

## 1.6 Project Description

In 2022, the Hay River experienced unusually high-water levels, resulting in increased sediment being deposited in the Hay River Harbour and Great Slave Lake at the river outfall. The sediment, which has not been regularly maintained since 1997, has begun to fill the Dredge Areas. This has caused an emergency scenario, since the shallow water in the navigation channel poses a risk to boats (i.e., sea barge, Coast Guard, fishing, and recreational vessels) getting stuck in the sediment deposit and not being able to enter or exit the Hay River Harbour. Removing sediment so that boats can travel along the navigation channel. If boats cannot enter or exit the harbour, the supply for essential goods, and fuel for power and heat could be interrupted for up to 12 communities who rely on the sea barge system.

The GNWT-INF has proposed dredging the navigation channel to mechanically excavate a 30 m wide and 2.4 m deep navigation channel for emergency use, to be completed by local contractors in coordination with GNWT-MTS. The excavated sediment from the navigation channel would be loaded onto a barge, allowed to passively dewater, and when the barge is at capacity, the sediment would be offloaded to haul trucks located on shore. The haul trucks would transfer the sediment to GNWT-INF property on Vale Island, using a sealed truck bed to mitigate further dewatering on roads. The sediment would be temporarily stored on Vale Island, contained with 1 m berms, for ongoing passive dewatering. Once moved from the barge to land, the sediment<sup>1</sup> will be considered soil (CCME 1999) and may be made available for public use, if appropriate, or would be transferred to a final management area.

This emergency dredging program will include removal and temporary storage of the following estimated volumes of sediment:

- Dredge Area A: the shipping lanes approaching the outfall to Great Slave Lake to a width of 30 m, dredging 16,000 m<sup>3</sup>; and
- Dredge Area B: the three fingers in the East Channel, dredging 68,000 m<sup>3</sup>.

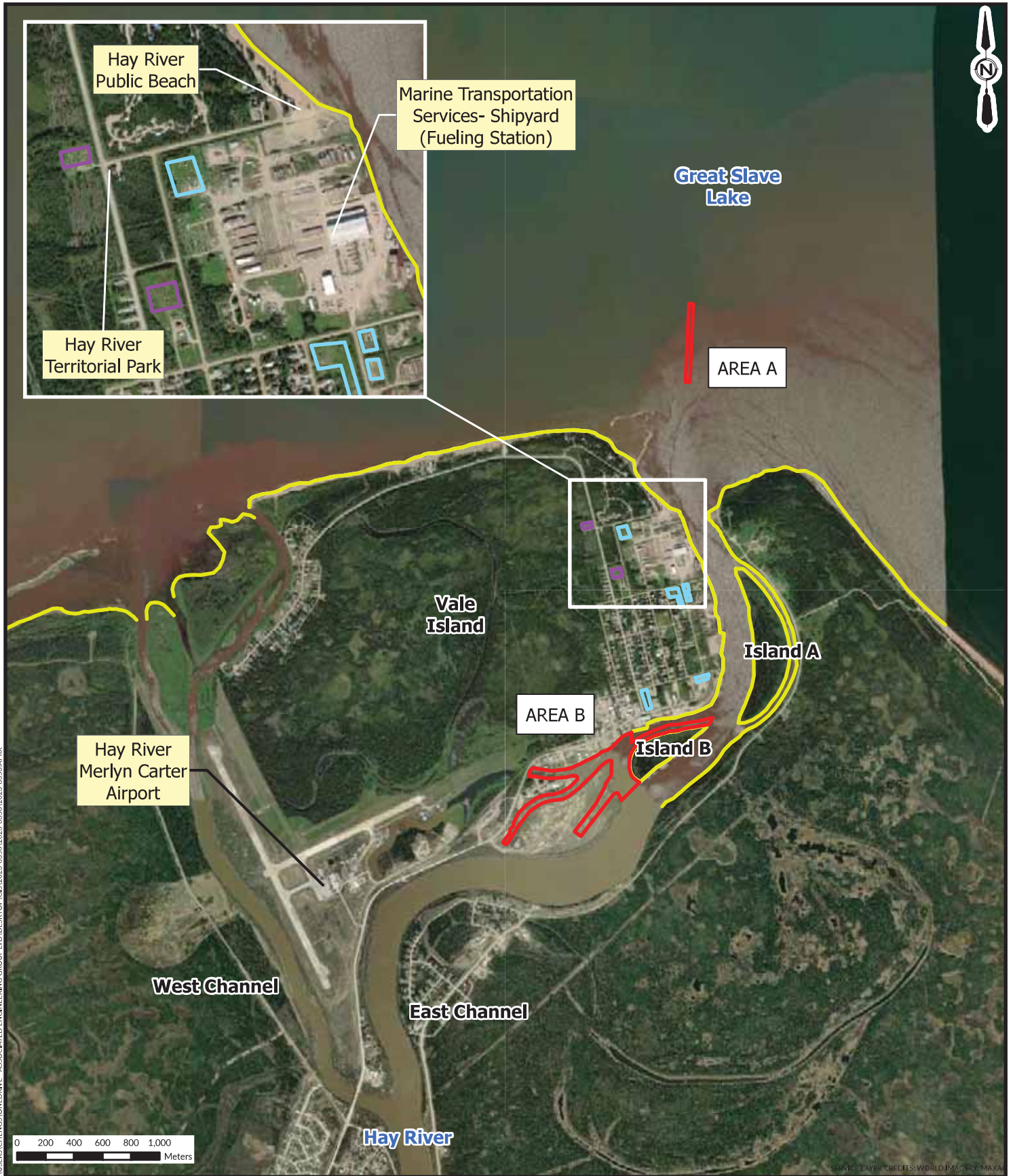
## 1.7 Potentially Impacted Communities and Environments

