



ENBRIDGE PIPELINES (NW) INC.

Waste Management Plan

Line 21 Planned Maintenance at KP 158 near Little Smith Creek

August 2020, Rev. 1 – 18-8582

Plain Language Summary

Enbridge Pipelines (NW) Inc. (Enbridge) is proposing to replace a segment of the Line 21 pipeline southeast of kilometre post (KP) 158 near Little Smith Creek in the Northwest Territories (the Project).

This Waste Management Plan (the Plan) has been developed for use by Enbridge and its Contractors and applies to all Project activities as described in **Section 2.0**. It was developed in accordance with the Mackenzie Valley Land and Water Board Guidelines for Developing a Waste Management Plan (2011), and aligns with Enbridge's corporate Waste Management Plan (Enbridge Pipelines Inc. 2018) for Canada. A copy of this Plan will be available to all Project personnel.

This Plan forms part of an application package prepared to satisfy the requirements of the Sahtú Land and Water Board for a Type A Land Use Permit and Type B Water License. In conjunction with this Plan, Enbridge has prepared a Spill Contingency Plan, Closure and Reclamation Plan, and Environmental and Socio-Economic Assessment for the Project. A Project-specific Environmental Protection Plan will be prepared prior to construction.

The purpose of this Plan is to provide guidance to on-site personnel regarding the identification, handling, storage, treatment, transportation, and disposal of different types of Project-related wastes. To be effective, it is important that all personnel are familiar with their responsibilities as they relate to proper waste management. This Plan was developed in consideration of all applicable federal and territorial legislation/regulations related to waste management and applies to the complete life cycle of Project waste, from creation to final treatment and disposal.

This Plan will be effective at the commencement of construction activities and will be updated to reflect site-specific conditions, as required.

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Acronyms, Abbreviations and Definitions

Enbridge	Enbridge Pipelines (NW) Inc.
EPP	<i>Environmental Protection Plan</i>
GNWT	Government of Northwest Territories
HDD	<i>Horizontal Directional Drill</i>
km	kilometre(s)
KP	Kilometre Post
L	Litre(s)
m	metre(s)
m ³	cubic metre(s)
MVLWB	Mackenzie Valley Land and Water Board
NPS	Nominal Pipe Size
NWT	Northwest Territories
ROW	Right-of-Way
SLWB	Sahtú Land and Water Board
TDG	<i>Transportation of Dangerous Goods</i>
the Project	<i>Replacement of a segment of the Line 21 pipeline southeast of KP 158 near Little Smith Creek in the Northwest Territories</i>
the Plan	Waste Management Plan
WHMIS	<i>Workplace Hazardous Materials Information System</i>

1.0

Introduction and Background

Enbridge Pipelines (NW) Inc. (Enbridge) is proposing to replace a segment of the Line 21 pipeline southeast of kilometre post (KP) 158 near Little Smith Creek in the Northwest Territories (NWT) (the Project). Enbridge retained Dillon Consulting Limited (Dillon) to prepare a Waste Management Plan (the Plan) in support of regulatory and permitting applications for the Project.

Contact information for Enbridge is provided in Table 1.

Table 1: Project Contacts

Name	Role	Address	Telephone	Email
Robert Gagnon	Project Manager	10175 101 St NW, Edmonton, Alberta T5J 0H3	(780) 392-4878	Robert.Gagnon@enbridge.com
Sarah McKenzie	Regulatory Lead	10175 101 St NW, Edmonton, Alberta T5J 0H3	(780) 420-5375	Sarah.McKenzie@enbridge.com

1.1

Purpose and Scope of Plan

This Plan has been developed for use by Enbridge and its Contractors and applies to all Project activities as described in **Section 2.0**. It was developed in accordance with the Mackenzie Valley Land and Water Board (MVLWB) Guidelines for Developing a Waste Management Plan (2011), and aligns with Enbridge's corporate Waste Management Plan (Enbridge Pipelines Inc. 2018) for Canada. A copy of this Plan will be available to all Project personnel.

This Plan forms part of an application package prepared to satisfy the requirements of the Sahtú Land and Water Board (SLWB) for a Type A Land Use Permit and Type B Water License. In conjunction with this Plan, Enbridge has prepared a Spill Contingency Plan, Closure and Reclamation Plan, and Environmental and Socio-Economic Assessment for the Project. A Project-specific Environmental Protection Plan (EPP) will be prepared prior to construction.

The purpose of this Plan is to provide guidance to on-site personnel regarding the identification, handling, storage, treatment, transportation, and disposal of different types of Project-related wastes. To be effective, it is important that all personnel are familiar with their responsibilities as they relate to proper waste management. This Plan was developed in consideration of all applicable federal and territorial legislation/regulations related to waste management and applies to the complete life cycle of Project waste, from creation to final treatment and disposal.

This Plan will be effective at the commencement of construction activities and will be updated to reflect site-specific conditions, as required.

1.2 Environmental Policy

Enbridge believes that minimizing the environmental footprint and impacts associated with our activities delivers value to shareholders, customers and employees. Enbridge's Environmental Management System, including its environmental protection program, has been established to protect and sustain the environment throughout the lifecycle of design, construct, maintain and operate, and decommission and abandon, and to anticipate, prevent, manage, and mitigate conditions that could adversely affect the environment.

Enbridge's Environmental Policy provides the philosophy and approach for responsible environmental management and supports values of integrity, safety, and respect, which guide our actions, policies, procedures and culture.

Enbridge's goal is to foster an educational, just, and flexible organizational culture where environmental excellence is an integral element in the conduct of our business.

Enbridge is committed to:

- Identifying interactions and potential impacts on the environment;
- Minimizing adverse environmental effects through effective planning and execution;
- Complying with government regulations and applicable industry standards;
- Effectively responding to unanticipated events;
- Providing appropriate training to ensure employees and contract workers understand their responsibility to protect the environment;
- Promoting a culture where environmental excellence is everyone's responsibility;
- Actively engaging with the public and government regarding environmental activities;
- Learning from past experiences in order to continually improve competency and performance; and
- Maintaining a non-retaliatory culture that encourages reporting and investigation of environmental hazards, potential hazards, near-misses, incidents, and non-compliances.

2.0

Project Description

The Project is located in the Sahtú Region of the NWT, approximately 80 kilometres (km) southeast of the hamlet of Tulita and approximately 140 km southeast of the Town of Norman Wells (see Figure 1 in Appendix A).

The Project is required to protect the Line 21 pipeline from potential impacts of slope instability at a meander bend along Little Smith Creek near KP 158 and to support the continued safe operation of the pipeline.

2.1

Project Components

The Project involves the removal of an approximately 510-metre (m) segment of the existing Line 21 pipeline (nominal pipe size [NPS] 12) and replacing it with a new, approximately 520-m NPS 12 pipeline segment at a greater depth of cover. Enbridge is planning to install the new pipeline segment via horizontal directional drill (HDD) within the existing Enbridge right-of-way (ROW), and no new land rights are required for operation; however, some temporary workspace, located on privately-held Sahtú lands administered by the Tulita District Land Corporation, will be required in order to accommodate construction activities.

The Project will require upgrades to existing access roads, as well as the following temporary infrastructure:

- Construction camps (up to three small camps);
- Laydown yard (fuel and equipment storage);
- Potential barge landing (upgrades to an existing site on the Mackenzie River); and
- Temporary workspace:
 - HDD work sites (entry and exit points, and false ROW for trenchless pipe drag section); and
 - Pipeline stopple/tie-in locations.

Refer to Figure 1 and Figure 2 in Appendix A for the locations of Project components.

2.2

Activities Resulting in the Generation of Wastes

Project activities will result in the generation of various types of wastes. The following subsections describe the types of Project activities that will generate waste and what wastes are typically generated. More detail on the waste types, including approximate volumes, that may be generated by the Project is provided in **Section 3.0**.

2.2.1 Clearing and Access/Site Preparation

Minor vegetation clearing/brushing will be required along the margins of existing access roads and some clearing and grubbing will be required at the camp site/laydown yard. Vegetation will be cleared on portions of the existing ROW where excavation is required for removal of the existing pipe segment and for the HDD entry and exit points and pipeline stopples/tie-ins, as well as for temporary workspace, where required.

Vegetative/woody debris will be generated from clearing, grubbing, and site preparation activities. These types of materials are considered flammable and must be collected and disposed of in accordance with the NWT *Forest Protection Act* (RSNWT 1988, c. F-10) and all applicable permits/authorizations.

2.2.2 Pipeline Construction

The replacement pipeline segment will be installed via HDD and will require drilling fluid (composed of inert bentonite clay) and produce drill cuttings. The drilling fluid and cuttings are considered wastes and require appropriate disposal.

In addition, some excavation work will require use of hydrovac equipment. Hydrovac excavation uses pressurized water and an industrial strength vacuum to simultaneously excavate and evacuate soil. This process creates a slurry (soil mixed with water) that is removed by a powerful vacuum into a debris tank. The slurry is considered a waste product that requires appropriate disposal.

The existing pipe segment that is being removed will be drained into onsite tankage. The contents of the pipe and the pipe segment will be re-injected into the new installed pipeline after it has been tied in and tested.

The new pipeline segment will be hydrostatically tested using a rental fluid comprised of a 50/50 mix of water and glycol. The test fluid will be trucked to and from the Project site in appropriate containment and will not be discharged to the environment.

Other typical wastes that will be generated by pipeline construction include scrap materials (metal, wood), geotextiles, liners, concrete, and spent welding rods, as well as used oils, fuel, lubricants, grease, coolants, filters, etc. from equipment maintenance and servicing. All wastes will be hauled off site and disposed of at approved facilities.

2.2.3 Potential Barge Landing

Construction of the potential barge landing may require the placement of fill material (i.e., sand/gravel). When construction is complete, the barge landing will be removed and the site will be restored, which will require removal of any fill material that may have been used to return the bank of the river to as close to its preconstruction contours as possible. Used fill material will require disposal.

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2.2.4 Camp Site(s) and Laydown Yard

The camp site(s) will be used to accommodate construction personnel and provide office space and will include parking space, sleeping quarters, community gathering space, kitchen, and sanitary facilities (toilets, showers, sinks, etc.). The laydown yard will be used for equipment and fuel storage.

The camp site(s) will accommodate up to 80 workers during peak construction (winter 2021). The camp(s) will generate domestic wastes, sewage, and greywater, which will be stored on-site in appropriate containment before being transported off-site for disposal. No wastes will be discharged to the environment.

All non-hazardous camp wastes are expected to be hauled to local disposal or treatment facilities in Tulita. If Tulita cannot accept the wastes, then they will be transported to appropriate facilities in Norman Wells or other approved sites. Written agreements will be put in place with receiving facilities for the acceptance of wastes prior to the commencement of construction.

2.2.5 Contaminated Materials

Spills have the potential to occur as a result of an accident or malfunction during Project activities and can result in contamination of soils, vegetation, or water. In the event of a spill, the Project's Spill Contingency Plan will be implemented and contaminated materials will be cleaned up and stored in suitable containment on-site until they can be transported to an appropriate disposal facility.

3.0

Identification of Waste Types

The following section identifies the different types of wastes that are anticipated to be generated during Project activities (see **Section 2.2**). For the purpose of this Plan, the waste types have been categorized as follows:

- Hazardous Wastes;
- Non-Hazardous and Non-Mineral Wastes; and
- Mineral Wastes.

The estimated quantities of each type of waste are provided in Table 2. The anticipated volumes are based on best available information and are subject to change.

Table 2: Anticipated Project Wastes and Approximate Rates of Production

Waste Type	Approx. Maximum Volume/Rate
Hazardous Wastes	
Used oils, fuel, lubricant, grease, coolants, filters, etc.	0.5 m ³ /day
Hydrostatic test fluid (water/glycol mix)	250 m ³
Contaminated soil, vegetation, or water	N/A – generated from accidents and malfunctions only
Non-Hazardous and Non-Mineral Wastes	
Domestic wastes (from camp and work sites)	5 m ³ /day
Sanitary wastes from camp (sewage and greywater)	200 L/person/day
Construction materials	2 m ³ /day
Vegetative/woody debris	TBD
Mineral Wastes	
HDD cuttings	250 m ³
HDD drilling fluid	625 m ³
Hydrovac slurry	100 m ³
Granular material for potential barge landing (sand/gravel)	100 m ³

Notes:

N/A = not applicable; TBD = to be determined; m³ = cubic metre(s); L = litre(s)

3.1

Hazardous Wastes

The predominant source of hazardous wastes generated by Project activities will be from equipment maintenance and servicing, which may result in waste oil, fuel, batteries, lubricants, grease, oil filters, used hoses, and solvents.

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Other potential hazardous wastes may be generated by accidents and malfunctions, resulting in contaminated sorbent materials, tarps, soil, vegetation, or water.

The potential environmental effects arising from unmanaged hazardous wastes could include degradation of soil quality, water quality, and terrestrial and aquatic habitat quality, as well as potential adverse effects on the health and safety of on-site personnel.

3.2 Non-Hazardous and Non-Mineral Wastes

Non-hazardous and non-mineral wastes generated by Project activities will include domestic and sanitary wastes (i.e., greywater and sewage), vegetative/woody debris from clearing and site preparation, and construction materials.

The potential environmental effects arising from improperly managed non-hazardous and non-mineral wastes could include increased risk of human-wildlife interactions (wildlife attractants), potential for spills, leaks, and safety incidents, a change in the aesthetics of the Project area, increased fire hazard (woody debris), and degradation of water quality, and terrestrial and aquatic habitat quality.

3.3 Mineral Wastes

Mineral wastes generated by Project activities will include used fill materials (sand/gravel), HDD waste, and hydrovac slurry.

HDD wastes are defined as all materials or chemicals, solid or liquid, associated with drilling; including drill cuttings and drill fluids. For the purposes of the Project, drilling fluids will be made up of water and bentonite-based additives. Water for drilling will be withdrawn from the Mackenzie River, nearby spring-fed waterbodies and/or Little Smith Creek. Drilling fluids will be recycled in a closed loop system to limit the volumes of water required to complete the HDD by separating drill cuttings returned to the surface. Depending on the drilling conditions, some drilling fluids and cuttings may be disposed of during HDD activities to avoid exceeding the temporary on-site storage capacity. Upon completion of the HDD activities, the drilling fluids and drill cutting swill be prepared for on-site or off-site disposal.

The potential environmental effects arising from improperly managed mineral wastes could include degradation of soil quality, water quality, and terrestrial and aquatic habitat quality.

4.0

Management of Wastes

The following subsections provide details on the management procedures for the specific waste types identified in **Section 3.0**. The management procedures are in alignment with Enbridge's corporate Waste Management Plan (Enbridge Pipelines Inc. 2018) for Canada and support the measures in the Project-specific EPP.

Waste reduction and recycling have been integrated directly into Project execution procedures to reduce waste generation for all Project components. Materials will be re-used or re-purposed, where possible.

Some wastes will require transportation for off-site treatment or disposal. The type of transportation and tracking documents will depend on the nature of the waste and the location of the appropriate disposal or treatment facility. Minimum requirements for transportation and tracking are outlined below.

Non-hazardous wastes that require off-site transportation from the Project footprint will be transported to local disposal facilities in Tulita. Hazardous wastes will be transported to an appropriate waste facility in Alberta. Appropriate containment will be used to store and transport wastes to avoid off-site impacts.

4.1

Hazardous Wastes

Hazardous materials will be handled, stored, transported and disposed of in accordance with Enbridge's Waste Management Plan (Enbridge Pipelines Inc. 2018) for Canada, as well as all applicable Workplace Hazardous Materials Information System (WHMIS) and Transportation of Dangerous Goods (TDG) legislation.

All hazardous wastes will be stored in designated storage areas in clearly marked containers at least 100 m away from the high-water mark of any waterbody, in accordance with the Project's Spill Contingency Plan. Any spills of hazardous wastes will be responded to and cleaned up in accordance with the Spill Contingency Plan. Hazardous wastes stored on-site will be removed from the designated storage areas prior to demobilizing equipment from the work areas and disposed of at approved facilities.

In the NWT, generators of hazardous waste must be registered with the Department of Environment and Natural Resources prior to shipping any hazardous waste. After completing registration, an identification number is issued by the government as proof of authorization for the company and must be used for the shipment of all hazardous wastes by the approved waste generator. Enbridge's NWT waste generator number is NTG000026.

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Hazardous materials must be disposed of at a licensed hazardous waste/Class 1 receiving facility. It is likely that hazardous Project wastes will be hauled to an approved facility in Alberta. In the event that hazardous waste is hauled to a separate jurisdiction (i.e., Alberta), a special hauling license will be obtained.

Each shipment of hazardous waste generated as a result of Project activities in the NWT must be accompanied by a completed, territorially-issued movement document/manifest. Contact the Environmental Inspector for assistance in obtaining the required movement documents.

4.1.1 Used Oils, Fuel, Lubricant, Grease, Coolants, Filters, etc.

All used oils, fuels, lubricants, greases, coolants, filters, solvents, etc. produced from routine equipment maintenance and servicing will be captured in appropriate containers, labeled as hazardous waste, and stored in designated areas.

Reference the waste information sheets in Appendix B for the applicable WHMIS and TDG classifications of each specific waste.

4.1.2 Hydrostatic Test Fluid

A rental fluid comprised of a 50/50 mix of water and glycol will be used to hydrostatically test the new pipeline segment.

The test fluid will be hauled to the site and stored in a double wall containment tank, or secondary containment will be set up for the tank.

The used test fluid will be collected and hauled off-site in appropriate containment and no fluid will be allowed to be discharged to the environment.

4.1.3 Contaminated Materials

The inadvertent release of a hazardous substance can generate contaminated clean-up materials (sorbent materials, tarps), soil, vegetation, or water. In the case of a release of hazardous or otherwise deleterious materials, follow the procedures outlined in the Spill Contingency Plan to stop, contain, and clean up a spill. All contaminated material will be considered hazardous waste and must be stored in an isolated containment structure, which can include the following:

- Tank;
- Bin; or,
- Pit/sump with an impermeable liner and containment berms.

The containment structure must prevent leachate from escaping the containment area and coming in contact with a waterbody or the ground surface.

Follow procedures in the Project-specific EPP to identify and contain potential contaminated materials. Contaminated materials will be disposed of off-site at an approved facility. Proper NWT waste manifests will be used when transporting and disposing of contaminated materials.

4.2 Non-Hazardous and Non-Mineral Wastes

4.2.1 Domestic Wastes

Waste management measures will be implemented to minimize attractants to wildlife, including the following:

- Reduce and properly dispose of garbage, food wastes, and other edible and aromatic substances.
- Store all food and garbage in either: airtight sealed containers, wildlife-proof containers, or in an enclosed area inaccessible to wildlife.
- Store all on-site grease, oils, fuels in wildlife-proof containers or enclosed bear-proof areas.
- Store minimal amounts of wastes on-site and haul wastes off for disposal as often as practical.

Combustible and non-combustible domestic wastes will be separated into two streams as recommended in the *Northern Land Use Guidelines for Camp and Support Facilities* (Government of Northwest Territories [GNWT] 2015). No incineration of domestic wastes will be undertaken.

Work crews will regularly inspect areas surrounding the camp and work sites to collect and properly dispose of any waste material that has blown off-site.

Domestic solid wastes will be temporarily stored at the camp before being transported to municipal facilities for disposal. Tulita is the preferred location for domestic waste disposal; however, alternate locations have been identified if Project wastes cannot be accepted at the preferred site (refer to waste disposal facilities listed in **Section 5.0**). Agreements will be put in place with waste disposal facilities prior to hauling any waste off-site for disposal.

Waybills or truck tickets will accompany all waste being hauled off site.

4.2.2 Sanitary Wastes

All sewage and greywater will be temporarily stored in tanks at the camp. Enbridge will seek to dispose of all sewage and greywater at a local waste treatment facility in Tulita. Agreements will be in place with waste treatment facilities prior to hauling any sewage or greywater off-site for disposal.

Waybills or truck tickets will accompany all waste being hauled off site.

In the unlikely event that off-site transportation is temporarily restricted, or pre-arranged disposal facilities are unable to accept wastes, sewage and greywater could reach on-site storage capacity. In

these circumstances, mitigation options could include the construction of a disposal pit. If required, such on-site disposal would proceed in accordance with best practices outlined in the Northern Land Use *Guidelines for Camp and Support Facilities* (GNWT 2015) and in consultation with GNWT Inspectors.

Portable toilets used on-site will be managed by the Contractor. Sanitary wastes collected in the portable toilets will be hauled off-site for treatment and disposal at the supplier's facility or by removing the contents on-site using appropriate mobile equipment and hauling to an approved waste treatment facility.

4.2.3 Construction Materials

Construction material wastes (e.g., scrap wood, scrap metal, liners, geotextiles, concrete, etc.) will be stored in closed top containers in approved areas until they are removed from site and hauled away for disposal. Approval for disposal must be received by the facility operator prior to disposal. The Contractor will coordinate with waste facility operators to ensure the facility can accept the waste types being hauled off-site. Waybills or truck tickets will accompany all waste being hauled off site.

4.2.4 Vegetative/Woody Debris

Non-salvageable vegetative and woody debris from brushing and clearing will be collected and moved to an open area (e.g., the gravel pit) where it will be disposed of by burning on-site. Burning will be conducted in accordance with the NWT *Forest Protection Act* (RSNWT 1988, c. F-10) and all applicable permits/authorizations. A burn permit will be acquired prior to burning during the closed season (May 1 to September 30).

Should burning not be permitted, brush and trees less than 13 cm in diameter will be stockpiled and spread back over the temporary workspaces following the completion of construction. If required, the brush and small trees may be mulched to reduce the space required for storing and to reduce the effort to spread materials back on the restored workspace.

4.3 Mineral Wastes

Mineral wastes, for the purpose of this Plan, are considered to be natural materials (e.g., clay, sand, gravel, soil) that are used for Project activities (i.e., HDD, hydrovac, fill). The preferred disposal option for mineral wastes is on-site treatment and disposal; however, the contingency disposal plan is to haul mineral wastes off-site to an appropriate facility in the case that the on-site options are determined to not be viable.

4.3.1 HDD Wastes and Hydrovac Slurry

Water will be withdrawn from the Mackenzie River or Little Smith Creek in order to facilitate HDD and hydrovac activities. Water is mixed with inert bentonite clay for HDD activities and with soils for hydrovacating.

4.0 Management of Wastes 12

HDD wastes (drilling fluid and cuttings) from the Project will be managed according to industry-accepted best management practices outlined in the Alberta Energy Regulator (AER) *Directive 050: Drilling Waste Management* (AER 2019) guidelines. Drilling wastes will be managed on-site to the extent possible. Drilling fluids will be recirculated during drilling activities to limit the volume of water required and waste generated through the drilling process. Drilling wastes will be stored on-site in bins or tanks while awaiting disposal. All efforts will be made to prevent drilling fluids and untested drilling wastes from coming into contact with the ground or from migrating off of the Project work site, through the use of secondary containment, collection pits, and drip trays, where required.

