lands, the equipment will have been Fine Cleaned and misted with a 1-2% bleach solution. If the equipment is arriving from another company activity and the lands were not known to be affected by clubroot, it is acceptable for the equipment to arrive in a Rough Clean condition.

Prior to leaving the work area or entering a quarter section owned by another landowner, use hand tools such as shovels, brooms and/or brushes and reasonable efforts to remove topsoil and vegetative debris from all boots, equipment, tools, mats, tracked equipment, trucks and hydrovac trucks to the extent practicable.

Fine Clean

Fine clean means soil and vegetation debris have been removed to a Rough Clean condition, the equipment has been power-washed or steam-cleaned to remove the remaining soil or vegetation debris, and the parts of the equipment that come into contact with soil have been misted with a 1-2% bleach solution or equivalent.

When conducting work, ensure all equipment is clean when arriving at the work area for the first time. If the equipment is arriving from clubroot affected lands the equipment will have been fine cleaned and misted with a 1-2% bleach solution. If the equipment is arriving from another company activity and the lands were not known to be affected by clubroot, it is acceptable for the equipment to arrive in a rough clean condition.

Prior to leaving the work area or entering another quarter section that is unaffected by clubroot:

- hand tools and boots which came into contact with topsoil must be:
 - cleaned to remove soil and mud
 - misted with a 1-2% bleach solution (or bleach alternative)
- vehicles and large equipment (e.g., mats, hydrovac truck tanks) which came into contact with topsoil must be:
 - rough cleaned to remove soil and mud (onsite)
 - power-washed or steam-cleaned to remove the balance of the soil (onsite or offsite at a commercial carwash)
 - misted with a 1-2% bleach solution (or bleach alternative)
- equipment used for fine cleaning (e.g., brooms, shovels) must be:
 - washed and misted with a 1-2% bleach solution (or bleach alternative)
- record cleanings in the Vehicle and Equipment Cleaning log

Records

Vehicle & Equipment Cleaning Log

Retain Vehicle and Equipment Cleaning Logs at the regional office for a minimum of 2 years.



Subject

**Environmental Screening & Clearance for O&M
Activities Performed by LP Operations**
Purpose

Environmental screening and clearance is necessary to:

- ensure compliance with applicable laws and regulations
- identify and avoid impacts to sensitive receptors
- identify appropriate mitigations for working in areas where sensitive receptors and historic contamination are present
- document environmental due diligence

Scope

This applies to all operation and maintenance (O&M) activities performed off- terminal or station property (including emergency response exercises) and to specific on-terminal or station O&M activities.

This does not apply to emergency response or activities covered in *01-02-02 Environmental Clearances for Integrity Digs and O&M Activities*.

Alternative environmental reports and plans, that meet the requirements of this standard, may be substituted for forms and clearances referenced in this standard.

Legislation**Canada**

- Canadian Environmental Protection Act
- Migratory Birds Convention Act
- Fisheries Act
- Species at Risk Act
- National Energy Board Act
- Applicable provincial and territorial legislation and regulations

United States of America

- Migratory Bird Treaty Act
- National Environmental Policy Act
- Endangered Species Act
- Clean Water Act
- Clean Air Act

Related Standards**Company**

- Book 8: Environment
 - *01-02-02 Environmental Clearances for Integrity Digs and O&M Activities*
- *Environmental Guidelines for Construction (EGC)*
- *Environmental Management Manuals [CAN]*
- *Environmental Mitigation Plan (EMP)*
- *Regulatory Affairs' Public Consultation and Environmental Screening Form [CAN]*

Related Forms	Company <ul style="list-style-type: none"> • <i>Preliminary Environmental Screening Form [CAN] / Project Environmental Review Worksheet [USA]</i>
Responsibilities	Regional Operations Regional Operations are responsible for: <ul style="list-style-type: none"> • submitting a completed Preliminary Environmental Screening Form [CAN] or Project Environmental Review Worksheet [USA] to Environment for O&M activities that require environmental clearance • ensuring O&M activities that require an environmental clearance do not proceed until the environmental clearances have been issued and reviewed • ensuring all required permits and mitigation measures listed in the clearance document are in place • maintaining copies of environmental clearances at the applicable work sites • maintaining records of environmental clearances Environment Environment is responsible for: <ul style="list-style-type: none"> • reviewing Preliminary Environmental Screening Forms [CAN] or Project Environmental Review Worksheets [USA] submitted by regional operations • issuing environmental clearances in a timely manner • providing appropriate support to regional operations when implementing mitigation measures or when clearances require further environmental work or permits • retaining environmental field resources as required (e.g., environmental inspectors, fish salvage crews) • updating the Wetland/Waterbody section of Regulatory Affairs' Public Consultation and Environmental Screening form [CAN]
Requirements	Operation and Maintenance Activities That Require Environmental Clearance Operation and Maintenance activities that require environmental clearance are those which take place: <ul style="list-style-type: none"> • outside a terminal or station property; or • on a terminal or station property if the work: <ul style="list-style-type: none"> – requires mechanical ground disturbance within 30 m (100 ft) of a waterbody – requires mechanical ground disturbance in close proximity (3 m or 10 ft) to groundwater monitoring wells – requires any amendment to an existing environmental permit or approval – requires any notification under an existing environmental permit or approval – requires a new environmental permit or approval

- requires surface disturbance within 45 m (148 ft) of any watercourse, waterbody or wetland, or on a slope leading directly to a waterbody or wetland, or within 90 m (196 ft) of any fish bearing or potentially fish bearing watercourse, water body or wetland [Saskatchewan only]

Operation and Maintenance activities that require an environmental clearance cannot proceed without an environmental clearance. Applicable mitigation measures and permits listed in the environmental clearance must be in place prior to the start of the activities.

Subject to the discretion of Environment, a single environmental screening and environmental clearance may be applied to multiple sites undergoing similar activities within a similar time period.

Environment may, on a case-by-case basis, determine certain low impact activities (i.e., locate request, replacing signs) are exempt from requiring an environmental clearance.

Operation and Maintenance Activities That Do Not Require Environmental Clearance

Operation and Maintenance activities that do not require environmental clearance are those which take place on a terminal or station property and do not require any of the following:

- do not require mechanical ground disturbance within 30 m (100 ft) of a waterbody
- do not require mechanical ground disturbance in close proximity (3 m or 10 ft) to groundwater monitoring wells
- do not require any amendment to an existing environmental permit or approval
- do not require any notification under an existing environmental permit or approval
- do not require a new environmental permit or approval
- do not require surface disturbance within 45 m (148 ft) of any watercourse, water body or wetland, or on a slope leading directly to a water body or wetland, or within 90 m (196 ft) of any fish bearing or potentially fish bearing watercourse, water body or wetland. [Saskatchewan only]

Operation and Maintenance activities that do not require an environmental clearance do not require further work under this standard.

Records

Environmental Clearance Records

Retain environmental clearance records:

- copy at O&M activity site subject to environmental clearance until activity is completed
- in the region for a minimum of 5 years