The Hay River and Great Slave Lake are most at risk of impacts from spills, along with the local communities who depend on the lake for food, economic, and recreational purposes. On shore, the three fingers in the East Channel and the Hay River Territorial Park would be at risk from spills that may occur in the three fingers or at the outfall. If a spill were large and not contained, Sandy Creek Beach and other neighbouring lakeshore could be impacted. Figure 1-2 shows the potential spill impacted locations.

Spills that may occur at any of the temporary soil storage sites on Vale Island would likely be small enough that they would impact only the immediate area. The Hay River Harbour Restoration – Sediment and Erosion Control Plan (Associated 2023a) indicates that the soil stockpiles will be a minimum of 30 m from any watercourse and will have berms, drainage channels, and sumps established. Topsoil will also be removed and stored separately. As such, any smaller spills should remain contained to the temporary storage sites. Depending on its location, a large spill could contaminate the groundwater and permafrost (if present) and have impacts downstream (on the Hay River or Great Slave Lake).

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<sup>1</sup> Sediment is unconsolidated material deposited on the bed of a waterbody or in a low spot or depression on land where the water velocity is insufficient to move the material (CCME 1999).



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SERVICE LAYER CREDITS: WORLD IMAGERY, MAXAR



- LEGEND**
- Potential Spill Impacted Shoreline
  - Dredging Areas
  - Temporary Soil Storage (GNWT)
  - Temporary Soil Storage (Town of Hay River)

AE PROJECT NO. 2023-8356  
 SCALE 1:36,000  
 COORD. SYSTEM NAD 1983 UTM ZONE 11N  
 DATE 2023-03-28  
 REV 03  
 DRAWN BY SC  
 CHECKED BY JB

**FIGURE 1-2**  
**FUELING, POTENTIAL SPILL,**  
**POTENTIAL IMPACT LOCATIONS**  
 GOVERNMENT OF  
 NORTHWEST TERRITORIES-  
 DEPARTMENT OF INFRASTRUCTURE  
 HAY RIVER HARBOUR  
 RESTORATION

## 1.8 Site Description

There are three areas of operations that could result in a spill. The first is the GNWT-MTS Syncro Yard, where fuel is transferred to vehicles and equipment. The second is the on-water dredging sites, including the 500 m by 30 m dredge site on the outfall of the Hay River and the three fingers in the East Channel. The third site is the temporary soil storage sites on Vale Island.