A common disposal solution for HDD and hydrovac mineral wastes is mix-bury-cover into the subsoil. The feasibility of mix-bury-cover is dependent upon the receiving substrate and the results of sampling to assess the wastes and determine if they need to be treated prior to disposal. If permitted by the SLWB, and pending substrate testing, mix-bury-cover of the Project's HDD and hydrovac wastes may be conducted along the trench line of the removed pipe segment in order to help backfill the space left by the removed pipeline and any remaining wastes may be disposed of at the on-site gravel pit or another suitable location nearby. Sumps will be excavated to mix the drilling wastes with native subsoil. Drilling wastes will also be analyzed for applicable parameters to assess against criteria set out in the AER (2019) *Directive 050* guidelines.

If, upon testing, the HDD wastes or hydrovac slurry are deemed unsuitable for mix-bury-cover or the substrates on-site are not appropriate to receive the wastes, or the SLWB does not permit on-site disposal, then the HDD and hydrovac wastes will be hauled off-site for disposal at an appropriate facility. All transports hauling drilling wastes off-site will have appropriate manifests, waybills or truck tickets, based on the type of waste.

4.3.2 Granular Materials

Granular (fill) materials (i.e., sand/gravel) may be required for construction and operation of the potential barge landing site. The Project may utilize materials from the gravel pit located adjacent to the camp/laydown yard, if the materials are determined to be clean and suitable for fill. All granular material placed at the potential barge landing site will be collected, to the extent feasible, upon completion of the Project and returned to the gravel pit and/or disposed of accordingly. The Environmental Inspector will be consulted prior to removing the material from site to determine the appropriate requirements for disposal.

5.0

Infrastructure for Waste Management

Waste disposal will occur throughout construction as part of general maintenance activities. Appropriate waste receptacles for the various waste types to be encountered on the Project will be available at suitable locations throughout the camp and work sites. Wildlife-proof containers will be used to store edible, organic, and/or aromatic wastes and wastes will be stored in fenced-off areas or inside buildings that are inaccessible to wildlife. Secondary and/or tertiary containment will be set up and maintained, as required, for all hazardous wastes (storage requirements are outlined in the Spill Contingency Plan).

Wastes being hauled off-site will be transported by truck on the winter road. Some wastes may need to be hauled by barge on the Mackenzie River, following final site clean-up and demobilization. Wastes will be stored in appropriate containment for transportation.

Waste disposal facilities for all wastes types being hauled off-site will be identified prior to hauling any wastes and disposal agreements will be put in place with all receiving facilities. All applicable facility guidelines and requirements will be met to ensure wastes will be accepted. Waste facility arrangements will be made closer to construction. Table 3 provides a list of potential waste facilities that may be able to accept the wastes generated by the Project.

Table 3: Waste Disposal Facilities

Waste Type	Company	Address	Contact Number(s)
Contaminated Soil (Landfill Disposal)	Tervita Northern Rockies Landfill	Mile 285 Alaska Highway PO Box 1049 Fort Nelson, BC V0C 1R0	P: (250) 774-3027
	Tervita Rainbow Lake Class II Landfill	PO Box 393 Rainbow Lake, AB T0H 2Y0	P: (780) 956-5650 F: (780) 956-5630
Filters, Rags and Sorbent Recycling	RBW Waste Management Ltd.	3907 - 69 Avenue Edmonton, AB T6B 3G4	P: (780) 955-9332 or 1-800-642-3802 F: (780) 437-0281
Hazardous Waste Disposal	RBW Waste Management Ltd.	3907 - 69 Avenue Edmonton, AB T6B 3G4	P: (780) 955-9332 or 1-800-642-3802 F: (780) 437-0281
	Tervita	12311 - 17th Street NE Edmonton, AB T6S 1A7	P: (780) 456-1444 or 1-800-667-0444 F: (780) 456-9696

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Waste Type	Company	Address	Contact Number(s)
Hazardous Waste Disposal (cont'd)	Tervita Northern Rockies Landfill	Mile 258 Alaska Highway PO Box 1049 Fort Nelson, BC V0C 1R0	P: (250) 774-3027
	KBL Environmental Ltd.	PO Box 1895 17 Cameron Road Yellowknife, NT X1A 2P4	P: (867) 873-5263
Hazardous Waste Transportation	Tervita	12311 - 17th Street NE Edmonton, AB T6S 1A7	P: (780) 456-1444 or 1-800-667-0444 F: (780) 456-9696
	KBL Environmental Ltd.	PO Box 1895 17 Cameron Road Yellowknife, NT X1A 2P4	P: (867) 873-5263
	Matco Transport	1 Junkers Road Norman Wells, NT X0E 0V0	P: (867) 587-2351
Lube Oil/Solvent Recycling	Terrapure Environmental	6024 - 27 Street NW Edmonton, AB T6P 1Y5	P: (780) 461-8926
	Tervita	9-61058 Hwy 668 Grande Prairie, AB T8W 5A9	P: (780) 539-1845 F: (780) 539-0260
Oil Disposal	L&P Disposals	Box 1752 High Level, AB T0H 1Z0	P: (780) 926-2988
Oilfield Waste Management	Tervita	PO Box 393 Rainbow Lake, AB T0H 2Y0	P: (780) 956-5650 F: (780) 956-5630
Paint Recyclers	DBS Environmental	1430 - 33 Street N Lethbridge, AB T1H 5H3	P: (403) 328-4833 1-888-328-4833 F: (403) 328-4729
Laboratories	Taiga Environmental Laboratory – Department of Environment and Natural Resources	4601 - 52 Avenue Yellowknife, NT X1A 2L9	P: (867) 767-9235 ext 53151 F: (867) 920-8740 taiga@gov.nt.ca

5.0 Infrastructure for Waste Management 15

Waste Type	Company	Address	Contact Number(s)
Domestic Waste Disposal	Norman Wells Solid Waste Landfill	Norman Wells, NT X0E 0V0	P: (867) 587-3700
	Hamlet of Tulita Solid Waste Facility	PO Box 170 Tulita, NT X0E 0K0	P: (867) 588-3003
Sewage Disposal	Hamlet of Tulita Taylor's Lake Sewage Lagoon	PO Box 91 Tulita, NT X0E 0K0	P: (867) 588-4471
	Northridge Contracting Ltd.	Norman Wells, NT X0E 0V0	P: (867) 587-2050
	Village of Fort Simpson Wastewater Treatment Plant	Box 240 Fort Simpson, NT X0E 0N0	P: (867) 695-2370
	Department of Public Works, Town of Hay River	100 - 62 Woodland Drive Hay River, NT X0E 1G1	P: (867) 874-6522

6.0 Training

Project-specific EPP training is required by all individuals working on Project sites. The EPP training will include a review of permit conditions, mitigation plans (including this Plan), and site-specific environmental mitigation for the Project. The level of EPP training will be dependent on the role and responsibility of the individual. Managers and foremen/supervisors with additional responsibility for the Project will receive more detailed EPP training to ensure they understand all permit conditions, environmental policies, and required environmental mitigation and can effectively direct employees. Field workers will receive a level of EPP training tailored to the execution of their scope of work.

7.0

Monitoring and Evaluation

The Environmental Inspector will be responsible for ensuring all Project personnel are aware of environmental conditions, commitments and guidelines for the Project and that the Project is executed in compliance with this Plan, the EPP, and all other associated management plans and contingency plans, as well as applicable regulatory permits and approvals.

The Environmental Inspector will work with Indigenous Monitors to oversee the implementation of this Plan in conjunction with the EPP. Regular inspections will occur over the course of the Project and daily inspection reports will be prepared and distributed to the Project team.

This Plan will be updated as required and all Enbridge personnel are encouraged to comment and assist in its improvement.

8.0

Contingencies

In the event that an unforeseen issue arises during construction for which no mitigation measures have been approved, the Enbridge Senior Environmental Advisor and the Environmental Inspector will develop appropriate measures in consultation with the Construction Manager, Project Manager and, when appropriate, regulatory agencies.

New or amended mitigation measures will be incorporated into this Plan by the Enbridge Senior Environmental Advisor and the revised Plan will be reviewed by the Project Manager and Construction Manager before it is issued to the Project team with an issued and effective date. The revised Plan will come into effect on the effective date. The Environmental Inspector will be responsible for distributing the revised copy of the Plan to all appropriate Project personnel.

If an issue arises and an adequate resolution cannot be determined between the Environmental Inspector and the Construction Manager, it shall be escalated to the Project Manager who will discuss and resolve the issue with the Enbridge Senior Environmental Advisor.

References

Alberta Energy Regulator (AER). 2019. Directive 050: Drilling Waste Management. August 2019. 167 pp.

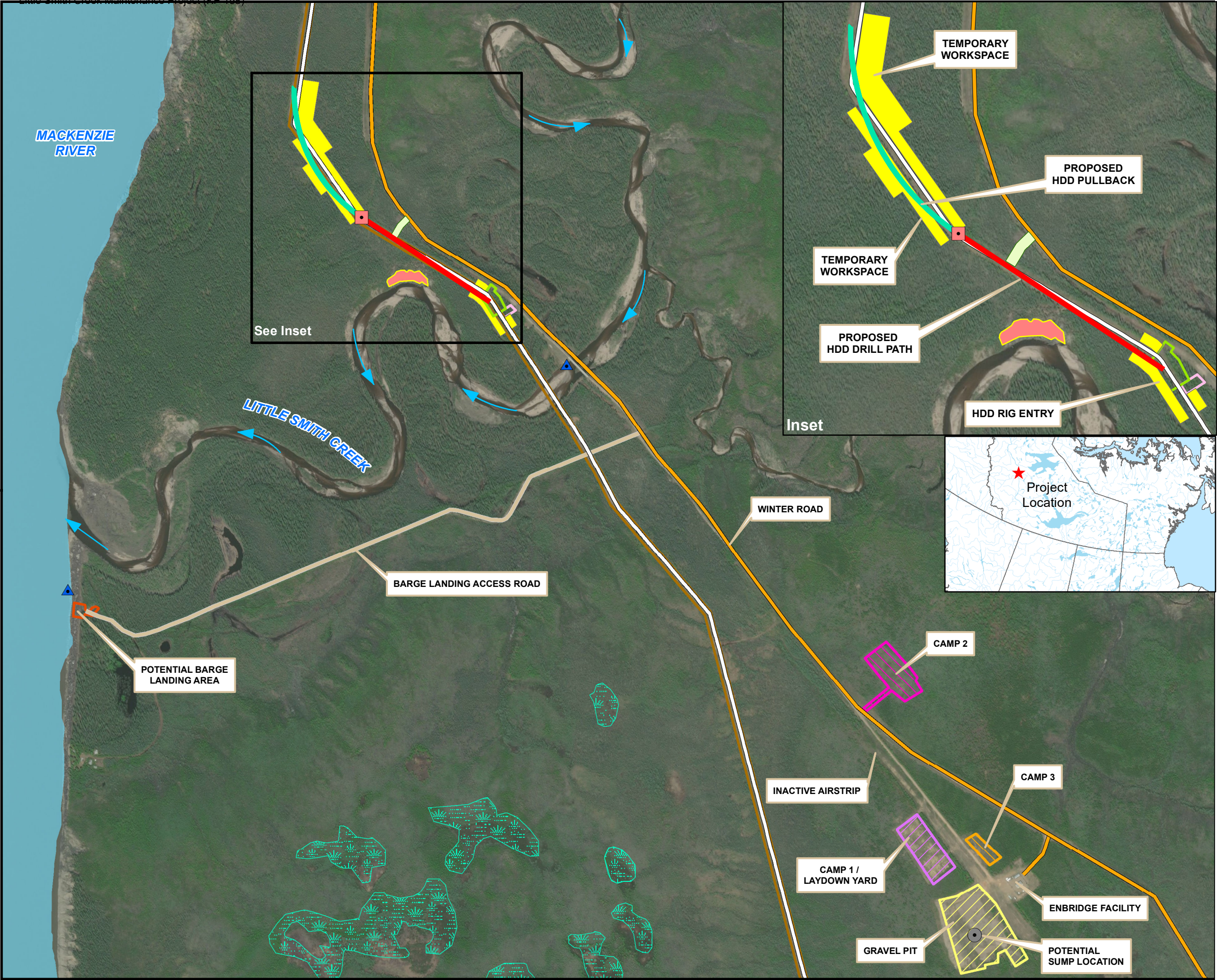
Enbridge Pipelines Inc. 2018. Waste Management Plan. June 2018, Version 5. 341 pp.

Government of Northwest Territories (GNWT). 2015. Northern Land Use Guidelines for Camp and Support Facilities. Yellowknife, NT. 30 pp.

Mackenzie Valley Land and Water Board (MVLWB). 2011. Guidelines for Developing a Waste Management Plan. Yellowknife, NT. 24 pp.

Appendix A

Site Figures



ENBRIDGE PIPELINES (NW) INC.
LINE 21 PLANNED MAINTENANCE AT KP 158 NEAR LITTLE SMITH CREEK

PROJECT OVERVIEW

FIGURE 1

- HDD Exit
- Potential Water Withdrawal Location
- Potential Sump Location
- Flow Direction
- Proposed HDD Pullback
- Proposed HDD Drill Path
- Waterbody
- Wetland
- Slope Failure
- North Entrance
- Existing Line 21 Pipeline
- Winter Road
- Barge Landing Access Road
- Potential Barge Landing Area
- Camp 1 / Laydown Yard
- Camp 2
- Camp 3
- HDD Rig Entry
- Temporary Workspace
- Gravel Pit
- Existing Line 21 ROW
- Stopple Entry

0 100 200 400 Meters

SCALE 1:11,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY NRCAN, DILLON CONSULTING & ESRI

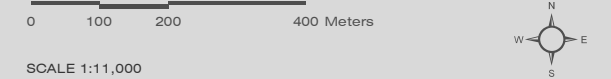
MAP CREATED BY: PH
MAP CHECKED BY: AL
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 188582
STATUS: DRAFT
DATE: 2020-08-24

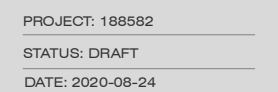


FIGURE 2



MAP DRAWING INFORMATION:
DATA PROVIDED BY NRCAN, DILLON CONSULTING & ESRI

MAP CREATED BY: PH
MAP CHECKED BY: AL
MAP PROJECTION: NAD 1983 UTM Zone 10N



Appendix B

Waste Information Sheets



Acid (un-neutralized)

Waste Information Sheet

General Information					
Original Use:	Water treatment, descaling, and as a cleaning agent in on-site laboratories for cleaning viscometers, etc. Synonyms: Acetic, Chromic, Hydrochloric acids.				
Physical State:	Corrosive liquid.				
Components:	Specific to the waste acid and use. Various concentrations from 1% to concentrated.				
Potential Hazards					
Class (WHMIS):	E; D1A; D1B	MSDS:	Use MSDS of specific acid.		
Hazard Symbols:			Protective Equipment:		
Environmental:	Leaching of metals if acid comes in contact with soil. Possible groundwater contamination if spilled or leaks at storage sites. Surface water contamination if not neutralized.				
Health:	Respiratory irritant. Corrosive on contact. Severe burns. Avoid contact or inhalation of fumes.				
Management Methods					
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste			
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste			
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material			
Storage:	Store in a corrosion resistant (plastic or lined) container at field facility. Keep closed. Store in a cool, well ventilated place away from high pH materials				
Treatment / Disposal:	<ul style="list-style-type: none"> Return to supplier if possible (if product is not contaminated). Neutralization may be required by either ENBRIDGE or waste contractor. Alberta: dispose in a Class Ia disposal well (pH 4.5 - 12.5), or a Class Ib well (pH 6.0 - 9.0). 				
Comments:	<ul style="list-style-type: none"> Reduce potential wastes by ordering acids in bulk. Alberta: Heavy metal content may restrict the usage of Class Ib disposal wells. Deep well disposal is only a limited option in Alberta where acids in small quantities may possibly already be mixed with large process or produced water volumes through operations. Best option is with inventory control (reduce), and using a Waste Material Exchange if volumes are large. 				
Reportable Release Quantity:	NWT: 5 kg or litres	Ontario: Any quantity			
	Alberta: 5 kg or litres	Québec: Any quantity			
	Saskatchewan: 5 kg or litres	TDG (includes loading / unloading): 5 kg or litres			
	Manitoba: 5 kg or litres				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>		-	-	-	-
Placards:	Dependent on specific waste chemical.				
Comments:	Dependent on specific waste chemical. If product was originally supplied as a dangerous good, then waste chemical is also a dangerous good. Use Shipping Name, Class, PIN, etc. of original shipment, unless original chemical properties have changed or contaminated with another dangerous good. If a mixture or solution of two or more dangerous goods, verify TDG Information with the Enbridge Environment Staff.				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				



Need further information?
Contact Enbridge Environment Staff in Edmonton.

Acid (un-neutralized)
Waste Information Sheet
September 2016



Asbestos

Waste Information Sheet

General Information				
Original Use:	Insulation on piping vessels, boiler equipment and building. Building panels. Waste may also be called insulation crysotile, crocidolite, amosite, mysorite, avibest, amphibole.			
Physical State:	Fibre material, gray, white, or blue. No odor.			
Components:	Asbestos, may also contain fibreglass and foam materials. Asbestos is a group of impure magnesium silicate materials which occur in a fibrous form.			
Potential Hazards				
Class (WHMIS):	D2A	MSDS:	Use MSDS of specific components (e.g.; asbestos) or ENBRIDGE MSDS Asbestos Gasket.	
Hazard Symbols:		Protective Equipment:		
Environmental:	Known carcinogen to human and animal life.			
Health:	Various exposure limits dependent on the type of asbestos. Causes asbestosis, lung cancer and mesothelioma.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Waste Dangerous Good	Manitoba: Hazardous Waste Ontario: Non-Hazardous Waste Québec: Residual Material		
Storage:	Double bag waste in properly labeled, sealed, polyethylene bags (minimum 6-mil thickness). If bags breaks, soak area with water and reseal.			
Treatment / Disposal:	Send / transfer to an approved landfill.			
Comments:	Notify landfill operator and / or local health board in advance of disposal. Waste must be buried immediately upon arrival at a landfill. Refer to Appendix B of ENBRIDGE Waste Management Plan.			
Reportable Release Quantity:	NWT: Any quantity Alberta: Any quantity Saskatchewan: Any quantity Manitoba: Any quantity	Ontario: Any quantity Québec: Any quantity	TDG (includes loading / unloading): 25 kg	
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
WHITE ASBESTOS	9	UN 2590	III	
BLUE ASBESTOS or BROWN ASBESTOS	9	UN 2212	II	
Placards:	Class 9 (in bulk or over 500 kg).			
Comments:	Handle in accordance with O&MP procedures. Refer to Appendix B of ENBRIDGE Waste Management Plan for guidance regarding packaging, transport and disposal.			
Documentation				
Transportation Documents:	Dependent on waste classification.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Asbestos
Waste Information Sheet
September 2016



Batteries - Alkaline (Dry)

Waste Information Sheet

General Information					
Original Use:	Batteries for gas detectors. Long life C & D cells, 9 volt, AA, etc.				
Physical State:	Various solid forms.				
Components:	Mercury, manganese dioxide.				
Potential Hazards					
Class (WHMIS):	MSDS: Mercury, manganese dioxide				
Hazard Symbols:	Protective Equipment:				
Environmental:	Lowers pH in aqueous environments. Battery fluids may have high heavy metals content. Can contaminate soil and water through landfill leachate. Do not incinerate. Small quantity "consumer" household batteries (non-vehicle) do not pose a serious threat to environment if landfilled.				
Health:	Ingestion of alkali may produce severe pain and burning of the mouth, throat and esophagus. Nausea and vomiting may follow.				
Management Methods					
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste			
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario: Non-Hazardous Waste			
	Saskatchewan: Non-Hazardous Waste	Québec: Residual Material			
Storage:	Significant volumes: store damaged batteries in corrosion resistant (lined) or plastic drums. Batteries in good condition can be stored on drip pan. Keep containers closed and store in a cool, dry, and well ventilated place, off the ground, away from incompatible materials.				
Treatment / Disposal:	(if the 4R options cannot be applied): Landfill - verify with provincial environmental agency or landfill operator. See Disposal Comments.				
Comments:	If available, use municipal, supplier, or retailer battery collection programs. Alkaline batteries containing liquids should only be taken to a Hazardous Waste Disposal facility, they should not be landfilled.				
Reportable Release Quantity:	NWT: N/A	Ontario: N/A			
	Alberta: N/A	Québec: N/A			
	Saskatchewan: N/A	TDG (includes loading / unloading): N/A			
	Manitoba: N/A				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated – See TDG Comments Below</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	Small alkaline batteries that are dry inside are not regulated. If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Batteries - Alkaline (Dry)
Waste Information Sheet
September 2016



Batteries - Alkaline (Wet)

Waste Information Sheet

General Information				
Original Use:	Various uses in electrical standby and alarm systems.			
Physical State:	Various solid forms.			
Components:	Mercury, manganese dioxide.			
Potential Hazards				
Class (WHMIS):	E, possible D1B, D2A			
MSDS:	Mercury, manganese dioxide			
Hazard Symbols:	Protective Equipment:			
Environmental:	Lower pH in aqueous environments. Battery fluids may have high heavy metals content. Can contaminate soil and water through landfill leachate. Do not incinerate. Small quantity "consumer" household batteries (non-vehicle) do not pose a serious threat to environment if landfilled.			
Health:	Ingestion of alkali may produce severe pain and burning of the mouth, throat and esophagus. Nausea and vomiting may follow.			
Management Methods				
Waste Classification:	<div style="display: flex; justify-content: space-between;"> <div> NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good </div> <div> Manitoba: Hazardous Waste Ontario: Hazardous Waste (121-C) Québec: Residual Hazardous Material </div> </div>			
Storage:	Significant volumes: store damaged batteries in corrosion resistant (lined) or plastic drums. Batteries in good condition can be stored on drip pan. Keep containers closed and store in a cool, dry and well ventilated place, off the ground, away from incompatible materials.			
Treatment / Disposal:	Enquire with local battery reconditioner for recycling. Hazardous - Hazardous Waste Disposal Facility			
Comments:	If available, use municipal, supplier or retailer battery collection programs. Alkaline batteries containing liquids should only be taken to a Hazardous Waste Disposal facility, they should not be landfilled.			
Reportable Release Quantity:	<div style="display: flex; justify-content: space-between;"> <div> NWT: 5 kgs or litres Alberta: 5 kgs or litres Saskatchewan: 5 kgs or litres Manitoba: 5 kgs or litres </div> <div> Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 5 kg or litres </div> </div>			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
BATTERIES, WET, FILLED WITH ALKALI, electric storage	8	UN2795	III	-
Placards:	Class 8 (in bulk or over 500 kg)			
Comments:				
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			





Need further information?
Contact Enbridge Environment Staff in Edmonton.

Batteries - Alkaline (Wet)
Waste Information Sheet
September 2016



Batteries - Dry Cell (Ni-Cd)

Waste Information Sheet

General Information					
Original Use:	Rechargeable dry cell batteries in DC systems. Possible small quantities in cordless appliances.				
Physical State:	Various solid forms.				
Components:	Nickel Cadmium.				
Potential Hazards					
Class (WHMIS):	E	MSDS:	Use MSDS of specific component.		
Hazard Symbols:		Protective Equipment:	  		
Environmental:	Lowers pH in aqueous environments. Can contaminate soil and water through landfill leachate. Do not incinerate. Small quantity 'consumer' household batteries (non-vehicle) do not pose a serious threat to environment if landfilled.				
Health:	If damaged may cause severe burns and permanent tissue damage to eyes and skin.				
Management Methods					
Waste Classification:	NWT: Non-Hazardous Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Non-Hazardous Waste Non-hazardous classification unless contains KOH.		Manitoba: Non-Hazardous Ontario: Non-Hazardous (122-C/146) Québec: Residual Material		
Storage:	Store in a steel drum (18 gauge minimum) with absorbent at field facility.				
Treatment / Disposal:	Send to an approved Ni-Cd battery recycler.				
Comments:					
Reportable Release Quantity:	NWT: N/A Alberta: N/A Saskatchewan: N/A Manitoba: N/A		Ontario: N/A Québec: N/A TDG (includes loading / unloading): N/A		
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	Not regulated by TDG if sealed. Non-hazardous classification unless contains KOH. If the waste is contaminated with dangerous goods TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Batteries - Dry Cell (Ni-Cd)
Waste Information Sheet
September 2016



Batteries - Wet Cell (Lead Acid)

Waste Information Sheet

General Information				
Original Use:	Variety of automotive, electric storage, portable or emergency electricity and lighting, and instruments.			
Physical State:	Various solid forms. Synonyms: Battery acid, battery fluid, lead acid (see also Acids and Caustic).			
Components:	Sulphuric acid, caustic, lead and various chemicals. May be acid or dry filled. Acid may contain heavy metals and caustics. Household (alkaline) batteries contain carbon, manganese and zinc.			
Potential Hazards				
Class (WHMIS):	E; D1B; D2A	MSDS:	Use MSDS of specific components (e.g.; Acid, Lead, Battery Acid, Battery Fluid, Fluid Alkali, Sulphuric Acid).	
Hazard Symbols:			Protective Equipment:	
Environmental:	Lower pH in aqueous environments. Battery fluids may have high heavy metals contents. Can contaminate soil and water through landfill leachate. Do not incinerate.			
Health:	Extremely corrosive vapor and liquids - can cause lung tissue damage. May cause severe burns and permanent tissue damage to eyes and skin. Lead poisoning.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba:	Hazardous Waste	
	Alberta: Hazardous Waste/DOW	Ontario:	Hazardous Waste (112-C)	
	Saskatchewan: Waste Dangerous Good	Québec:	Residual Hazardous Material	
Storage:	Store damaged batteries in corrosion resistant (plastic or lined) containers at field facility. Undamaged batteries may be stored on a drip pan. Keep containers closed and in a cool, dry, and well ventilated place, off the ground, away from incompatible materials.			
Treatment / Disposal:	Send to an approved battery recycler.			
Comments:	Drain batteries of fluids and / or contain for transport. Treat fluids as per "Acid" Waste Information Sheet.			
Reportable Release Quantity:	NWT: 5 kg or litres	Ontario:	Any quantity	
	Alberta: 5 kg or litres	Québec:	Any quantity	
	Saskatchewan: 50 kg (10 kg off-site)	TDG (includes loading / unloading): 5 kg or litres		
	Manitoba: 5 kg or litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
BATTERIES, WET, FILLED WITH ACID, electric storage	8	UN 2794	III	
Placards:	Class 8 (in bulk or over 500 kg).			
Comments:	There are various TDG categories for batteries and battery fluids. The above is one example. OTHER TDG Shipping Names MAY APPLY. Good batteries may be shipped unpackaged, but secured on a drip pan and individually labeled with a Class 8 label and PIN. Poor condition batteries should be shipped in labeled corrosion resistant drums with sorbents.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Batteries - Wet Cell (Lead Acid)
Waste Information Sheet
September 2016



Chemicals - Laboratory

Waste Information Sheet

General Information													
Original Use:	Onsite quality control laboratories. Organic chemicals are carbon based materials, including solvents and other petroleum-derived products. Inorganic chemicals are non-carbon based materials, including many acids, bases, and mineral based compounds.												
Physical State:	May be liquid, solid or gas; dependent on specific waste.												
Components:	Dependent on specific waste. Organic chemicals, Inorganic chemicals - acids, alkalis, and inorganic reagents.												
Potential Hazards													
Class (WHMIS):	B2; B3; B4; C; D; or E												
MSDS:	Varies with waste chemical.												
Hazard Symbols:	Protective Equipment:												
Environmental:	Limited environmental hazard due to small volume. Possible volatile flammable and corrosive liquids. Potential fire hazards.												
Health:	Health hazard - extent is dependent on the specific chemical.												
Management Methods													
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT: Hazardous Waste</td> <td style="width: 33%;">Manitoba: Hazardous Waste</td> <td style="width: 33%;"></td> </tr> <tr> <td>Alberta: Hazardous Waste/DOW</td> <td>Ontario: Hazardous Waste (148-C)</td> <td></td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> <td></td> </tr> </table>	NWT: Hazardous Waste	Manitoba: Hazardous Waste		Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (148-C)		Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material				
NWT: Hazardous Waste	Manitoba: Hazardous Waste												
Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (148-C)												
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material												
Storage:	Collect in lined drums or original containers if recycling. Monitor volumes and chemicals entering containers. Segregate different waste chemicals. Store in a cool, well ventilated area.												
Treatment / Disposal:	<ul style="list-style-type: none"> Segregate and reuse chemicals on-site if possible. Return to supplier if possible. Send to a chemical recycling facility. Send to an appropriate (approved) waste management facility 												
Comments:	Waste classification is subject to testing.												
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT: 5 kg or litres</td> <td style="width: 33%;">Ontario: Any quantity</td> <td style="width: 33%;"></td> </tr> <tr> <td>Alberta: 5 kg or litres</td> <td>Québec: Any quantity</td> <td></td> </tr> <tr> <td>Saskatchewan: 5 kg or litres</td> <td colspan="2">TDG (includes loading / unloading): Dependent on specific waste chemical</td> </tr> <tr> <td>Manitoba: 5 kg or litres</td> <td colspan="2"></td> </tr> </table>	NWT: 5 kg or litres	Ontario: Any quantity		Alberta: 5 kg or litres	Québec: Any quantity		Saskatchewan: 5 kg or litres	TDG (includes loading / unloading): Dependent on specific waste chemical		Manitoba: 5 kg or litres		
NWT: 5 kg or litres	Ontario: Any quantity												
Alberta: 5 kg or litres	Québec: Any quantity												
Saskatchewan: 5 kg or litres	TDG (includes loading / unloading): Dependent on specific waste chemical												
Manitoba: 5 kg or litres													
TDG Information													
Shipping Name	Class	PIN	Packing Group	Special Provisions									
<i>See TDG Comments Below</i>	-	-	-	-									
Placards:	Dependent on specific waste chemical.												
Comments:	Dependent on specific waste chemical. If product was originally supplied as a dangerous good, then waste chemical is also a dangerous good. Use Shipping Name, Class, PIN, etc. of original shipment, unless original chemical properties have changed or contaminated with another dangerous good. If a mixture or solution of two or more dangerous goods, verify TDG Information with the Enbridge Environment Staff.												
Documentation													
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.												
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.												

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Chemicals – Laboratory
Waste Information Sheet
September 2016



Chemicals - Miscellaneous

Waste Information Sheet

General Information				
Original Use:	Various – dependent on specific chemical.			
Physical State:	Various – liquid or slurry. Synonyms: Cleaners, lubricants, epoxies, glues, solvents, etc.			
Components:	Various – dependent on specific chemical. Refer to supplier information.			
Potential Hazards				
Class (WHMIS):	Dependent on specific chemical.		MSDS:	Refer to container label or supplier information.
Hazard Symbols:	Refer to container label or supplier MSDS.		Protective Equipment:	Refer to container label or supplier MSDS.
Environmental:	Possible soil and groundwater contamination from spills.			
Health:	Dependent on specific product. Refer to container label or supplier information.			
Management Methods				
Waste Classification:	NWT:	Testing Required.	Manitoba:	Testing Required.
	Alberta:	Testing Required.	Ontario:	Testing Required.
	Saskatchewan:	Testing Required.	Québec:	Testing Required.
Waste Classification:	All provinces & NWT: Dependent on specific chemical. Testing may be required.			
Storage:	Dependent on specific chemical.			
Treatment / Disposal:	<ul style="list-style-type: none"> • Return to supplier, reuse or recycle (dependent on chemical type). • Send to chemical reclaimer / recycler if applicable. • Send to appropriate (approved) waste management facility. • Recycle through Waste Material Exchange (if possible, appropriate). 			
Comments:	<ul style="list-style-type: none"> • Avoid over-supply. Order in bulk. • Investigate the use of low toxicity, safer chemicals. Inquire with supplier. 			
Reportable Release Quantity:	NWT:	5 kg or litres	Ontario:	Any quantity
	Alberta:	5 kg or litres	Québec:	Any quantity
	Saskatchewan:	5 kg or litres	TDG (includes loading / unloading): Dependent on specific waste chemical.	
	Manitoba:	5 kg or litres		
TDG Information				
Shipping Name		Class	PIN	Packing Group
<i>See TDG Comments Below</i>		-	-	-
Placards:	Dependent on specific chemical.			
Comments:	Testing required. Dependent on specific waste chemical. If product was originally supplied as a dangerous good, then waste chemical is also a dangerous good. Use Shipping Name, Class, PIN, etc., of original shipment unless original chemical properties have changed or contaminated with another Dangerous Good. If a mixture or solution of two or more dangerous goods, verify TDG Information with the Enbridge Environment Staff.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			





Need further information?
Contact Enbridge Environment Staff in Edmonton.

Chemicals - Miscellaneous
Waste Information Sheet
September 2016



Chemicals - Stabilizer

Waste Information Sheet

General Information					
Original Use:	Print shop chemicals from ENBRIDGE Tower, Edmonton				
Physical State:	Aqueous clear solution				
Components:					
Potential Hazards					
Class (WHMIS):	MSDS: ENBRIDGE MSDS #144 - Silvermaster Stabilizer				
Hazard Symbols:	Protective Equipment:				
 	 				
Environmental:	Combustion will produce sulphurous gases. Non-toxic with dilution.				
Health:	May cause nausea. If contact on skin - flush immediately.				
Management Methods					
Waste Classification:	NWT:	Testing Required.	Manitoba:	Testing Required.	
	Alberta:	Testing Required.	Ontario:	Testing Required.	
	Saskatchewan:	Testing Required.	Québec:	Testing Required.	
Storage:	Labeled plastic jugs.				
Treatment / Disposal:	Hazardous - Not applicable unless contaminated with a dangerous good.				
Comments:					
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name	Class	PIN	Packing Group	Special Provisions	
<i>Not TDG Regulated</i>	N/A	N/A	N/A	N/A	
Placards:	Dependent on specific chemical.				
Comments:	Testing required. Dependent on specific waste chemical. If product was originally supplied as a dangerous good, then waste chemical is also a dangerous good. Use Shipping Name, Class, PIN, etc., of original shipment unless original chemical properties have changed or contaminated with another Dangerous Good. If a mixture or solution of two or more dangerous goods, verify TDG Information with the Enbridge Environment Staff.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill, TDG Shipping Document, or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or District office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Chemicals – Stabilizer
Waste Information Sheet
September 2016



Construction and Demolition Material Waste Information Sheet

General Information					
Original Use:	Demolition or new construction projects.				
Physical State:	Various solids.				
Components:	Clean material (wood, metal, drywall, etc.) which is not contaminated with fiberglass insulation, asbestos, and sulphur. See also Metal - Scrap, Insulation (Asbestos), Insulation (Non-asbestos), and Contaminated Debris and Soil waste information sheets.				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Not applicable.	
Hazard Symbols:	Not applicable.		Protective Equipment:	Follow occupational health / safety and manufacturer requirements for all equipment operations. Use caution with dust.	
Environmental:	Possible toxic fumes if incinerated.				
Health:	Not a hazard.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Ensure wastes are stored in an orderly manner that does not pose a safety risk. Segregate potentially hazardous substances such as asbestos.				
Treatment / Disposal:	Send to an approved landfill. Notify landfill before shipment if significant quantities.				
Comments:	<ul style="list-style-type: none"> • Reuse materials when possible. • Recycle plastics, rubber, wood, paper, metal, drywall where practical. • Ontario requires that construction or demolition projects of more than one building or greater than 2000 square metres must implement a source separation program for brick and Portland cement concrete, corrugated cardboard, drywall, steel, and wood which is not treated, painted or laminated. Materials can be sent to a site operating under an Environmental Compliance Approval or to users of the material for recycling. 				
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Construction and Demolition Material
Waste Information Sheet
September 2016



Containers - Aerosol Cans

Waste Information Sheet

General Information				
Original Use:	Spray cans for contact cleaners, lubricants, paints.			
Physical State:	Metal cans (usually <1 litre) under pressure.			
Components:	Various, dependent on original contents. Aerosol component may contain nitrous oxide, organic solvents, ketone, acetone or chlorofluorocarbons.			
Potential Hazards				
Class (WHMIS):	Various		MSDS:	Various
Hazard Symbols:			Protective Equipment:	
Environmental:	Chlorofluorocarbons (CFCs) suspected of damage to ozone layer. Few aerosols still contain CFCs. Containers under pressure - can explode with incineration or compaction.			
Health:	Various health effects due to the fine mist and inhalation. Includes possible carcinogenesis and nervous system disorders.			
Management Methods				
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste		
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario: Non-Hazardous Waste		
	Saskatchewan: Non-Hazardous Waste	Québec: Residual Material		
Storage:	Store in cool, well ventilated area.			
Treatment / Disposal:	<ul style="list-style-type: none"> Empty – Metal cans can be recycled through appropriate recycler Non-hazardous – Landfill (small quantity - verify with landfill operator) Hazardous – Hazardous Waste Disposal Facility (depending on original content) 			
Comments:	If small quantity, take advantage of provincial toxic container collection programs which are available in Alberta, Manitoba and Ontario. Do not puncture or incinerate.			
Reportable Release Quantity:	NWT: N/A	Ontario: N/A		
	Alberta: N/A	Québec: N/A		
	Saskatchewan: N/A	TDG (includes loading / unloading): N/A		
	Manitoba: N/A			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:	N/A			
Comments:	If available in a consumer commodity, then not regulated. Where TDG regulated, TDG classification subject to original supplier shipment's TDG classification. May also be TDG exempt by minimum quantity. When a container is emptied, but not cleaned or purged of dangerous goods, the words "Empty – Last Contained" must be written on the shipping document.			
Documentation				
Transportation Documents:	Dependent on waste classification.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers - Aerosol Cans
Waste Information Sheet
September 2016



Containers - Crude Oil Sample Bottles

Waste Information Sheet

General Information				
Original Use:	Bottles from samples taken for on-site and off-site laboratory QA/QC analysis. Includes both glass and plastic bottles and residue samples.			
Physical State:	Solid containers with oil residues.			
Components:	In residue: hydrocarbons (oil and condensate), varsol, benzene, sulphur. May contain dissolved hydrogen sulphide.			
Potential Hazards				
Class (WHMIS):	B2; B3; D2A	MSDS:	Use MSDS of specific components.	
Hazard Symbols:			Protective Equipment:	
Environmental:	Potential groundwater contamination from bottles wash liquids and leachate if stored in a landfill.			
Health:	Not an inhalation hazard if < 38°C. High vapor concentrations may irritate nose, throat and lungs. May irritate eyes and skin on contact. May contain H ₂ S.			
Management Methods				
Waste Classification:	NWT: Non-Hazardous Waste Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste Ontario: Non-Hazardous Waste Québec: Residual Material		
Storage:	Store empty containers in drums at field facility.			
Treatment / Disposal:	<ul style="list-style-type: none"> Rinse / wash and reuse glass bottles on-site. Send broken or damaged bottles to an approved landfill. Recycle glass if contaminated with less than 3% oil (visually clean, maybe small residue). 			
Comments:				
Reportable Release Quantity:	NWT: N/A Alberta: N/A Saskatchewan: N/A Manitoba: N/A	Ontario: N/A Québec: N/A TDG (includes loading / unloading): N/A		
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:	Dependent on waste classification.			
Comments:	If the container contains residues of dangerous goods, then the applicability of TDG requirements are dependent on the nature of the dangerous goods. If the container is empty but not cleaned, write "Residue – last contained" on the shipping document – in addition to Shipping Name, etc. Common waste classification includes Class 3, PETROLEUM CRUDE OIL, UN 1267.			
Documentation				
Transportation Documents:	Dependent on waste classification.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers - Crude Oil Sample Bottles
Waste Information Sheet
September 2016



Containers - Drums / Barrels

Waste Information Sheet

General Information	
Original Use:	Transport and storage of liquid products.
Physical State:	Metal and plastic. Some are returnable. May be empty, rinsed or not rinsed.
Components:	Used drums should be treated as hazardous (dangerous oilfield/waste dangerous good) and/or toxic until proven otherwise. Refer to drum labels and shipping information for contents (chemicals, lube oil, solvents, and alcohol).
Potential Hazards	
Class (WHMIS):	Dependent upon contents of original drum.
MSDS:	Dependent on contents of original drum. See drum label.
Hazard Symbols:	Dependent on contents of original drum. See drum label.
Protective Equipment:	Dependent on contents of original drum. See drum label.
Environmental:	Depends on original contents. Containers may have to be rinsed according to pre-treatment comments. Rinse liquid disposal is a concern if drum contents are hazardous.
Health:	Dependent on contents of original drum. Regardless, wear protective clothing.
Management Methods	
Waste Classification:	<div style="display: flex; justify-content: space-between;"> <div> NWT: Non-Hazardous Waste Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Non-Hazardous Waste </div> <div> Manitoba: Non-Hazardous Waste Ontario: Non-Hazardous Waste Québec: Residual Material </div> </div> <p>NOTE: Above classification unless not completely empty and containing a hazardous waste. "Empty Container" is generally defined as a container that contains less than 2.5 cm of residue at the bottom of the container or less than 3% of the original contents, whichever is the lesser amount.</p>
Storage:	Store drums / barrels on their sides with all bungs securely in place at field facility. Use sorbents and / or provide leak containment. Do not give or sell to others. Do not store barrels which contain unknown materials – confirm material and use or properly dispose.
Treatment / Disposal:	<ul style="list-style-type: none"> Return barrels / drums to original supplier. Triple rinse barrels / drums and send to scrap metal dealer / barrel reconditioner. Triple rinse and send to an approved landfill. (Contact Enbridge Environment Staff for appropriate rinsing material)
Comments:	Purchase chemicals in bulk whenever possible to avoid the handling and disposal of barrels.
Reportable Release Quantity:	<div style="display: flex; justify-content: space-between;"> <div> NWT: N/A Alberta: N/A Saskatchewan: N/A Manitoba: N/A </div> <div> Ontario: N/A Québec: N/A TDG (includes loading / unloading): N/A </div> </div>
TDG Information	
Shipping Name	Class
<i>See TDG Comments Below</i>	-
Packing Group	Special Provisions
-	-
Placards:	Dependent on waste classification.
Comments:	<p>If the container contains residues of dangerous goods, the shipping name, TDG classification, and waste classification is dependent on the nature of the dangerous goods. If the container is empty but not cleaned, write "Residue – last contained" on the shipping document – in addition to Shipping Name, etc.</p> <p><i>The following exemption permits may apply to this waste: 95 2060 (in Alberta), SU 2801 (for Federal).</i></p>
Documentation	
Transportation Documents:	Dependent on waste classification.
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.



Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers - Drums / Barrels
Waste Information Sheet
September 2016



Containers - Gas Detection Calibration

Waste Information Sheet

General Information				
Original Use:	For H ₂ S, propane, methane and nitrogen. Refers to nonfillable containers which cannot be purged. Synonyms: Gas bomb containers.			
Physical State:	Solid			
Components:	Aluminum container			
Potential Hazards				
Class (WHMIS):	Various - refer to container label or supplier information.		MSDS:	Various - refer to container label or supplier information.
Hazard Symbols:			Protective Equipment:	
Environmental:	Explosion hazard. Minor air contaminant.			
Health:	Various health effects - dependent on gas.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
	Above classification assumes that containers cannot be purged.			
Storage:	Store in secure packaging/location away from heat sources.			
Treatment / Disposal:	Return to supplier if possible. Possible recycling to supplier but is dependent on type of cylinder. Hazardous – contact a hazardous waste contractor.			
Comments:	Verification on disposal method and transportation requirements should be obtained from provincial environment and transportation authorities. May possibly be landfilled.			
Reportable Release Quantity:	NWT: adverse effect	Ontario: adverse effect		
	Alberta: adverse effect	Québec: adverse effect		
	Saskatchewan: adverse effect	TDG (includes loading / unloading): adverse effect		
	Manitoba: adverse effect			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:	Dependent on type of gas.			
Comments:	When a container is emptied but not cleaned or purged of dangerous goods, the words "Empty – Last Contained" must be written on the shipping document.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers - Gas Detection Calibration
Waste Information Sheet
September 2016



Containers - Miscellaneous

Waste Information Sheet

General Information																	
Original Use:	Various containers from cleaners, lubricants, epoxies, glues, solvents, etc.																
Physical State:	Plastic, metal pails, buckets, tubs, tubes, cups, etc.																
Components:	Various																
Potential Hazards																	
Class (WHMIS):	Various - refer to container label or supplier information.																
MSDS:	Various - refer to container label or supplier information.																
Hazard Symbols:	Various - dependent on product in container.																
	Protective Equipment: Various - dependent on product. <div style="text-align: center;"> </div>																
Environmental:	Possible groundwater and soil contamination from leaching of container's product.																
Health:	Dependent on specific product. Refer to container label or supplier information.																
Management Methods																	
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">NWT:</td> <td style="width: 25%;">Testing Required</td> <td style="width: 25%;">Manitoba:</td> <td style="width: 25%;">Testing Required</td> </tr> <tr> <td>Alberta:</td> <td>Testing Required</td> <td>Ontario:</td> <td>Testing Required</td> </tr> <tr> <td>Saskatchewan:</td> <td>Testing Required</td> <td>Québec:</td> <td>Testing Required</td> </tr> </table>	NWT:	Testing Required	Manitoba:	Testing Required	Alberta:	Testing Required	Ontario:	Testing Required	Saskatchewan:	Testing Required	Québec:	Testing Required				
NWT:	Testing Required	Manitoba:	Testing Required														
Alberta:	Testing Required	Ontario:	Testing Required														
Saskatchewan:	Testing Required	Québec:	Testing Required														
Storage:	Store in an organized protected area away from heat sources. Prevent moisture from entering containers.																
Treatment / Disposal:	<ul style="list-style-type: none"> Hazardous - Hazardous Waste Disposal Facility Non-hazardous - Landfill via waste contractor Some jurisdictions restrict the recycle/reuse of metal drums. 																
Comments:	<ul style="list-style-type: none"> In Alberta, containers are regulated under the Alberta Waste Control Regulation. If they contained a substance listed in Table 4B of the Alberta Users Guide for Waste Managers then the container must be triple rinsed. In Saskatchewan, Manitoba and the N.W.T., an empty container that contained dangerous goods is considered as hazardous waste unless it has been cleaned or purged. Within Ontario's Regulation 347, there are exemptions for empty containers that previously contained a product; however, these exemptions are based on the product's specific ingredients as identified on the MSDS. If the container is not exempt it shall be considered as hazardous waste. 																
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">NWT:</td> <td style="width: 25%;">Any quantity if hazardous chemical</td> <td style="width: 25%;">Ontario:</td> <td style="width: 25%;">Any quantity if a hazardous chemical</td> </tr> <tr> <td>Alberta:</td> <td>Any quantity if hazardous chemical</td> <td>Québec:</td> <td>Any quantity if a hazardous chemical</td> </tr> <tr> <td>Saskatchewan:</td> <td>Any quantity if hazardous chemical</td> <td>TDG (includes loading / unloading):</td> <td>Any quantity if hazardous chemical</td> </tr> <tr> <td>Manitoba:</td> <td>Any quantity if hazardous chemical</td> <td></td> <td></td> </tr> </table>	NWT:	Any quantity if hazardous chemical	Ontario:	Any quantity if a hazardous chemical	Alberta:	Any quantity if hazardous chemical	Québec:	Any quantity if a hazardous chemical	Saskatchewan:	Any quantity if hazardous chemical	TDG (includes loading / unloading):	Any quantity if hazardous chemical	Manitoba:	Any quantity if hazardous chemical		
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Saskatchewan:	Any quantity if hazardous chemical	TDG (includes loading / unloading):	Any quantity if hazardous chemical														
Manitoba:	Any quantity if hazardous chemical																
TDG Information																	
Shipping Name	Class	PIN	Packing Group	Special Provisions													
<i>See TDG Comments Below</i>	-	-	-	-													
Placards:	Dependent on waste classification.																
Comments:	If product was originally supplied as a dangerous good, then waste container is a dangerous good, unless the container was cleaned or purged. If the container contains residues of dangerous goods, then the applicability of TDG requirements are dependent on the nature of the dangerous goods. Use shipping name, etc., of original shipment. When a container is emptied but not cleaned or purged of dangerous goods, the words "Empty – Last Contained" must be written on the shipping document.																
Documentation																	
Transportation Documents:	Dependent on waste classification.																
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.																


Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers – Miscellaneous
Waste Information Sheet
September 2016



Containers - Paint, Stain, Enamel

Waste Information Sheet

General Information					
Original Use:	Containers used to package paints as sent from the manufacturer.				
Physical State:	Metal and plastic cans and pails.				
Components:	Metal, plastic and paint (chemical) residues.				
Potential Hazards					
Class (WHMIS):	Specific to container - see container info.		MSDS:	Specific to container - see container info.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Potential toxic leachate from the storage or landfill of the containers if not drained and dried. Refer to "Storing a Waste", Section 4.0 of ENBRIDGE Waste Management Plan.				
Health:	Liquids may be irritant to eyes and skin.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
	Above classification assumes that the containers are drained and contents are dry.				
Storage:	Do not allow rain water to enter containers.				
Treatment / Disposal:	Thoroughly drain (use) and dry all containers before storage or landfill.				
Comments:					
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	Assumed not controlled by TDG if the paint residue is dry and therefore flash point is > 60°C. If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers - Paint, Stain, Enamel
Waste Information Sheet
September 2016



Containers – Herbicides/Pesticides

Waste Information Sheet

General Information									
Original Use:	In the petroleum industry, herbicide/pesticide containers usually originate from the application of herbicides for weed control. Herbicides/pesticide containers are hazardous, whether empty or full.								
Physical State:	Metal and plastic cans and pails.								
Components:	2,4-D, Glyphosate, Bromacil, Picloram, Atrazine, other fungicides and insecticides.								
Potential Hazards									
Class (WHMIS):	B4; D1B; D2A								
MSDS:	Specific to type of pesticide. See container or supplier's information.								
Hazard Symbols:	Protective Equipment:								
Environmental:	Container effluent may cause severe environmental damage (surface and groundwater contamination, vegetation damage, and subsequent soil erosion). Some pesticides may remain active in waterbody sediments for extended periods.								
Health:	Various effects. Inhalation of some herbicides/pesticides can cause death. Herbicides/pesticides can be absorbed through the eyes and skin.								
Management Methods									
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: Hazardous Waste</td> <td style="width: 50%;">Manitoba: Hazardous Waste</td> </tr> <tr> <td>Alberta: Hazardous Waste/DOW</td> <td>Ontario: Hazardous Waste</td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> </tr> </table>	NWT: Hazardous Waste	Manitoba: Hazardous Waste	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
NWT: Hazardous Waste	Manitoba: Hazardous Waste								
Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste								
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material								
Storage:	Do not allow rainwater to enter empty containers. Avoid the long-term storage of empty containers.								
Treatment / Disposal:	<ul style="list-style-type: none"> • Triple rinse containers with rinsate going back into spray tank. • Send to designated pesticide container collection facility (contact Enbridge Environment Staff for assistance). 								
Comments:	Use certified contractors for herbicide/pesticide applications for all chemical vegetation control, and ensure they properly dispose of all containers and associated wastes to designated facilities.								
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: Any quantity (free liquids)</td> <td style="width: 50%;">Ontario: Any quantity (free liquids)</td> </tr> <tr> <td>Alberta: Any quantity (free liquids)</td> <td>Québec: Any quantity (free liquids)</td> </tr> <tr> <td>Saskatchewan: Any quantity (free liquids)</td> <td>TDG (includes loading / unloading): Any quantity (free liquids)</td> </tr> <tr> <td>Manitoba: Any quantity (free liquids)</td> <td></td> </tr> </table>	NWT: Any quantity (free liquids)	Ontario: Any quantity (free liquids)	Alberta: Any quantity (free liquids)	Québec: Any quantity (free liquids)	Saskatchewan: Any quantity (free liquids)	TDG (includes loading / unloading): Any quantity (free liquids)	Manitoba: Any quantity (free liquids)	
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Manitoba: Any quantity (free liquids)									
TDG Information									
Shipping Name	Class	PIN	Packing Group	Special Provisions					
<i>See TDG Comments Below</i>	-	-	-	-					
Placards:	Dependent on specific pesticide.								
Comments:	There are a large number of TDGR categories for herbicides/pesticides. Consult the supplier and TDGR for Specific TDG classification. If the container is empty, write "Residue – last contained" on the shipping document.								
Documentation									
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.								

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Containers – Herbicides/Pesticides
Waste Information Sheet
September 2016



**Contaminated Debris and
Soil - Chemical / Solvent**
Waste Information Sheet







General Information									
Original Use:	Generated by the accidental spillage of chemicals and solvents during operation or maintenance. Includes contaminated soils, vegetation and absorbent materials.								
Physical State:	Solid, semi-liquid (chemical, solvent and contaminated solids).								
Components:	Various chemicals, hydrocarbons (solvents), soil, water, sorbent and other spill debris.								
Potential Hazards									
Class (WHMIS): B4	MSDS: Use MSDS of specific components, (e.g. solvent).								
Hazard Symbols: Refer to container label or supplier MSDS.	Protective Equipment: 								
Environmental:	Potential extensive groundwater / surface water and soil contamination if contaminated debris / soil is left in place or directly on ground surface or if disposed in a landfill.								
Health:	Dependent on specific product / chemical. Typically not an inhalation hazard if < 38°C. High vapor concentration may irritate nose, throat and lungs. May irritate eyes and skin on contact.								
Management Methods									
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: Hazardous Waste</td> <td style="width: 50%;">Manitoba: Hazardous Waste</td> </tr> <tr> <td>Alberta: Hazardous Waste/DOW</td> <td>Ontario: Hazardous Waste</td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> </tr> </table>	NWT: Hazardous Waste	Manitoba: Hazardous Waste	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
NWT: Hazardous Waste	Manitoba: Hazardous Waste								
Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste								
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material								
Storage:	Contain material in sealed drums, or lined and bermed area, away from heat and ignition sources at field facility.								
Treatment / Disposal:	<ul style="list-style-type: none"> On-site / off-site land treatment / biodegradation. Send to an appropriate (approved) waste management facility. On-site / off site treatment through chemical application and treatment (e.g. lime application for acid effected soils). Possibly send to a waste contractor for solvent / chemical recovery. 								
Comments:	Contact Enbridge Environment Staff on a case specific basis. Testing may be required.								
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: 25 kg or litres</td> <td style="width: 50%;">Ontario: Any quantity</td> </tr> <tr> <td>Alberta: 25 kg or litres</td> <td>Québec: Any quantity</td> </tr> <tr> <td>Saskatchewan: 25 kg or litres</td> <td>TDG (includes loading / unloading): Depending on specific contaminant.</td> </tr> <tr> <td>Manitoba: 1 kg or litres</td> <td></td> </tr> </table>	NWT: 25 kg or litres	Ontario: Any quantity	Alberta: 25 kg or litres	Québec: Any quantity	Saskatchewan: 25 kg or litres	TDG (includes loading / unloading): Depending on specific contaminant.	Manitoba: 1 kg or litres	
NWT: 25 kg or litres	Ontario: Any quantity								
Alberta: 25 kg or litres	Québec: Any quantity								
Saskatchewan: 25 kg or litres	TDG (includes loading / unloading): Depending on specific contaminant.								
Manitoba: 1 kg or litres									
TDG Information									
Shipping Name	Class	PIN	Packing Group	Special Provisions					
<i>See TDG Comments Below</i>	-	-	-	-					
Placards:	Dependent on specific contaminant.								
Comments:	Classifications for this waste may vary depending on the specific contaminant. Likely Classes based on common solvents and chemicals used in the oil and gas industry include 4.1, 6.1, or 8.								
Documentation									
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.								

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Contam. Debris & Soil - Chemical / Solvent
Waste Information Sheet
September 2016



**Contaminated Debris and
Soil - Mercury**
Waste Information Sheet





General Information				
Original Use:	Generated from the spillage of mercury from instrument manometers.			
Physical State:	Solid (mercury contaminated soils).			
Components:	Mercury, soil, water, sorbent and other spill debris.			
Potential Hazards				
Class (WHMIS):	D1A; D2A	MSDS:	Mercury	
Hazard Symbols:		Protective Equipment:	    	
Environmental:	Spilled mercury will contaminate pond and drainage ditch sludge and can accumulate in drains/gutters within process buildings. Leachate may contain soluble mercury salts.			
Health:	Toxic vapors. Eye irritation. If absorbed by skin, may cause dermatitis. Long or repeated exposure may create emotional disorder and damage to the nervous system, kidneys or liver.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba:	Hazardous Waste	
	Alberta: Hazardous Waste/DOW	Ontario:	Hazardous Waste	
	Saskatchewan: Waste Dangerous Good	Québec:	Residual Hazardous Material	
Storage:				
Treatment / Disposal:	<ul style="list-style-type: none"> If large quantity of mercury is spilled, the metal may be collected and cleaned for reuse. On-site solidification, Hazardous Waste Disposal Facility if mercury levels are above regulated landfill regulations. 			
Comments:	Contact Enbridge Environment Staff on a case specific basis. Testing may be required.			
Reportable Release Quantity:	NWT: 5 kg or litres	Ontario:	Any quantity	
	Alberta: 5 kg or litres	Québec:	Any quantity	
	Saskatchewan: 100 g	TDG (includes loading / unloading): 5 kg or L		
	Manitoba: 5 kg or litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
CORROSIVE SOLID, N.O.S. ("Technical Name")	8	UN1759	I, II or III	16
Placards:	Class 8			
Comments:	After shipping name put: "(soil/debris contaminated with mercury)". TDG regulation is dependent on whether or not contaminant levels are above regulated landfill regulation. Testing may be required. For sufficient quantities of mercury, see "Mercury" Waste Information Sheet.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Contam. Debris & Soil – Mercury
Waste Information Sheet
September 2016



**Contaminated Debris and
Soil - Oil / Condensate**
Waste Information Sheet

General Information				
Original Use:	Generated by the accidental spillage of crude oil or condensate. Includes contaminated soils, vegetation, and absorbent materials.			
Physical State:	Solid (oil / condensate and contaminated solids).			
Components:	Oil, condensate, BTEX, heavy metals (As, Cd, Cr, Pb, Hg, Ni, Tl or Se), salts, soils, boron, barium, other spill debris and absorbent materials.			
Potential Hazards				
Class (WHMIS):	B4	MSDS:	Crude Oil.	
Hazard Symbols:		Protective Equipment:	  	
Environmental:	Potential groundwater contamination from hydrocarbons if disposed in landfill. Migration of hydrocarbons also possible with land treatment. Light ends may be extremely mobile (water soluble).			
Health:	Typically not an inhalation hazard if < 38°C. High vapor concentrations may irritate nose, throat, and lungs. May irritate eyes and skin on contact. Personnel protection required. Level of protection will vary with the waste.			
Management Methods				
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan: Non-Hazardous Waste	Québec:	Residual Material.	
	Note: Classified as Hazardous Waste/WDG/DOW if BTEX, flash point and hydrocarbon exceed criteria.			
Storage:	If saturated - store in steel drums. Temporary storage on drying pads or lined areas.			
Treatment / Disposal:	Recover free liquids, contain contaminated soil within a bermed and lined storage cell, contact Enbridge Environment Staff for treatment and disposal options			
Comments:	Minimize contamination potential through the use of spill containment measures such as dikes and drip pans. Various jurisdictions have specific rules around the management of hydrocarbon contaminated materials. Contact the Enbridge Environment Staff to provide assistance.			
Reportable Release Quantity:	NWT: 25 kg	Ontario:	Any quantity	
	Alberta: 25 kg	Québec:	Any quantity	
	Saskatchewan: Any quantity	TDG (includes loading / unloading): 25 kg or litres		
	Manitoba: 1 kg			
TDG Information				
Shipping Name		Class	PIN	Packing Group
SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (soil / debris contaminated with Petroleum Crude Oil).		4.1	UN 3175	II
Special Provisions	16, 56			
Placards:	Class 4.1 (in bulk or over 500 kg).			
Comments:	May not be TDG regulated. Classified as Hazardous Waste/WDG/DOW if BTEX, flash point and hydrocarbon exceed regulated criteria.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Contaminated Debris & Soil - Oil/Condensate
Waste Information Sheet
September 2016



Contaminated Debris and Soil - Pesticide

Waste Information Sheet

General Information													
Original Use:	Generated by the accidental spillage or over use of pesticides (i.e. herbicides) during weed control operations. Includes sterilized contaminated soils and affected vegetation.												
Physical State:	Solid (pesticide and contaminated solids).												
Components:	Various pesticides (bromacil, diuron, sodium metaborate, ureabor, tebuthiron, picloram, atrazine, dicamba, 2,4-D), soils, absorbents, and other spill debris.												
Potential Hazards													
Class (WHMIS):	B4; D1B; D2A												
Hazard Symbols:	<div style="display: flex; align-items: center; justify-content: center;"> </div>												
MSDS: Use MSDS of specific pesticide.													
Protective Equipment:													
Environmental:	Potential groundwater and surface water contamination. Wind drift to agricultural or non-contaminated areas. Surface water contamination from soil leaching.												
Health:	Avoid inhalation - can cause nervous system disorders. Eye irritation. Can be readily absorbed through the skin and cause severe irritations.												
Management Methods													
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT: Hazardous Waste</td> <td style="width: 33%;">Manitoba: Hazardous Waste</td> <td style="width: 33%;"></td> </tr> <tr> <td>Alberta: Dangerous Oilfield Waste</td> <td>Ontario: Hazardous Waste</td> <td></td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> <td></td> </tr> </table>	NWT: Hazardous Waste	Manitoba: Hazardous Waste		Alberta: Dangerous Oilfield Waste	Ontario: Hazardous Waste		Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material				
NWT: Hazardous Waste	Manitoba: Hazardous Waste												
Alberta: Dangerous Oilfield Waste	Ontario: Hazardous Waste												
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material												
Storage:	Store debris in steel drums at field facility. Temporary storage on drying pads or lined areas. Keep containers closed and in a cool, well ventilated area.												
Treatment / Disposal:	<ul style="list-style-type: none"> If possible treat contaminated soil on-site through the application of activated carbon / charcoal (contact Enbridge Environment Staff). Spread affected soils over areas of site requiring vegetation control. Send to an approved landfill – co-disposal with activated carbon / charcoal. Notify landfill before shipment. 												
Comments:	Contact Enbridge Environment Staff on a case specific basis.												
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT: 5 kg or litres</td> <td style="width: 33%;">Ontario: Any quantity</td> <td style="width: 33%;"></td> </tr> <tr> <td>Alberta: 5 kg or litres</td> <td>Québec: Any quantity</td> <td></td> </tr> <tr> <td>Saskatchewan: 5 kg or litres</td> <td>TDG (includes loading / unloading): 5 kg or litres</td> <td></td> </tr> <tr> <td>Manitoba: 5 kg or litres</td> <td></td> <td></td> </tr> </table>	NWT: 5 kg or litres	Ontario: Any quantity		Alberta: 5 kg or litres	Québec: Any quantity		Saskatchewan: 5 kg or litres	TDG (includes loading / unloading): 5 kg or litres		Manitoba: 5 kg or litres		
NWT: 5 kg or litres	Ontario: Any quantity												
Alberta: 5 kg or litres	Québec: Any quantity												
Saskatchewan: 5 kg or litres	TDG (includes loading / unloading): 5 kg or litres												
Manitoba: 5 kg or litres													
TDG Information													
Shipping Name	Class	PIN	Packing Group	Special Provisions									
SOLIDS CONTAINING TOXIC LIQUID, N.O.S (Soil / debris contaminated with "Specific Chemical Name")	6.1	UN 3243	II	16, 57									
Placards:	Class 6.1 (in bulk or over 500 kg).												
Comments:	Many pesticides are not classified as poisonous substances in TDG. Check classification of the original product.												
Documentation													
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.												
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or District office.												

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Contaminated Debris & Soil – Pesticide
Waste Information Sheet
September 2016



Contaminated Debris and Soil - Produced Water

Waste Information Sheet

General Information																	
Original Use:	Generated by the accidental spillage of emulsion and produced water. Includes contaminated soils, vegetation, and absorbent materials.																
Physical State:	Solid and liquid (salt water and contaminated solids).																
Components:	Aromatic hydrocarbons, oil and grease, water, sand, sodium, calcium, magnesium and potassium. Many types of salt may be in waste. Most common is sodium chloride (NaCl) – average 2.6%.																
Potential Hazards																	
Class (WHMIS):	B4; D2A																
Hazard Symbols:	<div style="display: flex; align-items: center; justify-content: center;"> </div>																
MSDS: Use MSDS of specific components.																	
Protective Equipment:																	
<div style="display: flex; align-items: center; justify-content: center;"> </div>																	
Environmental:	Produced water with a high salt content will damage vegetation; extremely persistent compound which is toxic to environment in high concentrations.																
Health:	Not an inhalation hazard < 38°C. High vapor concentrations may irritate nose, throat and lungs. May irritate eyes and skin on contact. May contain H ₂ S.																
Management Methods																	
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT:</td> <td style="width: 33%;">Non-Hazardous Waste</td> <td style="width: 33%;">Manitoba:</td> <td style="width: 33%;">Non-Hazardous Waste</td> </tr> <tr> <td>Alberta:</td> <td>Non-Hazardous Waste/Non-DOW</td> <td>Ontario:</td> <td>Non-Hazardous Waste</td> </tr> <tr> <td>Saskatchewan:</td> <td>Non-Hazardous Waste</td> <td>Québec:</td> <td>Residual Material</td> </tr> </table>	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material				
NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste														
Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste														
Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material														
Storage:	If saturated - store in steel drums. Temporary storage on drying pads or lined areas.																
Treatment / Disposal:	<ul style="list-style-type: none"> Recover free liquids, contain contaminated soil within a bermed and lined storage cell, contact Enbridge Environment Staff for treatment and disposal options Small to medium volumes of contaminated soil should be sent to an approved landfill. 																
Comments:	Contact Enbridge Environment Staff on a case specific basis.																
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT:</td> <td style="width: 33%;">25 kg</td> <td style="width: 33%;">Ontario:</td> <td style="width: 33%;">Any quantity</td> </tr> <tr> <td>Alberta:</td> <td>2 m³ (any amount off-site)</td> <td>Québec:</td> <td>Any quantity</td> </tr> <tr> <td>Saskatchewan:</td> <td>1.6 m³ (any amount off-site)</td> <td colspan="2">TDG (includes loading / unloading): 25 kg or litres</td> </tr> <tr> <td>Manitoba:</td> <td>1 kg</td> <td colspan="2"></td> </tr> </table>	NWT:	25 kg	Ontario:	Any quantity	Alberta:	2 m ³ (any amount off-site)	Québec:	Any quantity	Saskatchewan:	1.6 m ³ (any amount off-site)	TDG (includes loading / unloading): 25 kg or litres		Manitoba:	1 kg		
NWT:	25 kg	Ontario:	Any quantity														
Alberta:	2 m ³ (any amount off-site)	Québec:	Any quantity														
Saskatchewan:	1.6 m ³ (any amount off-site)	TDG (includes loading / unloading): 25 kg or litres															
Manitoba:	1 kg																
TDG Information																	
Shipping Name	Class	PIN	Packing Group	Special Provisions													
<i>See TDG Comments Below</i>	-	-	-	-													
Placards:	Dependent on specific contaminant.																
Comments:	Classifications for this waste may vary depending on the specific contaminant. If waste contains significant quantities of petroleum crude oil, waste could be classed as SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S. ("Technical Name of Contaminant"). Refer to <i>Contaminated Debris and Soil – Oil/Condensate</i> Waste Information Sheet.																
Documentation																	
Transportation Documents:	Dependent on specific contaminant.																
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.																

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Contaminated Debris & Soil - Produced Water
Waste Information Sheet
September 2016



**Contaminated Debris & Soil -
Refined Products**
Waste Information Sheet


General Information									
Original Use:	This waste is generated by the accidental spillage of refined products. Includes contaminated soils, vegetation and absorbent materials.								
Physical State:	Solid (liquid and contaminated solids).								
Components:	Refined products, heavy metals (As, Cd, Cr, Pb, Hg, Ni, Tl or Se) soils, boron, barium, other spill debris and absorbent materials.								
Potential Hazards									
Class (WHMIS): B4	MSDS: All refined products.								
Hazard Symbols:	Protective Equipment:								
Environmental:	Potential groundwater contamination from hydrocarbons if disposed in landfill.								
Health:	Migration of hydrocarbons also possible with land treatment. Not an inhalation hazard below 38°C. High vapor concentrations may irritate nose, throat and lungs. May irritate eyes and skin on contact.								
Management Methods									
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: Hazardous Waste</td> <td style="width: 50%;">Manitoba: Hazardous Waste</td> </tr> <tr> <td>Alberta: Hazardous Waste/DOW</td> <td>Ontario: Hazardous Waste</td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> </tr> </table>	NWT: Hazardous Waste	Manitoba: Hazardous Waste	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
NWT: Hazardous Waste	Manitoba: Hazardous Waste								
Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste								
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material								
Storage:	Store in steel vessels, drums, etc. Temporary storage on drying pads or in/on lined pits or ground.								
Treatment / Disposal:	<ul style="list-style-type: none"> Recover free liquids, contain contaminated soil within a bermed and lined storage cell, contact Enbridge Environment Staff for treatment and disposal options Non-hazardous, Landfill, Bioremediation 								
Comments:	Minimize contamination potential through the use of spill containment measures such as dikes and drip pans. Various jurisdictions have specific rules around the management of hydrocarbon contaminated materials. Contact the Enbridge Environment Staff to provide assistance.								
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: 25 kg</td> <td style="width: 50%;">Ontario: Any quantity</td> </tr> <tr> <td>Alberta: 25 kg</td> <td>Québec: Any quantity</td> </tr> <tr> <td>Saskatchewan: 1.6 m³ (any amount off-site)</td> <td>TDG (includes loading / unloading): 25 kg or litres</td> </tr> <tr> <td>Manitoba: 1 kg</td> <td></td> </tr> </table>	NWT: 25 kg	Ontario: Any quantity	Alberta: 25 kg	Québec: Any quantity	Saskatchewan: 1.6 m ³ (any amount off-site)	TDG (includes loading / unloading): 25 kg or litres	Manitoba: 1 kg	
NWT: 25 kg	Ontario: Any quantity								
Alberta: 25 kg	Québec: Any quantity								
Saskatchewan: 1.6 m ³ (any amount off-site)	TDG (includes loading / unloading): 25 kg or litres								
Manitoba: 1 kg									
TDG Information									
Shipping Name	Class	PIN	Packing Group	Special Provisions					
SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (soil / debris contaminated with petroleum crude oil)	4.1	UN3175	II	16,56					
Placards:	Class 4.1 (in bulk or over 500 kg)								
Comments:	May not be TDG regulated. Dependent on flash point test.								
Documentation									
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.								