## 1.9 Type, Amount, and Location of Main Hazardous Materials

The primary hazardous materials used will be diesel and gasoline for powering excavators, tugboats, and vehicles. Fuel will be sourced from the GNWT-MTS Syncro Yard; increased or new fuel storage is not intended as part of the dredging activities. The activity with the greatest likelihood of a spill is refuelling, which will occur at the GNWT-MTS Syncro Yard. While fuelling at this location, workers will follow the Marine Transportation Services Oil Spill Response Plan (Appendix B).

The hydraulic fluid and lubricants for the excavators are also at risk of being spilled via leaks. Table 1-1 lists the hazardous materials, storage volumes, storage methods, and locations. Safety data sheets (SDSs) for these materials are in Appendix A. Table 1-1 and the SDSs for biodegradable hydraulic fluids and lubricants in Appendix A will be updated by the contractor after project award.

**Table 1-1 Hazardous Material Storage**

Hazardous Material	Volume	Storage Method	Location
Biodegradable hydraulic fluid	To be determined by contractor	Tote tanks within hydraulic fluid container that has integrated secondary containment, or other authorized containers as determined by the contractor	To be determined by contractor
Biodegradable lubricant	To be determined by contractor	Tote tanks within lubricant container that has integrated secondary containment, or other authorized containers as determined by the contractor	To be determined by contractor

Spills are also possible during routine maintenance of the barge and excavator or if an accident occurs and a tank is spilled, or equipment is damaged and is leaking.

Leaks could also occur on the trucks and excavators responsible for hauling and depositing soil.

## 2 RESPONSE ORGANIZATION

If a spill is identified, the contractor project manager will be contacted immediately. The contractor is responsible for adhering to the SCP throughout the project. Communication between construction management, environmental



monitors, and site supervisors in the field will occur via cell phone and radio. Table 2-1 lists the contractor emergency contact list and Table 2-2 lists emergency services contact information. Table 2-3 contains the contact information for Northwest Territories regulatory agencies. Tables 2-1 to 2-3 will be updated by the contractor after project award.

**Table 2-1 Contractor Emergency Contacts**

Contact	Name	Office Phone Number	Cell Phone Number
Primary contact			
Secondary contact			

**Table 2-2 Contact Information for Emergency Services**

Emergency Services	Contact Number
NWT 24-hour spill report line	867-920-8130
Hay River Regional Health Centre	867-874-8000
Emergency (police, fire, medical)	9-1-1
Environment and Natural Resources wildlife emergencies (Hay River area office)	867-875-7640
Environmental Health Office (Yellowknife), GNWT	867-669-8979

**Table 2-3 Contact Information for Northwest Territory Regulatory Agencies**

Regulatory Agency	Contact
Workers' Safety and Compensation Commission 24-hour incident reporting line	1-800-661-0792
Department of Lands, GNWT: Norman McCowan (manager of resource management)	867-874-6995 ext. 24
Department of Environment and Natural Resources, GNWT	867-875-5550
Department of Infrastructure, GNWT	867-875-8032
Environment Climate Change Canada (Yellowknife)	867-669-4725
Mackenzie Valley Land and Water Board	867-669-0506
Fisheries and Oceans Canada	1-866-290-3731 or 867-669-4790
Marine Transportation Services Shipyard	844-574-2023

Spill equipment that can be found at the GNWT-MTS Syncro Yard is listed in Table 2-4. Equipment that should be available on the barge and at the temporary storage sites is listed in Tables 2-5 and 2-6. The number of pieces of equipment currently displayed as ## will be updated by the contractor.

**Table 2-4 GNWT-MTS Syncro Yard Spill Control Equipment**

Equipment in Container #20262
Four sections – 50' Bennett river boom
One boom connector sling
Two 50' hand lines
Two 12" Maker buoys
One 5' x 4" camlock Manta Ray skimmer head
One 4" x 25' suction hose
One 4" x 50' PVC hose
40 loose – 8" x 10' sorbent booms
Four bags – 8" x 10' x 4' sorbent booms
One bag – 3/8" x 38" x 144' sorbent roll
One bag – 18" x 18" Matasorb sorbent pads