Need further information?
Contact Enbridge Environment Staff in Edmonton.

**Contaminated Debris & Soil - Refined
Products**
Waste Information Sheet
September 2016



**Contaminated Groundwater,
Sludges/Slurries**
Waste Information Sheet







General Information									
Original Use:	This waste is generated by the removal of groundwater and/or material classified as a sludge/slurry (i.e., a loose combination of soil and water).								
Physical State:	Liquid or semi-solid.								
Components:	Road salt, pesticides and herbicides, accidental spills of hazardous and non-hazardous materials.								
Potential Hazards									
Class (WHMIS): N/A	MSDS: None								
Hazard Symbols:	Protective Equipment: 								
Environmental:	Waste characterization required to identify pollution concerns.								
Health:	No hazards.								
Management Methods									
Waste Classification:	<table border="0"> <tr> <td>NWT: Testing Required</td> <td>Manitoba: Testing Required</td> </tr> <tr> <td>Alberta: Testing Required</td> <td>Ontario: Testing Required</td> </tr> <tr> <td>Saskatchewan: Testing Required</td> <td>Québec: Testing Required</td> </tr> </table>	NWT: Testing Required	Manitoba: Testing Required	Alberta: Testing Required	Ontario: Testing Required	Saskatchewan: Testing Required	Québec: Testing Required		
NWT: Testing Required	Manitoba: Testing Required								
Alberta: Testing Required	Ontario: Testing Required								
Saskatchewan: Testing Required	Québec: Testing Required								
Storage:	Large volumes may be temporarily stored in lined pits. For lesser volumes store in tanks or barrels.								
Treatment / Disposal:	<ul style="list-style-type: none"> Recover free liquids, contain contaminated sludge/slurry within a bermed and lined storage cell, contact Enbridge Environment Staff for treatment and disposal options. Non-hazardous. 								
Comments:	Minimize contamination potential through the use of spill containment measures. Various jurisdictions have specific rules around the management of materials that pose a contamination risk. Contact the Enbridge Environment Staff to provide assistance.								
Reportable Release Quantity:	<table border="0"> <tr> <td>NWT: N/A</td> <td>Ontario: N/A</td> </tr> <tr> <td>Alberta: N/A</td> <td>Québec: N/A</td> </tr> <tr> <td>Saskatchewan: N/A</td> <td>TDG (includes loading / unloading): N/A</td> </tr> <tr> <td>Manitoba: N/A</td> <td></td> </tr> </table>	NWT: N/A	Ontario: N/A	Alberta: N/A	Québec: N/A	Saskatchewan: N/A	TDG (includes loading / unloading): N/A	Manitoba: N/A	
NWT: N/A	Ontario: N/A								
Alberta: N/A	Québec: N/A								
Saskatchewan: N/A	TDG (includes loading / unloading): N/A								
Manitoba: N/A									
TDG Information									
Shipping Name	Class	PIN	Packing Group	Special Provisions					
<i>Not TDG Regulated</i>	N/A	N/A	N/A	N/A					
Placards:	N/A								
Comments:	If the material is contaminated with dangerous goods, TDG Regulations may apply..								
Documentation									
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.								

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Contaminated Groundwater, Sludges/Slurries
Waste Information Sheet
September 2016



Drag Reducing Agent (DRA)
– Flow Improver
Waste Information Sheet





General Information				
Original Use:	This material is injected into the pipeline system to reduce friction and viscosity elements to improve the overall "flowability" of pipeline liquids.			
Physical State:	Opaque amber to light green liquid, hydrocarbon/solvent-like odour.			
Components:	Various petroleum hydrocarbons (> 90%).			
Potential Hazards				
Class (WHMIS):	B3, D2B	MSDS:	Use MSDS for specific product (e.g. CDR Flow Improver from Conoco Inc., Houston, TX, USA).	
Hazard Symbols:	 		Protective Equipment:	   
Environmental:	A highly mobile waste stream. Potential for groundwater and soil contamination. Possible toxic vapours and fire hazard with on-site recycling operations.			
Health:	May cause minor skin, eye and lung irritation. Toxic if ingested.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
Storage:	Store in steel drums or tanks in a well ventilated area away from heat sources.			
Treatment / Disposal:	Return to supplier or solvent recycler for recycling. Send to an appropriate (approved) waste management facility			
Comments:	May need to test to determine actual classification due to variety of products			
Reportable Release Quantity:	NWT: 100 litres	Ontario: Any quantity		
	Alberta: 200 kg or litres	Québec: Any quantity		
	Saskatchewan: 500 litres (100 off-site)	TDG (includes loading / unloading): 200 kg or L		
	Manitoba: 100 litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
PETROLEUM PRODUCTS, N.O.S.	3	UN1268	I, II or III	None
Placards:	Class 3 (in bulk or over 500 kg)			
Comments:	The above classification is based on a pure product. If the waste is contaminated with other materials, OTHER TDG Shipping Names MAY APPLY.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Drag Reducing Agent (DRA) – Flow Improver
Waste Information Sheet
September 2016



**Drag Reducing Agent
(DRA) – Liquid Power or
EP-1000 Extreme Power**
Waste Information Sheet

General Information					
Original Use:	This material is injected into the pipeline system to reduce friction and viscosity elements to improve the overall "flowability" of pipeline liquids.				
Physical State:	White liquid with a mild odour.				
Components:	Water and calcium (CDR Liquid Power), Ethylene glycol, alcohols, C12-14-secondary, ethoxylated (EP-1000 Extreme Power) and other unknown constituents (protected by product patent) (both).				
Potential Hazards					
Class (WHMIS):	N/A	MSDS:	Use MSDS for specific product (i.e. CDR Liquid Power from Conoco Inc. and Extreme Power EP 1000 from Phillips Specialty Products Inc., both in Houston, TX, USA).		
Hazard Symbols:	N/A	Protective Equipment:	   		
Environmental:	No significant impacts. Mild caustic - may cause localized pH alteration in soils or surface waters.				
Health:	May cause minor skin, eye and lung irritation.				
Management Methods					
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste		
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste		
	Saskatchewan: Non-Hazardous Waste	Québec:	Residual Material		
Storage:	Store in steel drums or tanks in a well ventilated area. Segregate from strong oxidizing agents.				
Treatment / Disposal:	Return to supplier (if "un-spent"). Send to an appropriate (approved) waste management facility				
Comments:					
Reportable Release Quantity:	NWT: Any vol. causing an adverse impact	Ontario:	Any quantity		
	Alberta: Any vol. causing an adverse impact	Québec:	Any quantity		
	Saskatchewan: Any vol. causing an adverse impact	TDG (includes loading / unloading): N/A			
	Manitoba: Any vol. causing an adverse impact				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
Not TDG Regulated		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

**Drag Reducing Agent (DRA) – Liquid
Power or EP-1000 Extreme Power**
Waste Information Sheet
September 2016



**Electronics – Computer/
Printer Equipment**
Waste Information Sheet

General Information					
Original Use:	Includes broken and obsolete computer desktop, laptop and notebook computer terminals, keyboards, mouse, disk drives, monitors and printers from offices.				
Physical State:	Solid				
Components:	Plastic casings containing various components including heavy metals, such as lead, cadmium and mercury, and valuable materials such as aluminum, ferrous metals and copper.				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Not Applicable.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Illegal burning may produce toxic fumes. Decomposition in landfills may cause leaching of toxins into the soil and groundwater.				
Health:	Not expected to be a hazard unless casing is forcibly broken or damaged to expose potentially hazardous components.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Store in bins or in areas of low traffic volumes on-site. Segregate computer monitors from other waste computer equipment to facilitate recycling. Maintain waste volumes in a neat and orderly manner. Protect from high heat and moisture.				
Treatment / Disposal:	<ul style="list-style-type: none"> If available, use provincial, municipal, supplier, or retailer waste electrical and electronic equipment (WEEE) stewardship (take-back and recycling) programs. Landfill – verify with provincial environmental agency or landfill operator. 				
Comments:					
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Electronics – Computer / Printer Equipment
Waste Information Sheet
September 2016



**Electronics – Printer
Cartridges**
Waste Information Sheet


General Information					
Original Use:	Includes empty ink and toner cartridges from office computer equipment and printers.				
Physical State:	Solid				
Components:	Small quantities of various chemicals, depending on the cartridge manufacturer (Propanol, ethanol, iron oxide).				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Use MSDS of specific cartridge.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Illegal burning may produce toxic fumes. Decomposition in landfills may cause leaching of toxins into the soil and groundwater.				
Health:	Encased in a cartridge and are not accessible unless forcibly broken or damaged. Not expected to be a health risk under normal circumstances. Exposure to the chemical components of damaged or broken cartridges may cause eye irritation.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Store in bins or in areas of low traffic volumes on-site. Segregate from other waste to facilitate recycling. Maintain waste volumes in a neat and orderly manner. Protect from high heat and moisture.				
Treatment / Disposal:	<ul style="list-style-type: none"> • If available, use provincial, municipal, supplier, or retailer stewardship programs. Some manufacturers can rebuild toner cartridges with new drums; refilled ink-jet cartridges or self-refill kits can also be purchased. • BE CAREFUL when using refilled cartridges or self-refill kits; may not be compatible with printer. • Where opportunities for the 4R's are unavailable, landfill, unless the chemical content warrants management as hazardous waste. Check the MSDS. 				
Comments:					
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is broken, damaged or contaminated with dangerous goods, TDG Regulations may apply. Verify classification of waste with contaminants as per the MSDS.				
Documentation					
Transportation Documents:	Truck Ticker or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Electronics – Printer Cartridges
Waste Information Sheet
September 2016



Filters - Air
Waste Information Sheet

General Information					
Original Use:	Filters are non-regenerable air filters from air intake on compressors, electric motors and air conditioners.				
Physical State:	Sock cartridge, canister units, fibre sheets and/or plates.				
Components:	Particulates. No other data available.				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Not applicable.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Illegal incineration may produce toxic fumes. Possible spontaneous combustion.				
Health:	Not an inhalation hazard below 38°C. High vapor concentrations may irritate nose. Slight skin irritations.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Store with other dry garbage. Well ventilated storage areas.				
Treatment / Disposal:	Prior to disposal, segregate from other types of filters (e.g., lube oil) and landfill.				
Comments:					
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Filters – Air
Waste Information Sheet
September 2016



Filters - Glycol

Waste Information Sheet

General Information													
Original Use:	Facilities where glycol is used as a heat trace. Filters used for the removal of corrosion products, and other impurities from glycol when recycled or regenerated in a closed system.												
Physical State:	Cartridge or paper filters.												
Components:	May contain triethylene glycol (TEG), diethylene glycol (DEG), ethylene glycol (EG), propylene glycol (PG) hydrocarbons, boron, chromium, copper, nickel, lead zinc, iron sulphide and carbon.												
Potential Hazards													
Class (WHMIS): D2A	MSDS: Use MSDS of components (e.g.; TEG, DEG, EG).												
Hazard Symbols: <div style="text-align: center; font-size: 2em;">⚠</div>	Protective Equipment: <div style="text-align: center;"> </div>												
Environmental:	Potential groundwater contamination if disposed in a landfill. Wash water may contain high levels of glycol. Incineration may produce toxic fumes.												
Health:	Not an inhalation hazard if < 38°C. High vapor concentration may irritate nose. Avoid prolonged exposure.												
Management Methods													
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT: Hazardous Waste</td> <td style="width: 33%;">Manitoba: Hazardous Waste</td> <td style="width: 33%;"></td> </tr> <tr> <td>Alberta: Hazardous Waste/DOW</td> <td>Ontario: Hazardous Waste</td> <td></td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> <td></td> </tr> </table> <p>Note: Above classification if contaminated – see TDG Comments below.</p>	NWT: Hazardous Waste	Manitoba: Hazardous Waste		Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste		Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material				
NWT: Hazardous Waste	Manitoba: Hazardous Waste												
Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste												
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material												
Storage:	Store temporarily in drain barrels to allow for the drainage of any free liquids. Transfer to designated filter bin / bag (glycol filters used in sour service may be pyrophoric; store in sealed steel drums). Keep in well ventilated storage area.												
Treatment / Disposal:	<ul style="list-style-type: none"> Scheduled pick up by waste contractor for treatment at recycling/recovery facility. Treated filters are then landfilled (depending on application) as nonhazardous materials. Recycle drained liquids or send to an appropriate (approved) waste management facility. 												
Comments:	<ul style="list-style-type: none"> Use filters with removable cores to reduce waste volumes. Pyrophoric filters cannot be stored in bins or tote bags. 												
Reportable Release Quantity: (Note: based on Class 4.1 or 4.2.)	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">NWT: 25 kg or litres</td> <td style="width: 33%;">Ontario: Any quantity</td> <td style="width: 33%;"></td> </tr> <tr> <td>Alberta: 25 kg or litres</td> <td>Québec: Any quantity</td> <td></td> </tr> <tr> <td>Saskatchewan: 25 kg or litres</td> <td colspan="2">TDG (includes loading / unloading): 25 kg or litres</td> </tr> <tr> <td>Manitoba: 1 kg or litre</td> <td colspan="2"></td> </tr> </table>	NWT: 25 kg or litres	Ontario: Any quantity		Alberta: 25 kg or litres	Québec: Any quantity		Saskatchewan: 25 kg or litres	TDG (includes loading / unloading): 25 kg or litres		Manitoba: 1 kg or litre		
NWT: 25 kg or litres	Ontario: Any quantity												
Alberta: 25 kg or litres	Québec: Any quantity												
Saskatchewan: 25 kg or litres	TDG (includes loading / unloading): 25 kg or litres												
Manitoba: 1 kg or litre													
TDG Information													
Shipping Name	Class	PIN	Packing Group	Special Provisions									
PYROPHORIC SOLIDS MIXTURE, N.O.S. (waste filters contaminated with iron sulphide)	4.2	UN 2846 **ERAP**	I	16,38									
SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S. (Technical Name)	4.2	UN 3175	II	16,56									
Placards:	Class 4.2 as appropriate (in bulk or over 500 kg).												
Comments:	EG, PG, DEG and TEG filters are not TDG regulated. However, after use in gas dehydration processes, glycol filters may be pyrophoric, flammable, or leachable as indicated by TDG classifications above. Pyrophoric solids (Class 4.2) are prohibited for bulk transport. **ERAP** Cannot offer for transport dangerous goods having PIN UN2846 when the quantity of that good exceeds 1,000 kg or litres for the dangerous goods without an Emergency Response Assistance Plan approved by Transport Canada. Verify with the Enbridge Environment Staff.												
Documentation													
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.												
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.												

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Filters – Glycol
Waste Information Sheet
September 2016



Filters - Lubricating Oil

Waste Information Sheet

General Information	
Original Use:	Filters from engines, rotating equipment and lubricating oil clean-up systems. Used for the removal of corrosion products, degradation sludges and other impurities.
Physical State:	Cloth or paper cartridges of various sizes, metal cartridges.
Components:	Hydrocarbons, lead, zinc, additives, and other trace heavy metals, N-hexane, naptha. May also contain triphenyl phosphates, anti-rust and anti-oxidant additives. Fibre, water, ash, sand.
Potential Hazards	
Class (WHMIS):	D2B
Hazard Symbols:	<div style="display: flex; align-items: center; justify-content: center;"> </div>
	MSDS: Lubricating Oil. Protective Equipment: <div style="display: flex; align-items: center; justify-content: center;"> </div>
Environmental:	Potential groundwater contamination (metals leaching) if disposed in a landfill. Heavy metals may release under acidic conditions. Hydrocarbons are toxic in soil and water. Incineration may produce toxic fumes.
Health:	Not an inhalation hazard if < 38°C. High vapor concentrations may irritate nose and throat. Slight skin irritations.
Management Methods	
Waste Classification:	<div style="display: flex; justify-content: space-between;"> <div> NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good </div> <div> Manitoba: Hazardous Waste Ontario: Hazardous Waste Québec: Residual Hazardous Material </div> </div> <p>Note: Alberta – Waste Type 201 – spent / undrained lube oil filters from internal combustion engines. Testing may be required for classification. Dependent on application.</p>
Storage:	Store temporarily in drain barrels to allow for the drainage of any free liquids. Transfer to designated filter bin / bag. Keep in well ventilated storage area.
Treatment / Disposal:	<ul style="list-style-type: none"> Scheduled pick up by waste contractor for recycling/recovery of used oil. Drained liquids should be recycled.
Comments:	Install reusable filter systems on compressors.
Reportable Release Quantity:	<div style="display: flex; justify-content: space-between;"> <div> NWT: 25 kg Alberta: 25 kg or litres Saskatchewan: 100 kg (50 kg off-site) Manitoba: 1 kg </div> <div> Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 25 kg or litres </div> </div>
TDG Information	
Shipping Name	Class
<i>See TDG Comments below</i>	-
Packing Group	Special Provisions
-	-
Placards:	
Comments:	Lubricating oil filters are not TDG regulated. If there is any indication that the lube oil may have any contaminants, then further TDG testing may be required for flammability and leachates. Other possible classes are Flammable Solids N.O.S. (lube oil filters); Class 4.1, UN 3175, PG II.
Documentation	
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Filters - Lubricating Oil
Waste Information Sheet
September 2016



Fuel - Diesel
Waste Information Sheet





General Information					
Original Use:	Vehicle fuel.				
Physical State:	Flammable liquid.				
Components:	Mixture of hydrocarbons. May contain benzene, naphthalene, sulphur.				
Potential Hazards					
Class (WHMIS):	B3, D2B		MSDS:	Low Sulphur Diesel	
Hazard Symbols:			Protective Equipment:		
Environmental:	Possible groundwater or surface water contamination if spilled or leaked. Can be toxic to aquatic life.				
Health:	Causes sever skin irritation. Aspiration hazard if swallowed. Use with adequate ventilation. Avoid contact or inhalation of fumes.				
Management Methods					
Waste Classification:	NWT:	Hazardous Waste	Manitoba:	Hazardous Waste	
	Alberta:	Hazardous Waste/DOW	Ontario:	Hazardous Waste (221-I)	
	Saskatchewan:	Waste Dangerous Good	Québec:	Residual Hazardous Material	
Storage:	Store in tightly closed approved containers at a field facility. Keep closed. Store in a cool, dry, well-ventilated place away from heat, direct sunlight, and all sources of ignition.				
Treatment / Disposal:	Hazardous Waste Management Facility				
Comments:					
Reportable Release Quantity:	NWT:	100 litres	Ontario:	Any quantity	
	Alberta:	200 litres	Québec:	Any quantity	
	Saskatchewan:	100 litres (100 litres off-site)	TDG (includes loading / unloading): 200 litres		
	Manitoba:	100 litres			
TDG Information					
Shipping Name			Class	PIN	Packing Group
DIESEL FUEL			3	UN1202	III
Special Provisions					
82,88					
Placards:	Class 3 (in bulk or over 500 kg).				
Comments:					
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Fuel – Diesel
Waste Information Sheet
September 2016



Fuel - Gasoline
Waste Information Sheet

General Information				
Original Use:	Vehicle fuel.			
Physical State:	Flammable liquid.			
Components:	Mixture of hydrocarbons. May contain ethanol, benzene, toluene, xylene.			
Potential Hazards				
Class (WHMIS):	B3, D2B	MSDS:	Gasoline	
Hazard Symbols:	 		Protective Equipment:	 
Environmental:	Possible groundwater or surface water contamination if spilled or leaked. Can be toxic to aquatic life.			
Health:	May cause skin irritation, headaches, nausea or dizziness with prolonged exposure. Use with adequate ventilation. Avoid contact or inhalation of fumes.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (221-I)		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
Storage:	Store in tightly closed approved containers at a field facility. Keep closed. Store in a cool, dry, well-ventilated place away from heat, direct sunlight, and all sources of ignition.			
Treatment / Disposal:	Hazardous Waste Management Facility			
Comments:				
Reportable Release Quantity:	NWT: 100 litres	Ontario: Any quantity		
	Alberta: 200 litres	Québec: Any quantity		
	Saskatchewan: 100 litres (100 litres off-site)	TDG (includes loading / unloading): 200 litres		
	Manitoba: 100 litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
GASOLINE	3	UN1203	II	17, 82, 88
Placards:	Class 3 (in bulk or over 500 kg).			
Comments:				
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			


Need further information?
Contact Enbridge Environment Staff in Edmonton.

Fuel – Gasoline
Waste Information Sheet
September 2016



Garbage - Domestic Waste

Waste Information Sheet

General Information					
Original Use:	Includes waste from offices, miscellaneous warehouse packaging and construction camps. Does not include sanitary sewage. See also Metal-scrap and Containers waste information sheets.				
Physical State:	Mixed garbage. Synonyms: Trash, Refuse.				
Components:	Paper, metal, glass, organic, wood, cloth.				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Not Applicable.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Accumulated garbage may attract wildlife. Illegal burning may produce toxic fumes. Landfills may cause gas venting and leachate problems. Possible spontaneous combustion. Possible hazardous containers if not properly segregated.				
Health:	Not expected to be a hazard.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Store in bins or in areas of low traffic volumes on-site. Segregate waste types to facilitate recycling. Maintain waste volumes in a neat and orderly manner. Protect from wind.				
Treatment / Disposal:	<ul style="list-style-type: none"> Send / transfer to an approved landfill. Segregate and recycle paper, cardboard, glass, metal, and plastic. 				
Comments:	Ontario requires that office buildings greater than 10,000 square metres have a source separation program.				
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
Not TDG Regulated		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply. Cover all open loads during transport.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Garbage - Domestic Waste
Waste Information Sheet
September 2016



Glycol

Waste Information Sheet

General Information					
Original Use:	Engine and compressor coolant. Dehydration for natural gas processing. Heat trace and heat medium (line heaters, utility boilers). Antifreeze for tank farm roof drains and fire pumps.				
Physical State:	Liquid usually mixed 1:1 with water (depending on particular use). Synonyms: Ethylene glycol, antifreeze, monoethylene glycol or glycol alcohol.				
Components:	Glycol, iron oxide (trace), iron sulphide, heavy metals. May contain some additives (corrosion inhibitors) for antifreeze.				
Potential Hazards					
Class (WHMIS):	D2A	MSDS:	Use MSDS of specific components (e.g. TEG, DEG, EG, Antifreeze, Ethylene Glycol).		
Hazard Symbols:			Protective Equipment:		
Environmental:	Storage in unlined pits or general spills can cause surface and groundwater contamination. Fatal to wildlife.				
Health:	Inhalation of fumes may cause throat irritation and headaches. Toxic when ingested; could result in kidney damage. Moderate irritation to skin, eyes and mucous tissues upon contact.				
Management Methods					
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste			
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (212-L)			
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material			
	Note: See comment under TDG information.				
Storage:	Store material in steel drums at field facility. Store in a cool well ventilated place.				
Treatment / Disposal:	<ul style="list-style-type: none"> Send to glycol supplier for recycling. Glycol from tank roof drain lines should be contained for use the following year. Vehicle antifreeze should be changed and recycled by a qualified service centre. Filter and reuse in process (may require the addition of corrosion inhibitor). In Alberta, if glycol content < 40%, waste may be injected via Class Ia or Ib injection well. 				
Reportable Release Quantity:	NWT: 100 litres	Ontario: Any quantity			
	Alberta: 200 kg or litres	Québec: Any quantity			
	Saskatchewan: 25 litres (5 litres off-site)	TDG (includes loading / unloading): 200 kg or L			
	Manitoba: 100 litres				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
FLAMMABLE LIQUID, N.O.S. ("Technical Name")		3	UN 1993	I, II or III	16
TOXIC LIQUID, ORGANIC, N.O.S.		6.1	UN2810	I, II or III	16
Placards:	Class 3 (in bulk or over 500 kg).				
Comments:	There are various TDG categories for glycol wastes. The above is one example. OTHER TDG Shipping Names MAY APPLY. Dependent on specific waste chemical. If flash point ≤ 60°C then it will be TDG regulated. Due to processes, transformations and mixtures, this waste may contain dangerous goods and should be tested - if not pure waste glycol. The additives in antifreeze may make this waste TDG regulated as above. Not regulated if not contaminated with a dangerous good.				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate; dependent if glycol is contaminated with a dangerous good.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Glycol
Waste Information Sheet
September 2016



H₂S Sensing Tape

Waste Information Sheet




General Information					
Original Use:	Sensing tape used for the detection of H ₂ S leaks.				
Physical State:	White tape strips.				
Components:	Lead acetate and acetic acid.				
Potential Hazards					
Class (WHMIS):	The "tape" itself is not a controlled product.		MSDS:	Lead acetate, acetic acid.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Toxic leachate, soil and groundwater contamination from lead acetate if improperly landfilled. Co-dispose with limestone.				
Health:	Not expected to be hazard however avoid prolonged skin contact. Handle with gloves. Wash thoroughly after handling.				
Management Methods					
Waste Classification:	NWT:	Hazardous Waste	Manitoba:	Hazardous Waste	
	Alberta:	Hazardous Waste/DOW	Ontario:	Hazardous Waste	
	Saskatchewan:	Waste Dangerous Good	Québec:	Residual Hazardous Material	
Storage:	Seal inside plastic bags and keep in closed containers, in covered location away from flammable locations.				
Treatment / Disposal:	Hazardous – Hazardous Waste Disposal Facility. Landfill which accepts hazardous waste.				
Comments:					
Reportable Release Quantity:	NWT:	5 kg or liters	Ontario:	Any quantity	
	Alberta:	5 kg or liters	Québec:	Any quantity	
	Saskatchewan:	5 kg or litres	TDG (includes loading / unloading): 5 kg or litres		
	Manitoba:	5 kg or litres			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
LEAD ACETATE		6.1	UN1616	III	109, 118
Placards:	Class 6.1 (in bulk or over 500 kg)				
Comments:					
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or District office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

H₂S Sensing Tape
Waste Information Sheet
September 2016



Halon
Waste Information Sheet

General Information				
Original Use:	Pressurized for use in refrigeration and fire extinguishing systems. Federal government has imposed strict control on non-essential uses and the discharge testing of fire extinguishing system.			
Physical State:	Dense colorless gas with slight ethereal odor. May occur as a liquid under extreme pressure.			
Components:	Bromotrifluoromethane (Brominated fluorocarbon). Trade names examples are Halon 1301, Fluorocarbon 1301, Trifluorobromomethane, Freon 13B1, R13B1.			
Potential Hazards				
Class (WHMIS):	A	MSDS:	Halon 1301	
Hazard Symbols:		Protective Equipment:	 	
Environmental:	Linked to depletion of ozone layer in upper atmosphere.			
Health:	Very low toxicity, weak narcotic. Eye irritant. May cause frost bite and skin burns. High concentrations may cause Asphyxiation without warning.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good		Manitoba: Hazardous Waste Ontario: Hazardous Waste. (331-R) Québec: Residual Hazardous Material	
Storage:	Closed pressurized systems only. Store cylinders in an upright position in a dry well-ventilated area.			
Treatment / Disposal:	Contact appropriate (approved) supplier, recycler and/or Enbridge Environment Staff for assistance.			
Comments:	Contact supplier for disposal of any halon wastes - high potential for supplier to re-use and recycle. Halon systems that are no longer required should have the halon storage units removed by supplier. If a halon system is to be tested, send to a testing company that uses an environmentally acceptable testing procedure. Ensure that the company empties the halon into another tank before hydrostatically testing the cylinder and then re-injects the gas once the test is complete. Do not empty halon cylinders or extinguishers before sending the cylinder for structural testing.			
Reportable Release Quantity:	NWT: Any quantity Alberta: Any quantity Saskatchewan: Any quantity Manitoba: Any quantity		Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): Any quantity	
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:	Dependent on specific waste chemical.			
Comments:	Dependent on specific waste chemical.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			




Need further information?
Contact Enbridge Environment Staff in Edmonton.

Halon
Waste Information Sheet
September 2016



Hydrotest Fluids - Methanol

Waste Information Sheet

General Information					
Original Use:	Methanol is used as a hydrotest fluid for pipelines and for dehydration in gas processing. Also used for hydrate removal.				
Physical State:	Low viscosity clear liquid, alcohol-like odor.				
Components:	Methanol.				
Potential Hazards					
Class (WHMIS):	B2, D1B, D2A, D2B.	MSDS:	Use MSDS of specific components (e.g.; Methanol, Methyl Hydrate).		
Hazard Symbols:		Protective Equipment:	 		
Environmental:	Potential groundwater contamination if spilled. Very toxic to aquatic life.				
Health:	Vapors may irritate nose, throat, lungs, and cause eye irritation. Methanol is readily absorbed by the skin and may produce nervous system effects.				
Management Methods					
Waste Classification:	NWT:	Hazardous Waste	Manitoba:	Hazardous Waste	
	Alberta:	Hazardous Waste/DOW	Ontario:	Hazardous Waste	
	Saskatchewan:	Waste Dangerous Good	Québec:	Residual Hazardous Material	
Storage:	Store in steel drums or tanks at field facility. Keep in a well ventilated area away from heat sources.				
Treatment / Disposal:	<ul style="list-style-type: none"> Reuse fluids for subsequent hydro-testing operations. Send to waste contractor for recovery of product or incineration. Deep well disposal well. 				
Comments:	If large hydrostatic test requires methanol, consideration should be given to renting methanol water mixture from supplier and returning mixture to supplier when test is completed.				
Reportable Release Quantity:	NWT:	100 litres	Ontario:	Any quantity	
	Alberta:	200 kg or litres	Québec:	Any quantity	
	Saskatchewan:	500 litres (100 off-site)	TDG (includes loading / unloading): 200 kg or L		
	Manitoba:	100 litres			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
METHANOL		3 (6.1)	UN 1230	II	43
FLAMMABLE LIQUIDS, N.O.S. ("Technical Name")		3	UN1993	I, II or III	16
Placards:	Class 3 (in bulk or over 500 kg).				
Comments:	First TDGR classification for pure methanol. If contaminated with inert substances or a mixture of two or more dangerous goods, then the second shipping name may apply.				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				


Need further information?
Contact Enbridge Environment Staff in Edmonton.

Hydrotest Fluids – Methanol
Waste Information Sheet
September 2016



Hydrotest Fluids - Water

Waste Information Sheet

General Information					
Original Use:	Surface water or municipal source water used as a hydrotest fluid for pipelines.				
Physical State:	Condition of source water. Impurities from testing may discolour water.				
Components:	Possible components include iron, nickel, lead, suspended solids and oil.				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Not applicable.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Potential erosion and surface water sedimentation when released following hydrotest operation.				
Health:	No significant health issues.				
Management Methods					
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste			
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario: Non-Hazardous Waste			
	Saskatchewan: Non-Hazardous Waste	Québec: Residual Material			
Storage:	Surface storage in pits and depressions must be in accordance with construction permit and municipal authority. Consultation may also be required with the provincial environment authority.				
Treatment / Disposal:	<ul style="list-style-type: none"> • Reuse fluids for subsequent hydro-testing operations. • Surface land release following testing and approval from municipality, provincial environment authority or NEB (See comments below). • Deep well disposal. 				
Comments:	Hydrotest water must always be analyzed prior to watershed release. Must not raise or lower receiving body of water by $\pm 2^{\circ}\text{C}$. If saline water was used, do not discharge onto arable land. Tank water should also be analyzed prior to release onto tank farm area. Provincial environment department approval is required for water use and / or disposal. A significant advance notification time may be required. Refer to ENBRIDGE procedures. While used hydrostatic test water is not usually a hazardous waste, water may require pre-treatment prior to release – if water becomes contaminated during testing (from sediments and pipeline impurities). Possible treatment methods include filtering and activated carbon treatment.				
Reportable Release Quantity:	NWT: N/A	Ontario: N/A			
	Alberta: N/A	Québec: N/A			
	Saskatchewan: N/A	TDG (includes loading / unloading): N/A			
	Manitoba: N/A				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply. Secure all valves and fittings prior to transport.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				



Need further information?
Contact Enbridge Environment Staff in Edmonton.

Hydrotest Fluids – Water
Waste Information Sheet
September 2016



Insulation (Non-Asbestos)

Waste Information Sheet

General Information																									
Original Use:	Fireproofing and thermal insulation in buildings, pipes, and vessels.																								
Physical State:	Batts of material or rolls.																								
Components:	Fiberglass, calcium silicate, rockwool, foam material.																								
Potential Hazards																									
Class (WHMIS):	D2A	MSDS:	None.																						
Hazard Symbols:		Protective Equipment:																							
Environmental:	Low hazard. Wildlife may ingest.																								
Health:	May cause severe skin, eye and respiratory irritation. Insulation installation or removal will produce an irritating fibre dust.																								
Management Methods																									
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">NWT:</td> <td style="width: 35%;">Non-Hazardous Waste</td> <td style="width: 15%;">Manitoba:</td> <td colspan="2">Non-Hazardous Waste</td> </tr> <tr> <td>Alberta:</td> <td>Non-Hazardous Waste/Non-DOW</td> <td>Ontario:</td> <td colspan="2">Non-Hazardous Waste</td> </tr> <tr> <td>Saskatchewan:</td> <td>Non-Hazardous Waste</td> <td>Québec:</td> <td colspan="2">Residual Material</td> </tr> </table>					NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste		Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste		Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material						
NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste																						
Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste																						
Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material																						
Storage:	Contain in plastic bags or other sealable container at field facility.																								
Treatment / Disposal:	Send / transfer to an approved landfill.																								
Comments:	<ul style="list-style-type: none"> Repair exposed / damaged piping and building insulation. If possible, reuse insulation from demolition projects for new facility construction. 																								
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">NWT:</td> <td style="width: 35%;">N/A</td> <td style="width: 15%;">Ontario:</td> <td colspan="2">N/A</td> </tr> <tr> <td>Alberta:</td> <td>N/A</td> <td>Québec:</td> <td colspan="2">N/A</td> </tr> <tr> <td>Saskatchewan:</td> <td>N/A</td> <td colspan="3">TDG (includes loading / unloading): N/A</td> </tr> <tr> <td>Manitoba:</td> <td>N/A</td> <td colspan="3"></td> </tr> </table>					NWT:	N/A	Ontario:	N/A		Alberta:	N/A	Québec:	N/A		Saskatchewan:	N/A	TDG (includes loading / unloading): N/A			Manitoba:	N/A			
NWT:	N/A	Ontario:	N/A																						
Alberta:	N/A	Québec:	N/A																						
Saskatchewan:	N/A	TDG (includes loading / unloading): N/A																							
Manitoba:	N/A																								
TDG Information																									
Shipping Name		Class	PIN	Packing Group	Special Provisions																				
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A																				
Placards:	N/A																								
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply. Seal before transporting.																								
Documentation																									
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate																								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.																								






Need further information?
Contact Enbridge Environment Staff in Edmonton.

Insulation (Non-Asbestos)
Waste Information Sheet
September 2016



Lead Compounds

Waste Information Sheet

General Information				
Original Use:	Lubricants or other products in which the base is a soluble lead.			
Physical State:	Semi-solid			
Components:	Lead chloride, lead fluoborate.			
Potential Hazards				
Class (WHMIS):	MSDS:			
Hazard Symbols:	Protective Equipment:			
	   			
Environmental:	Lead chloride and lead fluoborate are soluble and can therefore cause potential surface and groundwater contamination.			
Health:	Skin irritant. Toxic in certain concentrations.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good If contaminated soil, a leachate test may be required.	Manitoba: Hazardous Waste Ontario: Hazardous Waste Québec: Residual Hazardous Material		
Storage:	Store off ground in impermeable, sealed containers.			
Treatment / Disposal:	<ul style="list-style-type: none"> Hazardous - Hazardous Waste Management Facility Non-hazardous - If leachate test okay, landfill which is licensed to accept this type of waste. 			
Comments:				
Reportable Release Quantity:	NWT: 5 kg or litres Alberta: 5 kg or litres Saskatchewan: 2 kg Manitoba: 5 kg or litres	Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 5 kg or litres		
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
LEAD COMPOUND, SOLUBLE, N.O.S.	6,1 (9)	UN2291	III	24
Placards:	Class 6.1 (9) (In bulk or over 500 kg)			
Comments:	The above is one example. OTHER TDG Shipping Names MAY APPLY. Dependent on specific waste chemical.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Lead Compounds
Waste Information Sheet
September 2016



**Lubricating Oil -
Hydrocarbon and Synthetic**
Waste Information Sheet

General Information				
Original Use:	Lubrication of oilfield machinery, engines, compressors, and vehicles.			
Physical State:	Hydrocarbon liquids and grease.			
Components:	Chlorinated solvents, naphthalene, benzene, toluene, xylenes, lead, trace metals (i.e. Ba, Cr, V), triphenyl phosphate, butylated triphenyl phosphate, anti-rust and anti-oxidant additives.			
Potential Hazards				
Class (WHMIS):	Not a controlled product.		MSDS:	Lubricating Oil and above chemicals.
Hazard Symbols:			Protective Equipment:	
Environmental:	Potential groundwater and surface water contamination (hydrocarbons and metals) if applied to roads or other ground surfaces.			
Health:	Not an inhalation hazard if < 38°C. May cause some skin and tissue irritation.			
Management Methods				
Waste Classification:	NWT: Non-Hazardous	Manitoba: Non-Hazardous		
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario: Non-Hazardous (252-L)		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Material		
	Note: Above waste classification applies to new and/or unused lubricating oils unless contaminated with heavy metals such as lead, barium or vanadium. Testing may be required.			
Storage:	Store in sealed drums at field facility. Larger quantities should be stored in storage tanks equipped with spill containment measures. Used lubricating oil <i>must</i> be segregated from other produced / waste liquids.			
Treatment / Disposal:	<ul style="list-style-type: none"> Send to a lube oil recycling facility. Verify that recycler is licensed to receive and process lube oil. Return to supplier for recycling. 			
Comments:	Lube oil must be segregated from other waste fluids. Various jurisdictions have specific management requirements for spent lube oil			
Reportable Release Quantity:	NWT: 100 litres	Ontario: Any quantity		
	Alberta: 5 kg or litres	Québec: Any quantity		
	Saskatchewan: 100 litres (50 litres off-site)	TDG (includes loading / unloading): 5 kg or L		
	Manitoba: 100 litres			
TDG Information				
Shipping Name		Class	PIN	Packing Group
See TDG Comments Below		-	-	-
Placards:				
Comments:	Unused (clean) lubricating oils are not regulated under TDG; however, waste lubricating oils, as a result of use in older engines with lead bearings, can contain quantities of metals such as lead, barium or vanadium. Testing may be required. TDG classification and shipping names will depend on specific waste contaminants.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Lubricating Oil - Hydrocarbon / Synthetic
Waste Information Sheet
September 2016



Mercury
Waste Information Sheet

General Information				
Original Use:	Excess mercury from instrument manometers, mercury bulbs in tank level switches, mercooid switches.			
Physical State:	A low viscosity silvery liquid. Odorless. Synonyms: Quicksilver, Hydragryum.			
Components:	Mercury.			
Potential Hazards				
Class (WHMIS):	D1A; D2A.	MSDS:	Mercury.	
Hazard Symbols:	 	Protective Equipment:	 	
Environmental:	Spilled mercury will contaminate pond and drainage ditch sludges and accumulate in drains / gutters within process buildings. Leachate may contain soluble mercury salts.			
Health:	Toxic vapors. Eye irritation. If absorbed by skin, may cause dermatitis. Long or repeated exposure may create emotional disorder and damage to the nervous system, kidneys or liver.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (146-H)		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
Storage:	Store in closed containers and in a cool, well ventilated place away from incompatible materials.			
Treatment / Disposal:	List on a chemical waste exchange program (if pure). Send to a hazardous waste management facility.			
Comments:	Pure mercury may be listed on a chemical waste exchange program for use by other parties. Replace mercury manometers with electronic instruments. Old level switches (wires are known to corrode) replace with ultrasonic level switches.			
Reportable Release Quantity:	NWT: 5 kgs or litres	Ontario: Any quantity		
	Alberta: 5 kgs or litres	Québec: Any quantity		
	Saskatchewan: 100 g	TDG (includes loading / unloading): 5 kgs or litres		
	Manitoba: 5 kgs or litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
MERCURY	8	UN2809	III	
Placards:	Class 8			
Comments:				
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Mercury
Waste Information Sheet
September 2016



Metal - Scrap
Waste Information Sheet



General Information				
Original Use:	Refers to clean material (pipe, pumps, tanks etc.) which is not contaminated with insulation, asbestos, oil or sulphur. See also Waste Information Sheets on Construction and Demolition Material, Insulation (Asbestos) and Insulation (Non-asbestos).			
Physical State:	Solids.			
Components:	Metal (iron, steel, aluminum), traces of organic and inorganic lead, fluorides and other process chemicals.			
Potential Hazards				
Class (WHMIS):	D1A; D2A			
Hazard Symbols:	<div style="display: flex; align-items: center; justify-content: center;"> </div>			
MSDS: None. Protective Equipment: <div style="display: flex; align-items: center; justify-content: center;"> </div>				
Environmental:	Not considered a hazard. Possible ground or air contamination if not cleaned of hydrocarbon residue.			
Health:	Trace chemicals may cause skin and throat irritation. Particles may cause eye damage and irritation. Possible toxic fumes generated within enclosed vessels, units, spaces.			
Management Methods				
Waste Classification:	<div style="display: flex; justify-content: space-between;"> <div> NWT: Non-Hazardous Waste Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Non-Hazardous Waste </div> <div> Manitoba: Non-Hazardous Waste Ontario: Non-Hazardous Waste Québec: Residual Material </div> </div>			
Storage:	Store in a low traffic area of field facility. Keep storage area orderly and segregate metals by type for recycling.			
Treatment / Disposal:	Send to a scrap metal recycler. Ensure no liquid or oil residue prior to sending off site. Drain all liquids from equipment. Wipe liquid from surface where possible. All attempts to recycle must be made. Landfill is last resort.			
Comments:	Ensure waste is not contaminated with chemicals, oil, asbestos, etc.			
Reportable Release Quantity:	<div style="display: flex; justify-content: space-between;"> <div> NWT: N/A Alberta: N/A Saskatchewan: N/A Manitoba: N/A </div> <div> Ontario: N/A Québec: N/A TDG (includes loading / unloading): N/A </div> </div>			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>	N/A	N/A	N/A	N/A
Placards:	N/A			
Comments:	If the waste is contaminated with dangerous goods (e.g. equipment has not been cleaned or equipment contains sufficient quantity of liquid hydrocarbons to still classify it as a dangerous good), TDG Regulations may apply. If the cavities within the equipment still contain liquid then the equipment should be classified according to the classification of the liquid and transported as a dangerous good. Seal equipment's orifices prior to transport.			
Documentation				
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Metal Scrap
Waste Information Sheet
September 2016



Methanol
Waste Information Sheet

General Information				
Original Use:	Methanol is used for drying pipelines (after hydrotesting) or for winter testing of pipelines to prevent from freezing. See Disposal Comments below for information on Hydrotest Water.			
Physical State:	Low viscosity clear colorless liquid, alcohol-like odour.			
Components:	Methanol – usually < 0.5%.			
Potential Hazards				
Class (WHMIS):	B2, D1B, D2A, D2B.	MSDS:	Use MSDS of specific components (e.g.; Methanol, Methyl Hydrate).	
Hazard Symbols:		Protective Equipment:		
Environmental:	Potential groundwater contamination if spilled. Very toxic to aquatic life.			
Health:	Vapours may irritate nose, throat, lungs and cause eye irritation. Methanol is readily absorbed by the skin and may produce nervous system effects.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good	Manitoba: Hazardous Waste Ontario: Hazardous Waste Québec: Residual Hazardous Material		
Storage:	Store in steel drums or tanks in a well ventilated area away from heat sources.			
Treatment / Disposal:	<ul style="list-style-type: none"> Return to supplier for recycling/recovery. Hazardous – Hazardous Waste Management Facility 			
Comments:	If large hydrostatic test requires methanol, consideration should be given to renting methanol water mixture from supplier and returning mixture to supplier when test is completed.			
Reportable Release Quantity:	NWT: 100 litres Alberta: 200 kg or litres Saskatchewan: 500 litres (100 off-site) Manitoba: 100 litres	Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 200 kg or L		
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
METHANOL	3 (6.1)	UN1230	II	43
Placards:	Class 3 (in bulk or over 500 kg)			
Comments:	<ul style="list-style-type: none"> Above TDG classification for pure methanol. If contaminated with non-dangerous goods or mixed with other dangerous goods but methanol in the primary constituent, alternate Shipping Name may apply: FLAMMABLE LIQUIDS, N.O.S. (methanol); Class: 3; PIN: UN1993; Packing Group: II. 			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Methanol
Waste Information Sheet
September 2016



Mud - Drilling
Waste Information Sheet

General Information				
Original Use:	Used in drilling operations to stabilize water sensitive formations, improve borehole stability, alleviate mud rings, reduce drill pipe torque and pumping pressure.			
Physical State:	May be oil based or gel chemical viscous liquid.			
Components:	Mixture of hydrocarbons and may contain corrosives.			
Potential Hazards				
Class (WHMIS):		MSDS: Use MSDS of specific drilling mud type.		
Hazard Symbols:		Protective Equipment:		
Environmental:	Dependent on specific drilling mud type. May be toxic to aquatic species.			
Health:	High vapour concentrations may irritate eyes, skin and breathing, and may result in dizziness and headaches.			
Management Methods				
Waste Classification:	NWT:	Testing Required	Manitoba:	Testing Required
	Alberta:	Testing Required	Ontario:	Testing Required
	Saskatchewan:	Testing Required	Québec:	Testing Required
Storage:	Store in a corrosion resistant (plastic or lined) container at field facility. Keep closed. Store in a cool, well ventilated place away from potential sources of ignition or sparks and from high pH materials.			
Treatment / Disposal:	Recycle where possible Approved Hazardous Waste Management Facility			
Comments:				
Reportable Release Quantity:	NWT:	Dependent on mud type.	Ontario:	Dependent on mud type.
	Alberta:	Dependent on mud type.	Québec:	Dependent on mud type.
	Saskatchewan:	Dependent on mud type.	TDG (includes loading / unloading): Dependent on mud type.	
	Manitoba:	Dependent on mud type.		
TDG Information				
Shipping Name		Class	PIN	Packing Group
<i>See TDG Comments Below</i>		-	-	-
Placards:	Dependent on specific drilling mud waste type.			
Comments:	Drilling mud may be water-based, oil-based, gel, or of other non-aqueous based types. Classification and shipping requirements dependent on specific drilling mud waste type. Testing required.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			



Need further information?
Contact Enbridge Environment Staff in Edmonton.