**Table 2-5 Sea Barge Spill Control Equipment**

Equipment
ABC fire extinguisher
Sorbent booms
Drip trays
## loose – 8" x 10' sorbent booms
## bag – 8" x 10' x 4' sorbent booms
## bag – 3/8" x 38" x 144' sorbent roll
## bag – 18" x 18" Matasorb sorbent pads

**Table 2-6 Spill Control Equipment at Temporary Soil Storage Locations**

Equipment
Drip trays
ABC fire extinguisher

## Equipment

## loose – 8" x 10' sorbent booms

## bag – 8" x 10' x 4' sorbent booms

## bag – 3/8" x 38" x 144' sorbent roll

## bag – 18" x 18" Matasorb sorbent pads

### 3 SPILL PREVENTION

Each vehicle, barge, and excavator will carry the required emergency spill kits to prevent fuel or hydraulic fluid from entering waterbodies. Immediately before project start-up, the environmental monitor and operators will inspect all machines, including the excavator, trucks used to transport dredged material, boats, and barges, for any possible fuel, lubricant, or hydraulic fluid leaks and excessive grease. Small boats and trucks will be inspected on land, above the high-water mark. Vegetable-based biodegradable hydraulic fluids will be used by the excavator as a precautionary measure in the event of a hydraulic fluid leak.

Refuelling of vehicles will be conducted more than 30 m from the nearest waterbody. Refuelling of sea barges and the excavator situated on a barge will be conducted carefully, with drip pans underneath and the spill kit containing absorbency pads at readiness.

The environmental monitor and machine operators will inspect all equipment, including any heavy equipment and boats, daily for leaks and proper operation. Any signs of leaks or excessive grease will result in a stoppage of work to contain the leak, grease, or spill. Work will not commence until the necessary cleanup and repairs are completed.

The GNWT-MTS Syncro Yard has its own preventive measures, which should be followed whenever fuelling (Appendix B).

When possible, any mechanical maintenance should be performed at the GNWT-MTS Syncro Yard, where spills are less likely to reach sensitive environments and plenty of equipment and experienced staff are present to mitigate leaks and spills from occurring.

Paper copies of the SCP will be distributed to the contractor, and a copy should be available in all vehicles. Copies should also be available at the GNWT-MTS Syncro Yard. For additional copies, contact the GNWT.

## 4 SPILL RESPONSE ACTION PLAN

When responding to any spill, personal protective equipment (PPE) should be used and must include:

- Tyvek coveralls;
- Plastic gloves;
- Safety goggles; and
- Leak-proof boots.