Mud – Drilling
Waste Information Sheet
September 2016



Oily Rags

Waste Information Sheet

General Information				
Original Use:	Maintenance and spill clean-up operations.			
Physical State:	Oily and dirty cloths.			
Components:	High concentrations of hydrocarbons, solvents and heavy metals, glycols.			
Potential Hazards				
Class (WHMIS):	B4	MSDS:	Use MSDS of specific components (e.g. Crude oil).	
Hazard Symbols:		Protective Equipment:		
Environmental:	Flammable - possible ignition of other landfill wastes. Potential groundwater contamination (from hydrocarbons) if disposed to landfill or directly on ground surface. Incineration without flue gas scrubber may produce toxic fumes.			
Health:	Skin irritation.			
Management Methods				
Waste Classification:	<div style="display: flex; justify-content: space-between;"> <div> NWT: Non-Hazardous Waste Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Non-Hazardous Waste </div> <div> Manitoba: Non-Hazardous Waste Ontario: Hazardous Waste (251-I). Québec: Residual Hazardous Material </div> </div> <p>NOTE: Above classification unless low flash point, BTEX component or hydrocarbon content.</p>			
Storage:	Store in drums or containers with loose-fitting lids at field facility (may be provided by cleaning service). Keep in a well ventilated area away from heat sources. Do not mix with other rags used for chemicals.			
Treatment / Disposal:	<ul style="list-style-type: none"> Send or scheduled pick-up to oily rag cleaning service. If rags cannot be recycled, deposit in waste filter bins for removal by waste contractor. May be landfilled with knowledge of waste contractor and landfill operator. 			
Comments:	In provinces where oily rags are considered to be non-hazardous, they can be recycled through a cleaning or drycleaning service. However the cleaning effluent may pose a worse environmental contamination. Question the cleaner's operations on how its effluent is being disposed.			
Reportable Release Quantity:	<div style="display: flex; justify-content: space-between;"> <div> NWT: 25 kg Alberta: 25 kg or litres Saskatchewan: 100 kg (50 kg off-site) Manitoba: 1 kg </div> <div> Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 25 kg </div> </div>			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("Technical Name")	4.1	UN 3175	II	16,56
Placards:	Class 4.1 as appropriate (in bulk or over 500 kg).			
Comments:	If the rags are heavily oiled, they should be considered as a solid containing a flammable liquid. If dripping, they may be a FLAMMABLE LIQUID, N.O.S. Rags which are contaminated with other substances (e.g. chemicals) may also be TDG regulated. Depending on the level and type of contamination, oily rags may be considered spontaneously combustible, Class 4.2. Testing may be required.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e., manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Oily Rags
Waste Information Sheet
September 2016



Paints, Enamels & Stains

Waste Information Sheet

General Information					
Original Use:	Painting, etc.				
Physical State:	Liquids and dried paint, etc. in containers.				
Components:	Oil based paints, enamels, stain, shellac, varnishes and associated thinners are hazardous materials.				
Potential Hazards					
Class (WHMIS):	Dependent on type of paint.		MSDS:	Dependent on type of paint.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Surface water and groundwater contaminated. Vegetation damage. Fire hazard.				
Health:	High vapour concentrations may cause respiratory problems. Read container labels. Skin and eye irritants.				
Management Methods					
Waste Classification:	NWT:	Hazardous Waste	Manitoba:	Hazardous Waste	
	Alberta:	Hazardous Waste/DOW	Ontario:	Hazardous Waste (145-B)	
	Saskatchewan:	Waste Dangerous Good	Québec:	Residual Hazardous Material	
Storage:	Group common-based paints together. Keep in original containers. Liquid, grouped paints and associated materials should be stored in sealed lined drums or similar containers.				
Treatment / Disposal:	Coordinate paint projects to reduce excess leftover supplies. Use all paint in containers. Non-hazardous paint materials should be recycled. Possible some off-site recycling of some oil and metallic based paints.				
Comments:	See also "Containers - Paint, Stain, Enamel" Waste Information Sheet.				
Reportable Release Quantity (if Class 3)	NWT:	100 litres	Ontario:	Any quantity	
	Alberta:	200 litres	Québec:	Any quantity	
	Saskatchewan:	25 litres (5 litres off-site)	TDG (includes loading / unloading):	200 litres	
	Manitoba:	100 litres			
Reportable Release Quantity (if Class 8)	NWT:	5 kg or litres	Ontario:	Any quantity	
	Alberta:	5 kgs or litres	Québec:	Any quantity	
	Saskatchewan:	50 kgs (50 kgs off-site)	TDG (includes loading / unloading):	5 kgs or litres	
	Manitoba:	5 kgs or litres			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
PAINT (if flammable)		3	UN1263	I, II or III	59, 83
PAINT (if corrosive)		8	UN3066	II or III	59
Placards:	Dependent on TDG class.				
Comments:	TDGR classification subject to flash point testing. In addition, possible alternate classification may be - Shipping Name: PAINT or PAINT RELATED MATERIAL (used to describe paint, lacquer, stain, shellac, varnish, polish, liquid filler, liquid lacquer base, and paint thinning/reducing compounds).				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Paints, Enamels & Stains
Waste Information Sheet
September 2016



Pesticides / Herbicides

Waste Information Sheet

General Information				
Original Use:	Chemical solutions used to control unwanted plant growth on leases and right-of-ways.			
Physical State:	Poisonous liquid.			
Components:	Dependent upon type of pesticide.			
Potential Hazards				
Class (WHMIS):	WHMIS testing required to verify. B4; D1B, D2A	MSDS:	Specific to type of pesticide. See container or supplier's information.	
Hazard Symbols:		Protective Equipment:		
Environmental:	Container effluent may cause severe environmental damage (surface and groundwater contamination, vegetation damage, and subsequent soil erosion).			
Health:	Various effects. Inhalation of some herbicides/pesticides can cause death. Herbicides/pesticides can be absorbed through the eyes and skin.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good	Manitoba: Hazardous Waste Ontario: Hazardous Waste Québec: Residual Hazardous Material		
Storage:	Collect in seal drums or leave in existing containers. Do not allow rain water to enter containers.			
Treatment / Disposal:	Apply herbicides/pesticide to target vegetation areas - but only for non-residual herbicides. Disposal only to a Hazardous Waste Management Facility.			
Comments:	Use certified contractors for herbicide/pesticide applications for all chemical vegetation control, and ensure they properly dispose of all containers and associated wastes to designated facilities.			
Reportable Release Quantity:	NWT: Any quantity (free liquids) Alberta: Any quantity (free liquids) Saskatchewan: Any quantity (free liquids) Manitoba: Any quantity (free liquids)	Ontario: Any quantity (free liquids) Québec: Any quantity (free liquids) TDG (includes loading / unloading): Any quantity (free liquids)		
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:	Dependent on specific contaminant.			
Comments:	Classifications for this waste may vary depending on the specific contaminant. There are a large number of TDG categories for herbicides/pesticides. Consult the supplier and TDG Regulations for specific TDG classification. See also "Containers – Herbicides/Pesticides" Waste Information Sheet.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Pesticides / Herbicides
Waste Information Sheet
September 2016



Pigging Waste - Liquid / Wax

Waste Information Sheet




General Information									
Original Use:	Crude oil production, pipeline transmission, and heavy oil production. Generated from pipeline cleaning operations that have pig receiving facilities and from cleaning and emptying pipeline strainer baskets								
Physical State:	Liquid or wax.								
Components:	Hydrocarbon paraffin, demulsifiers.								
Potential Hazards									
Class (WHMIS):	B2; B3; or B4								
Hazard Symbols:	<div style="text-align: center;"> </div>								
	MSDS: Hydrocarbon related MSDSs. Protective Equipment: <div style="text-align: center;"> </div>								
Environmental:	Potential groundwater contamination if liquids are improperly contained in unlined ponds and pits. Hazardous air emissions if non-approved burn disposal. Potential groundwater and/or surface water contamination, vegetation damage if wax residuals applied to ground or roads.								
Health:	Not an inhalation hazard if < 38°C. High vapor concentration may irritate nose. Slight skin irritations.								
Management Methods									
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: Hazardous Waste</td> <td style="width: 50%;">Manitoba: Hazardous Waste</td> </tr> <tr> <td>Alberta: Hazardous Waste/DOW</td> <td>Ontario: Hazardous Waste (251-I)</td> </tr> <tr> <td>Saskatchewan: Waste Dangerous Good</td> <td>Québec: Residual Hazardous Material</td> </tr> </table>	NWT: Hazardous Waste	Manitoba: Hazardous Waste	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (251-I)	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
NWT: Hazardous Waste	Manitoba: Hazardous Waste								
Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (251-I)								
Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material								
Storage:	Contain in drums or other steel containers at field facility. Keep away from ignition and heat sources.								
Treatment / Disposal:	<ul style="list-style-type: none"> Send to a licensed oilfield reclaimer for product recovery. Recycle: Liquids - 100% of waste from crude oil pipelines may be recycled to crude oil slop tanks. Oil reclamation, with recycle to pipeline, followed by disposal of solids. Waxes - 100% of waste from crude oil pipelines may be recycled to refinery cooker units, diluted with hot oils and mixed with crude stream. 								
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: 100 litres</td> <td style="width: 50%;">Ontario: Any quantity</td> </tr> <tr> <td>Alberta: 200 litres</td> <td>Québec: Any quantity</td> </tr> <tr> <td>Saskatchewan: 100 litres</td> <td>TDG (includes loading / unloading): 200 litres</td> </tr> <tr> <td>Manitoba: 100 litres</td> <td></td> </tr> </table>	NWT: 100 litres	Ontario: Any quantity	Alberta: 200 litres	Québec: Any quantity	Saskatchewan: 100 litres	TDG (includes loading / unloading): 200 litres	Manitoba: 100 litres	
NWT: 100 litres	Ontario: Any quantity								
Alberta: 200 litres	Québec: Any quantity								
Saskatchewan: 100 litres	TDG (includes loading / unloading): 200 litres								
Manitoba: 100 litres									
TDG Information									
Shipping Name	Class	PIN	Packing Group	Special Provisions					
See TDG Comments below.	-	-	-	-					
Placards:									
Comments:	<p>If wax only with flash point >60°C, then not regulated if leachate test is OK.</p> <p>If ≤ 60°C, use FLAMMABLE LIQUIDS, N.O.S. (petroleum crude oil), Class 3, UN 1993, Packing Group II or III (establish packing group from flash point and boiling point tests).</p> <p>A representative wax sample should have tests performed to determine the possible leachates it may generate or its flammability. If wax test results meet TDG criteria, the wax could be classed as flammable or leachate toxic.</p>								
Documentation									
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.								

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Pigging Waste Liquids / Wax
Waste Information Sheet
September 2016



**Pipe Coating
(Coal Tar Wraps)**
Waste Information Sheet





General Information					
Original Use:	Coating applied to underground pipes, pipe joints, fittings, couplings, etc. to protect the metal surfaces from corrosion.				
Physical State:	Pliable, coated fabric or other pliable material in a wound roll, resembling a roll of tape. May also be in the form of a viscous liquid or sludge.				
Components:	Various substances; may include epoxies, phenols, polyaromatic hydrocarbons, asbestos and/or PCBs.				
Potential Hazards					
Class (WHMIS):	Dependent on specific coating type.	MSDS:	Use MSDS of specific coal tar wrap type.		
Hazard Symbols:		Protective Equipment:	 		
Environmental:	Coal tar is a known carcinogen to human and animal life.				
Health:	Various exposure limits dependent on the type of coal tar coating. May cause minor skin and eye irritation. Under fire conditions, may emit irritating/toxic fumes.				
Management Methods					
Waste Classification:	NWT: Hazardous Waste Alberta: Dangerous Oilfield Waste Saskatchewan: Hazardous Waste	Manitoba: Hazardous Waste Ontario: Hazardous Waste Québec: Residual Hazardous Material			
	Testing required. Dependent on specific waste chemical.				
Storage:	Store in a dry environment, away from continuous direct sunlight. Keep in original manufacturers packaging until ready to use.				
Treatment / Disposal:	<ul style="list-style-type: none"> Send to an appropriate waste management facility. Following appropriate disposal procedures if asbestos containing. 				
Comments:	Avoid over supply.				
Reportable Release Quantity:	NWT: N/A Alberta: N/A Saskatchewan: N/A Manitoba: N/A	Ontario: N/A Québec: N/A TDG (includes loading / unloading): N/A			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
See TDG Comments Below		-	-	-	-
Placards:	Dependent on specific waste chemical.				
Comments:	Dependent on specific waste chemical. If product was originally supplied as a dangerous good, then waste chemical is also a dangerous good. Use Shipping Name, Class, PIN, etc. of original shipment, unless original chemical properties have changed or contaminated with another dangerous good. If a mixture or solution of two or more dangerous goods, verify TDG Information with the Enbridge Environment Staff.				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Pipe Coating (Coal Tar Wraps)
Waste Information Sheet
September 2016



Produced Sand
Waste Information Sheet

General Information					
Original Use:	Produced from heavy oil operations and some reservoirs that allow sand fines into the wellbore. Includes the sand, oil and water mixture contained in the bottom of field separator tanks and ecology pits. Also mixtures produced desanding processes (hydrocyclones).				
Physical State:	Sand, water and hydrocarbon mixture.				
Components:	Chlorides, carbonates, oil, aromatics (BTEX), trace heavy metals, arsenic.				
Potential Hazards					
Class (WHMIS):	B4; D2A		MSDS:	Use MSDS of specific components.	
Hazard Symbols:	 		Protective Equipment:	 	
Environmental:	The wastes high salt content may impact vegetation growth if a surface disposal method is used. Possible oil / phenol and salt migration into surface water and groundwater.				
Health:	Not an inhalation hazard if < 38°C. High vapor concentrations may irritate nose. Slight skin irritations.				
Management Methods					
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste			
	Alberta: Non-Dangerous Oilfield Waste	Ontario: Verify with Ontario MOECC			
	Saskatchewan: Non-Hazardous Waste	Québec: Verify with Québec MDDELCC			
Storage:	Secure in impermeable tanks or ecology pits at field facility. Provide bird deterrent measures.				
Treatment / Disposal:	<ul style="list-style-type: none"> Waste may be road-spread (depending on hydrocarbon content). Send to a licensed oilfield reclaimer for hydrocarbon recovery (if sufficient hydrocarbon content). Send to a salt cavern disposal facility (Newalta Hughenden, AB). Send to cement plant. 				
Comments:					
Reportable Release Quantity:	NWT: 25 kg	Ontario: Any quantity			
	Alberta: 2 m ³ (any amount off-site)	Québec: Any quantity			
	Saskatchewan: 1.6 m ³ (any amount off-site)	TDG (includes loading / unloading): 25 kg			
	Manitoba: 1 kg				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. ("Technical Name")		4.1	UN 3175	II	16, 56
Placards:	Class 4.1 or Class 3 (in bulk or over 500 kg)				
Comments:	If there is free liquid oil, use – Shipping Name PETROLEUM DISTILLATES, N.O.S, or PETROLEUM PRODUCTS, N.O.S., Class 3, UN 1268, Packing Group I, II, or III (establish packing group from flash point and boiling point tests).				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Produced Sand
Waste Information Sheet
September 2016



Sewage

Waste Information Sheet

General Information					
Original Use:	Human and waste water sewage generated at camp and office facilities. Synonyms: Biological wastes, black water.				
Physical State:	Liquid to sludge.				
Components:	Biological wastes, chlorine, sodium, and heavy metals.				
Potential Hazards					
Class (WHMIS):	Not Available	MSDS:	Not Available		
Hazard Symbols:	Protective Equipment: 				
Environmental:	Heavy metals can severely contaminate soils, surface water and groundwater. Generated gases can be flammable.				
Health:	Untreated sewage effluent can provide a medium for epidemic causing bacteria.				
Management Methods					
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste			
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario: Non-Hazardous Waste			
	Saskatchewan: Non-Hazardous Waste	Québec: Residual Material			
Storage:	Contain in tanks or separate lined ponds.				
Treatment / Disposal:	<ul style="list-style-type: none"> Water conservation (usage and leak surveys). Effluent irrigation is viable but requires capital investment and engineering design (and applicable approvals/permits). Primary, secondary and tertiary treatment for water recovery, however larger capital investment required. Septic tanks and transport (if required) to local sewage treatment facility, if available, by commercial carrier. Sewage is usually regulated by the provincial public health act and/or clean water legislation. 				
Reportable Release Quantity:	The following release quantities apply if there was not an approval in place to discharge sewage.				
	NWT: Any quantity	Ontario: Any quantity			
	Alberta: Any quantity	Québec: Any quantity			
	Saskatchewan: Any quantity	TDG (includes loading / unloading): Any quantity			
	Manitoba: Any quantity				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>		N/A	N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply. Be aware of specific legislation applying in each province/territory to the disposal of sewage. Sewage is usually regulated by the provincial public health act and/or clean water legislation.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Sewage
Waste Information Sheet
September 2016



Sludge - Chemical

Waste Information Sheet

General Information				
Original Use:	Laboratory sump. Has various synonyms.			
Physical State:	Liquid sludge			
Components:	Various - dependent on specific analysis.			
Potential Hazards				
Class (WHMIS):	B2; B3; B4; C; D; or E - dependent on specific analysis	MSDS:	Various - dependent on specific analysis.	
Hazard Symbols:			Protective Equipment:	
Environmental:	Potential soil, surface water and groundwater contamination.			
Health:	Treat as a possible severe health hazard. May cause skin, eye and respiratory irritation.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
Storage:	Leave in-situ or store in lined ponds or in tanks/barrels. Segregate from other waste sludges.			
Treatment / Disposal:	Hazardous - Hazardous Waste Management Facility. Possible contaminated soil treatment facility.			
Comments:	Treatment and disposal depends on specific analysis. Avoid long term collection of sludge - non-hazardous			
Reportable Release Quantity:	NWT: 5 kg or litres	Ontario: Any quantity		
	Alberta: 5 kg or litres	Québec: Any quantity		
	Saskatchewan: 5 kg or litres	TDG (includes loading / unloading): 5 kg or litres		
	Manitoba: 5 kg or litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:	Dependent on TDG Classification			
Comments:	Dependent on specific sludge analysis. Contact Enbridge Environment Staff.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			







Need further information?
Contact Enbridge Environment Staff in Edmonton.

Sludge – Chemical
Waste Information Sheet
September 2016



Sludge - Hydrocarbon

Waste Information Sheet



General Information				
Original Use:	Oil production, transportation and storage operations. Waste sludge from the bottom of crude oil storage tanks, separators, inlet separators, slop tanks, flare knockouts, etc.			
Physical State:	Black viscous liquid sludge (semi-solid). Strong hydrocarbon odor.			
Components:	Hydrocarbons, asphaltenes, corrosion inhibitors, iron oxides, iron sulphides, sand, silt.			
Potential Hazards				
Class (WHMIS):	B4	MSDS:	Use MSDS of specific components (e.g.; Crude oil, Iron sulphide).	
Hazard Symbols:		Protective Equipment:	    	
Environmental:	Waste characterization required to identify pollution concerns. Potential surface, groundwater, and soil contamination. Toxic leachate from possible high lead levels.			
Health:	Not an inhalation hazard if < 38°C. May cause skin, eye, and respiratory irritation.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste (251-I)		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
Storage:	<ul style="list-style-type: none"> Large volumes may be temporarily stored in lined pits. For lesser volumes store in tanks or barrels. 			
Treatment / Disposal:	<ul style="list-style-type: none"> Send to a licensed reclaimer for product recovery and disposal. Send to a waste contractor for potential treatment and disposal. Spread and treat waste on-site. Contact Enbridge Environment Staff. 			
Comments:				
Reportable Release Quantity:	NWT: 100 litres (liquid); 25 kg (solid)	Ontario: Any quantity		
	Alberta: 2 m ³ (or any amount off-site)	Québec: Any quantity		
	Saskatchewan: 1.6 m ³ (or any amount off-site)	TDG (includes loading / unloading): 25 kg		
	Manitoba: 100 litres (liquid); 1 kg (solid)			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
See TDG Comments Below	-	-	-	-
Placards:	Dependent on specific contaminant.			
Comments:	Classifications for this waste may vary depending on the specific contaminant. This waste is subject to a wide variability in its flammability, corrosiveness and specific chemical components. This waste has to be tested to determine if it meets any of the TDG classification criteria and, if required, a leachate test. Potential classes are 3, 4.1, 4.2.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Sludge – Hydrocarbon
Waste Information Sheet
September 2016



**Spent Abrasives -
Containing Paint Coating
(Lead or Chromium)**
Waste Information Sheet

General Information																	
Original Use:	Paint coating on tanks and equipment.																
Physical State:	Solids																
Components:	Silica sand or metal shot containing abraded paint coating. Coating may contain lead or chromium. When used on pipes covered with coal tar and/or asbestos, refer to the corresponding WIS Pipe Coating (Coal Tar Wraps) and/or Asbestos.																
Potential Hazards																	
Class (WHMIS):	MSDS:																
Hazard Symbols:	Protective Equipment:																
																	
Environmental:	May contaminate soil, surface water and groundwater.																
Health:	Breathing of particulate may cause respiratory complications. Skin and eye irritants.																
Management Methods																	
Waste Classification:	<table style="width:100%; border: none;"> <tr> <td style="width: 25%;">NWT:</td> <td style="width: 25%;">Testing Required</td> <td style="width: 25%;">Manitoba:</td> <td style="width: 25%;">Testing Required</td> </tr> <tr> <td>Alberta:</td> <td>Testing Required</td> <td>Ontario:</td> <td>Testing Required</td> </tr> <tr> <td>Saskatchewan:</td> <td>Testing Required</td> <td>Québec:</td> <td>Testing Required</td> </tr> </table>	NWT:	Testing Required	Manitoba:	Testing Required	Alberta:	Testing Required	Ontario:	Testing Required	Saskatchewan:	Testing Required	Québec:	Testing Required				
NWT:	Testing Required	Manitoba:	Testing Required														
Alberta:	Testing Required	Ontario:	Testing Required														
Saskatchewan:	Testing Required	Québec:	Testing Required														
Storage:	Store abrasive in original container prior to use. Store spent abrasive in container or tank lot prior to disposal.																
Treatment / Disposal:	Hazardous Waste Management Facility - possible landfill that will receive hazardous wastes - confirm with waste contractor and landfill operator.																
Comments:	Spent abrasive should be analyzed for leachate (TCLP) content prior to disposal (lead, chromium, total hydrocarbon). Leachate criteria varies in different provinces. If required, consult Enbridge Environment Staff for appropriate leachate criteria.																
Reportable Release Quantity:	<table style="width:100%; border: none;"> <tr> <td style="width: 25%;">NWT:</td> <td style="width: 25%;">5 kg or litres</td> <td style="width: 25%;">Ontario:</td> <td style="width: 25%;">Any quantity</td> </tr> <tr> <td>Alberta:</td> <td>5 kg or litres</td> <td>Québec:</td> <td>Any quantity</td> </tr> <tr> <td>Saskatchewan:</td> <td>2 kg</td> <td colspan="2">TDG (includes loading / unloading): 5 kg or litres</td> </tr> <tr> <td>Manitoba:</td> <td>5 kg or litres</td> <td colspan="2"></td> </tr> </table>	NWT:	5 kg or litres	Ontario:	Any quantity	Alberta:	5 kg or litres	Québec:	Any quantity	Saskatchewan:	2 kg	TDG (includes loading / unloading): 5 kg or litres		Manitoba:	5 kg or litres		
NWT:	5 kg or litres	Ontario:	Any quantity														
Alberta:	5 kg or litres	Québec:	Any quantity														
Saskatchewan:	2 kg	TDG (includes loading / unloading): 5 kg or litres															
Manitoba:	5 kg or litres																
TDG Information																	
Shipping Name	Class	PIN	Packing Group	Special Provisions													
<i>See TDG Comments Below</i>	-	-	-	-													
Placards:	Dependent on specific contaminant.																
Comments:	Testing required. Classifications for this waste may vary depending on the specific contaminant.																
Documentation																	
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.																
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.																

Need further information?
Contact Enbridge Environment Staff in Edmonton.

**Spent Abrasives -
Containing Paint Coating (Lead or Chromium)**
Waste Information Sheet
September 2016








**Sulfatreat - Hydrogen Sulfide
Treatment**
Waste Information Sheet

General Information																				
Original Use:	Removes hydrogen sulfide from gases.																			
Physical State:	Granular solid.																			
Components:	Montmorillonite, water, iron oxides, silica																			
Potential Hazards																				
Class (WHMIS):	D2A, D2B	MSDS:	SULFATREAT 410 HP																	
Hazard Symbols:		Protective Equipment:																		
Environmental:	Non-toxic.																			
Health:	Dust may cause eye, skin and respiratory tract irritation. Long term inhalation of particulates may cause lung damage.																			
Management Methods																				
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">NWT:</td> <td style="width: 25%;">Non-Hazardous</td> <td style="width: 25%;">Manitoba:</td> <td style="width: 25%;">Non-Hazardous</td> </tr> <tr> <td>Alberta:</td> <td>Non-Hazardous/DOW</td> <td>Ontario:</td> <td>Non-Hazardous</td> </tr> <tr> <td>Saskatchewan:</td> <td>Non-Hazardous</td> <td>Québec:</td> <td>Residual Material</td> </tr> </table>				NWT:	Non-Hazardous	Manitoba:	Non-Hazardous	Alberta:	Non-Hazardous/DOW	Ontario:	Non-Hazardous	Saskatchewan:	Non-Hazardous	Québec:	Residual Material				
NWT:	Non-Hazardous	Manitoba:	Non-Hazardous																	
Alberta:	Non-Hazardous/DOW	Ontario:	Non-Hazardous																	
Saskatchewan:	Non-Hazardous	Québec:	Residual Material																	
Storage:	Keep away from heat, sparks and flame. Keep segregated from strong acids and strong oxidizers.																			
Treatment / Disposal:	Recover and reclaim or recycle, where possible.																			
Comments:	Send/transfer to an approved landfill, unless believed to have changed properties and/or become contaminated with a dangerous good that would render it a hazardous waste.																			
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">NWT:</td> <td style="width: 25%;">N/A</td> <td style="width: 25%;">Ontario:</td> <td style="width: 25%;">N/A</td> </tr> <tr> <td>Alberta:</td> <td>N/A</td> <td>Québec:</td> <td>N/A</td> </tr> <tr> <td>Saskatchewan:</td> <td>N/A</td> <td colspan="2">TDG (includes loading / unloading): N/A</td> </tr> <tr> <td>Manitoba:</td> <td>N/A</td> <td colspan="2"></td> </tr> </table>				NWT:	N/A	Ontario:	N/A	Alberta:	N/A	Québec:	N/A	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		Manitoba:	N/A		
NWT:	N/A	Ontario:	N/A																	
Alberta:	N/A	Québec:	N/A																	
Saskatchewan:	N/A	TDG (includes loading / unloading): N/A																		
Manitoba:	N/A																			
TDG Information																				
Shipping Name	Class	PIN	Packing Group	Special Provisions																
<i>Not TDG Regulated</i>	N/A	N/A	N/A	N/A																
Placards:	N/A																			
Comments:	If the waste is contaminated or has changed properties from its original state, TDG Regulations may apply.																			
Documentation																				
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate																			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.																			
Need further information? Contact Enbridge Environment Staff in Edmonton.			Sulfatreat – Hydrogen Sulfide Treatment Waste Information Sheet September 2016																	



Tank Seals

Waste Information Sheet


General Information					
Original Use:	Storage tank roof seals. "Foam logs" and fabric seals which are stained or soaked with crude oil. Synonyms: Neoprene, rubber or canvas seals.				
Physical State:	Solids (metal, neoprene) contaminated with crude oil.				
Components:	Liquid hydrocarbons, asphalt, possible heavy metals. Waste should be analyzed.				
Potential Hazards					
Class (WHMIS):	B4	MSDS:	Crude Oil		
Hazard Symbols:		Protective Equipment:	   		
Environmental:	Potential for soil and groundwater contamination if improperly stored or landfilled.				
Health:	High vapour concentrations may irritate inhalation. Slight skin irritations.				
Management Methods					
Waste Classification:	NWT: Hazardous Waste Alberta: Hazardous Waste/DOW Saskatchewan: Waste Dangerous Good	Manitoba: Hazardous Waste Ontario: Hazardous Waste (251-I) Québec: Residual Hazardous Material			
Storage:	Temporary storage on-site; if potential exists for liquid contaminants (oil) then store in lined area, tanks or barrels. Prevent additional soil contamination by protecting from rain and snow melt.				
Treatment / Disposal:	<ul style="list-style-type: none"> • Pretreatment: Seals and steel must be cleaned by scraping, wiping, draining, or steam cleaning. • Hazardous – Hazardous Waste Management Facility • Non-hazardous – Landfill: contact landfill operator for specific instructions before shipment. 				
Comments:	<ul style="list-style-type: none"> • See also Waste Information Sheets on Metal - Scrap and Water - Oily. Reduce quantity of oily water that results from steam cleaning by storing steel until sufficient quantities (storage restrictions may apply). Ensure that metal recyclers only take "cleaned" metal. Seals may require sampling prior to disposal. Contact Enbridge Environment Staff for assistance. 				
Reportable Release Quantity:	NWT: 25 kg Alberta: 25 kg or litres Saskatchewan: 100 kg (50 kg off-site) Manitoba: 1 kg	Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 25 kg			
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
FLAMMABLE SOLID, ORGANIC N.O.S. ("Technical Name")		4.1	UN 1325 **ERAP**	II or III	16
Placards:	4.1 Flammable Solid				
Comments:	If there is little or no oil content, waste tank seals could be non-hazardous and not TDG regulated. **ERAP** Cannot offer for transport dangerous goods having PIN UN2846 when the quantity of that good exceeds 1,000 kg or litres for the dangerous goods without an Emergency Response Assistance Plan approved by Transport Canada. Verify with the Enbridge Environment Staff.				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Tank Seals
Waste Information Sheet
September 2016



Tape - Denso
Waste Information Sheet


General Information					
Original Use:	Tape: Pipeline water-proofing and protection against corrosion. Paste: Priming metal prior to the application of anti-corrosion (Denso) tape. Synonyms: Denso Paste.				
Physical State:	Brown paste or brown paste impregnated tape.				
Components:	Tape: Hydrocarbon was (petrolatum), china clay and polyester fibre fabric. Paste: China clay and petrolatum (petroleum jelly).				
Potential Hazards					
Class (WHMIS):	Not a controlled product.		MSDS:	Denso paste and Denso tape.	
Hazard Symbols:			Protective Equipment:		
Environmental:	Combustion will produce carbon monoxide and carbon dioxide.				
Health:	Prolonged and repeated contact may irritate skin.				
Management Methods					
Waste Classification:	NWT:	Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta:	Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan:	Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Store in original supplier packaging/containers. Store in cool conditions. Avoid heat and flame.				
Treatment / Disposal:	Non-hazardous: Landfill - for large waste quantities contact landfill operator in advance.				
Comments:					
Reportable Release Quantity:	NWT:	N/A	Ontario:	N/A	
	Alberta:	N/A	Québec:	N/A	
	Saskatchewan:	N/A	TDG (includes loading / unloading): N/A		
	Manitoba:	N/A			
TDG Information					
Shipping Name			Class	PIN	Packing Group
<i>Not TDG Regulated</i>			N/A	N/A	N/A
Placards:	N/A				
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply.				
Documentation					
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Tape – Denso
Waste Information Sheet
September 2016



Tires
Waste Information Sheet

General Information				
Original Use:	Automobile and truck tires. Used tires for pipe supports in pipeline construction. Synonyms: Rubber.			
Physical State:	Solid			
Components:	Rubber, Steel belt, additives.			
Potential Hazards				
Class (WHMIS):	Not a controlled product.	MSDS:	Not applicable.	
Hazard Symbols:			Protective Equipment:	
Environmental:	Non-biodegradable or crushable.			
Health:	No hazards.			
Management Methods				
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba:	Non-Hazardous Waste	
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario:	Non-Hazardous Waste	
	Saskatchewan: Non-Hazardous Waste	Québec:	Residual Material	
Storage:	Store in neat short stacks with space between rows - not in a haphazard pile. Do not store for extensive time periods. Avoid rainwater collection.			
Treatment / Disposal:	Most provinces have a tire recycling program in place. Perform vehicle maintenance at service stations with a tire recycling program in place.			
Comments:	Ensure that tires are segregated at landfill. Possible spontaneous combustion in landfills due to air cavities - non-biodegradable or crushable.			
Reportable Release Quantity:	NWT: N/A	Ontario:	N/A	
	Alberta: N/A	Québec:	N/A	
	Saskatchewan: N/A	TDG (includes loading / unloading): N/A		
	Manitoba: N/A			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>Not TDG Regulated</i>	N/A	N/A	N/A	N/A
Placards:	N/A			
Comments:	If the waste is contaminated with dangerous goods, TDG Regulations may apply.			
Documentation				
Transportation Documents:	Truck Ticket or Waybill or Provincial Manifest as appropriate			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Tires
Waste Information Sheet
September 2016



Wash Fluids - Solvents

Waste Information Sheet

General Information				
Original Use:	Waste includes solvents from equipment cleaning operations.			
Physical State:	Clear / cloudy liquid. Hydrocarbon odor.			
Components:	Tetra and trichloroethylene, xylene, acetone, ethyl acetate, methyl isobutyl ketone, n-butyl alcohol, cyclohexane, methanol, creosols, cresylic acid, toluene, carbon disulphide, isobutane, pyridine, ammonia based substances and hydrocarbon bases (kerosene).			
Potential Hazards				
Class (WHMIS):	D2A, B2	MSDS:	Use MSDS of specific wash components.	
Hazard Symbols:			Protective Equipment:	
Environmental:	A highly mobile waste stream. Potential for groundwater and soil contamination. Possible toxic vapors and fire hazard with on-site recycling operations.			
Health:	May cause skin, eye and respiratory irritation. Most solvents are toxic.			
Management Methods				
Waste Classification:	NWT: Hazardous Waste	Manitoba: Hazardous Waste		
	Alberta: Hazardous Waste/DOW	Ontario: Hazardous Waste		
	Saskatchewan: Waste Dangerous Good	Québec: Residual Hazardous Material		
Storage:	Store in closed tanks or sealed drums at field facility. Keep containers closed and away from sources of heat and ignition. Store unused fluids in original containers inside of sealed drums with sorbents.			
Treatment / Disposal:	<ul style="list-style-type: none"> Hydrocarbon / solvent / crude oil mixtures may be recycled. Send to a licensed solvent recycler. Send to a Hazardous Waste Management Facility 			
Comments:	<ul style="list-style-type: none"> Use non-hydrocarbon based wash fluids when possible. Do not use chlorinated hydrocarbons (e.g. methylene) as cleaning solvents. Halogenated organic solvents must be segregated from all other waste streams. 			
Reportable Release Quantity: (if Class 3)	NWT: 100 litres	Ontario: Any quantity		
	Alberta: 200 litres	Québec: Any quantity		
	Saskatchewan: 25 litres (5 litres off-site)	TDG (includes loading / unloading): 200 litres		
	Manitoba: 100 litres			
Reportable Release Quantity: (if Class 6)	NWT: 5 kg or litres	Ontario: Any quantity		
	Alberta: 5 kgs or litres	Québec: Any quantity		
	Saskatchewan: 25 litres (5 litres off-site)	TDG (includes loading / unloading): 5 kgs or litres		
	Manitoba: 50 litres (10 litres off-site)			
TDG Information				
Shipping Name		Class	PIN	Packing Group
See TDG Comments below.		-	-	-
Placards:	Class 3, 6, 8 or 9 as appropriate (in bulk or over 500 kg.).			
Comments:	Solvents can be classified as Flammable Liquids (Class 3), Poisonous (Class 6), and Corrosive (Class 8). Refer to supplier information for TDG classification.			
Documentation				
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.			
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Wash Fluids – Solvents
Waste Information Sheet
September 2016



Wash Fluids - Water

Waste Information Sheet

General Information									
Original Use:	Waste includes water used for equipment, buildings and process area water / steam cleaning and maintenance, drains, and runoff water.								
Physical State:	Liquid.								
Components:	Water, iron oxides, calcium carbonate, sand / silt, trace hydrocarbons, crude oil, lube oil, salts, metals (lead, chromium, thallium).								
Potential Hazards									
Class (WHMIS): D2A	MSDS: Use MSDS of specific wash components.								
Hazard Symbols: <div style="text-align: center; font-size: 2em;">⚠</div>	Protective Equipment: <div style="text-align: center;"> </div>								
Environmental:	Potential groundwater contamination (from hydrocarbon and metal leaching) if improperly stored in an unlined pond. Potential surface water and soil contamination.								
Health:	Not an inhalation hazard if < 38°C. High vapor concentrate may irritate nose and throat. Slight skin irritations.								
Management Methods									
Waste Classification:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: Testing Required</td> <td style="width: 50%;">Manitoba: Testing Required</td> </tr> <tr> <td>Alberta: Testing Required</td> <td>Ontario: Testing Required</td> </tr> <tr> <td>Saskatchewan: Testing Required</td> <td>Québec: Testing Required</td> </tr> </table>	NWT: Testing Required	Manitoba: Testing Required	Alberta: Testing Required	Ontario: Testing Required	Saskatchewan: Testing Required	Québec: Testing Required		
NWT: Testing Required	Manitoba: Testing Required								
Alberta: Testing Required	Ontario: Testing Required								
Saskatchewan: Testing Required	Québec: Testing Required								
Storage:	Process wash waters are usually handled in a closed system (sumps). For open systems contain in drums or, if necessary, in lined ponds (if no possibility of mixing with other water).								
Treatment / Disposal:	<ul style="list-style-type: none"> Dispose to slop system. If significant quantities, send to third party disposal well. Contact Enbridge Environment Staff for assistance 								
Comments:	Recover hydrocarbons before disposal. Minimize the generation of mists or vapours. Waste waters with more than 3% oils may allow for the recovery of hydrocarbons at approved reclaimers or via on-site separation equipment.								
Reportable Release Quantity:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">NWT: 5 kgs or litres</td> <td style="width: 50%;">Ontario: Any quantity</td> </tr> <tr> <td>Alberta: 5 kgs or litres</td> <td>Québec: Any quantity</td> </tr> <tr> <td>Saskatchewan: 5 kgs or litres</td> <td>TDG (includes loading / unloading): 5 kgs or litres</td> </tr> <tr> <td>Manitoba: 5 kgs or litres</td> <td></td> </tr> </table>	NWT: 5 kgs or litres	Ontario: Any quantity	Alberta: 5 kgs or litres	Québec: Any quantity	Saskatchewan: 5 kgs or litres	TDG (includes loading / unloading): 5 kgs or litres	Manitoba: 5 kgs or litres	
NWT: 5 kgs or litres	Ontario: Any quantity								
Alberta: 5 kgs or litres	Québec: Any quantity								
Saskatchewan: 5 kgs or litres	TDG (includes loading / unloading): 5 kgs or litres								
Manitoba: 5 kgs or litres									
TDG Information									
Shipping Name	Class	PIN	Packing Group	Special Provisions					
<i>See TDG Comments Below</i>	-	-	-	-					
Placards:	Dependent on specific contaminant.								
Comments:	Classifications for this waste may vary depending on the specific contaminant and is dependent on the nature of cleaners and surfaces cleaned. If waste is commingled with other produced waters then use the classification for produced water. If separated (not commingled), the TDG classification is dependent on the nature of the cleaners used and other contaminants (hydrocarbons).								
Documentation									
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.								
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.								

Need further information?
Contact Enbridge Environment Staff in Edmonton.

Wash Fluids – Water
Waste Information Sheet
September 2016



Water - Oily

Waste Information Sheet

General Information					
Original Use:	Wash waters, cooling waters, buildings, drains, steam cleaning operations and may include run-off water. Collected in sumps. Synonyms: Waste water, waste water pond water, run-off holding pond water, roof run-off water, steam cleaning water.				
Physical State:	Liquid				
Components:	Water, iron oxides, calcium carbonate, sand/silt, oil and grease, trace metals (lead, chromium, thallium), BTEX.				
Potential Hazards					
Class (WHMIS):	B4	MSDS:	Crude Oil.		
Hazard Symbols:			Protective Equipment:		
Environmental:	Waste may contain polyaromatic hydrocarbons and volatile which will generate toxic fumes during decomposition of the waste. May also contain trace metals and sulfides. Potential groundwater contamination (metals, hydrocarbons) if stored in an unlined pond				
Health:	Not an inhalation hazard below 38°C. High vapour concentrate may irritate nose. Slight skin irritations.				
Management Methods					
Waste Classification:	<div style="display: flex; justify-content: space-between;"> <div> NWT: Non-Hazardous Waste Alberta: Non-Hazardous Waste/Non-DOW Saskatchewan: Non-Hazardous Waste </div> <div> Manitoba: Non-Hazardous Waste Ontario: Non-Hazardous Waste (251-L) Québec: Residual Material </div> </div> <p>NOTE: Above classification unless low flash point, BTEX or hydrocarbon content.</p>				
Storage:	Oil water should usually be handled in a closed system. Store in tanks. If necessary, impervious earthen/lined ponds if there is no possibility of mixing with other waters.				
Treatment / Disposal:	<ul style="list-style-type: none"> Waste waters containing more than 3% oils may allow for the recovery of hydrocarbons at approved reclaimers. Deep Well Disposal. Possible watershed release after treatment and approval from government environment department. Contact Enbridge Environment Staff for assistance. 				
Comments:	The construction and operation of any facilities designed for the treatment of waste waters will require approval by the provincial environmental agency.				
Reportable Release Quantity:	<div style="display: flex; justify-content: space-between;"> <div> NWT: 100 litres Alberta: 200 litres Saskatchewan: Any quantity Manitoba: 100 litres </div> <div> Ontario: Any quantity Québec: Any quantity TDG (includes loading / unloading): 200 litres </div> </div>				
TDG Information					
Shipping Name		Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>		-	-	-	-
Placards:	Dependent on specific contaminant.				
Comments:	Generally not TDG regulated. However, the TDG classification is dependent on the hydrocarbon content (flammable) and leachate test. If hydrocarbon contents are high the waste may be Classed as; FLAMMABLE LIQUIDS, N.O.S. ("Technical Name"), Class 3, UN 1993.				
Documentation					
Transportation Documents:	TDG Shipping Document or provincial Manifest / Movement Document, as appropriate.				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.				





Need further information?
Contact Enbridge Environment Staff in Edmonton.

Water – Oily
Waste Information Sheet
September 2016



Water - Produced

Waste Information Sheet

General Information				
Original Use:	Includes all water separated from hydrocarbon streams during all phases of oil and gas production and transportation.			
Physical State:	Liquid. Synonyms - salt water, tank drawdown water.			
Components:	Chlorides, benzene, toluene, ethylbenzene, naphthalene, phenols, water, dissolved solids and organic carbon.			
Potential Hazards				
Class (WHMIS):	B2, B3, D1B, D2A	MSDS:		
Hazard Symbols:		Protective Equipment:		
		  		
Environmental:	Potential groundwater contamination. Potential surface water and soil contamination (salt) from spillage. Possible contamination of disposal formation (if deep well disposed). Extremely persistent compound which is toxic to the environment in high concentrations.			
Health:	Not hazard below 38°C. High vapor concentrate may irritate nose. Slight skin irritations.			
Management Methods				
Waste Classification:	NWT: Non-Hazardous Waste	Manitoba: Non-Hazardous Waste		
	Alberta: Non-Hazardous Waste/Non-DOW	Ontario: Non-Hazardous Waste		
	Saskatchewan: Non-Hazardous Waste	Québec: Residual Material		
Storage:	Minimize the generation of mists or vapors. Store in tanks.			
Treatment / Disposal:	Produced formation waters should be segregated from all other waste waters. Should only be handled in a closed system. Deep well disposal.			
Comments:	Drainage onto tank lots can increase lease restoration costs.			
Reportable Release Quantity:	NWT: 100 litres	Ontario: Any quantity		
	Alberta: 200 litres	Québec: Any quantity		
	Saskatchewan: Any quantity	TDG (includes loading / unloading): 200 litres		
	Manitoba: 100 litres			
TDG Information				
Shipping Name	Class	PIN	Packing Group	Special Provisions
<i>See TDG Comments Below</i>	-	-	-	-
Placards:				
Comments:	Generally not TDG regulated, but may be classified as a flammable product dependent on hydrocarbon content. May also be tested for possibility of leachates. Contact Enbridge Environment Staff.			
Documentation				
Transportation Documents:				
Company Records:	Maintain a copy of all waste information (i.e. manifests, shipping documents, disposal agreements) at the ENBRIDGE Field or Region office.			
Need further information? Contact Enbridge Environment Staff in Edmonton.			Water – Produced Waste Information Sheet September 2016	