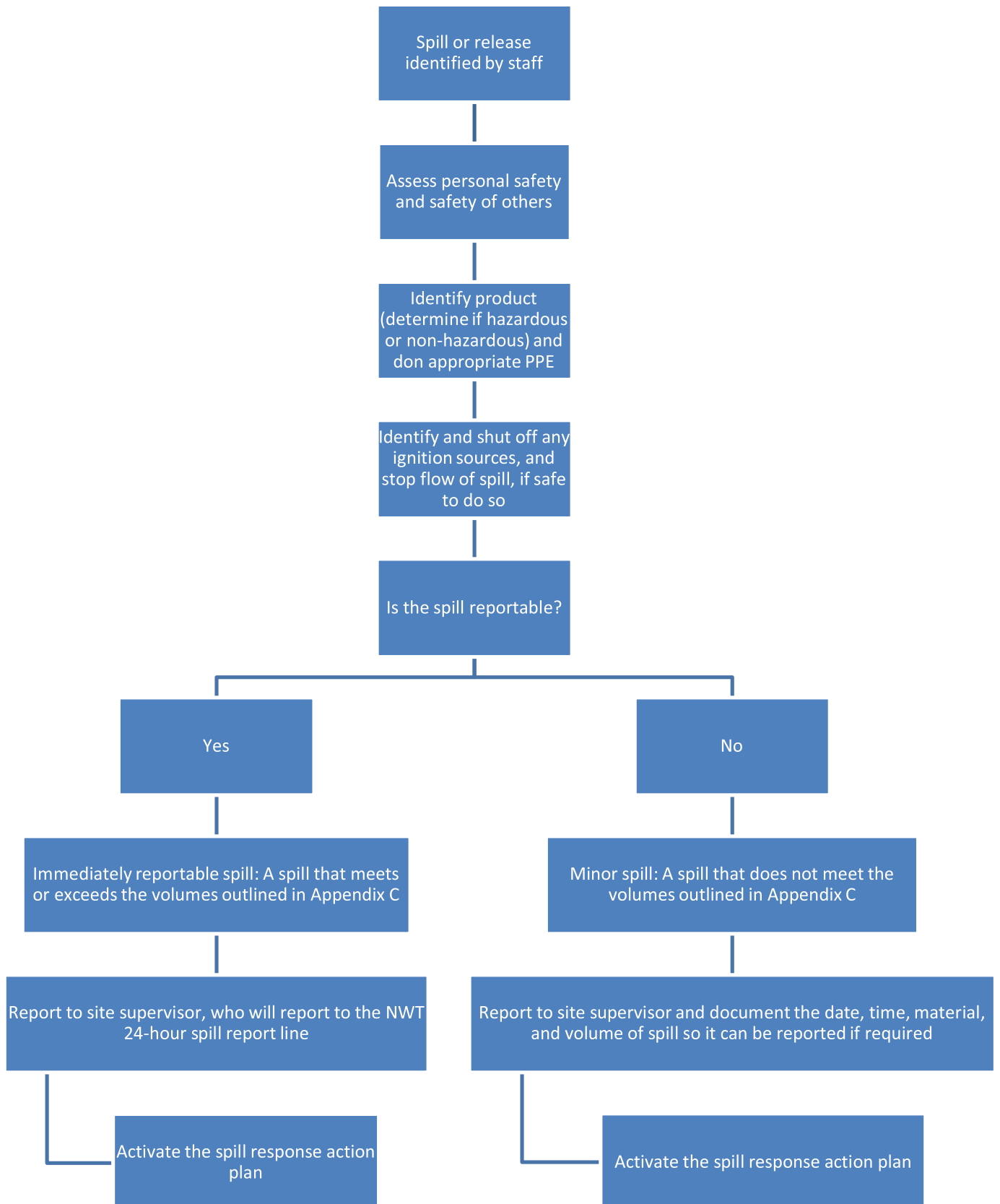
### 4.1 Procedure for Initial Actions

Take the following initial actions when responding to a spill:

- 1) Notify personnel in the immediate area of the spill. Advise the personnel to stay clear of the spill and any associated leaks, and have them monitor the spill so that the response team can best capture it and prevent its spread.
- 2) Identify any ignition sources and shut them off if it is safe to do so. An ignition source that is not safe to access could include one that requires an employee to cross a pool of the spilled liquid, one that is close enough to a leak that ignition could happen at any time, or one that was caused by damage to a vessel and could have resulted in unknown damage nearby.
- 3) Stop the spill at the source if it is safe to do so. This might include shutting off valves, righting containers, patching holes, or placing a spill tray.

If a spill occurs, follow the actions described in Figure 4-1.

Figure 4-1 Spill Response Flow Chart





## 4.2 Procedure for Reporting a Spill

Report all spills immediately to the site supervisor, who will determine whether the spill needs to be reported to the NWT 24-hour spill report line. Information that should be reported includes the approximate quantity, product, type, location, whether the spill is still in progress, product odour and colour, and the weather:

a. Immediately reportable spills

A spill is immediately reportable if it meets or exceeds the volumes outlined in Appendix C. A spill that meets or exceeds these volumes must be reported to the NWT 24-hour spill report line.

b. Minor spills

A spill is minor if it has a quantity less than that outlined in Appendix C. A minor spill does not need to be reported immediately to the NWT 24-hour spill report line, but it must be tracked and documented so that the relevant information can be submitted to the contractor project manager. These spills can be recorded and tracked in a non-reportable spill log for task and cleanup tracking. If there is any doubt whether the quantity spilled exceeds the reportable levels outlined in Appendix C, the spill should be reported to the NWT 24-hour spill report line.

Any spill that occurs during the project should be reported to the supervisors and project manager. For any spill, fill out an NT-NU spill report form (Appendix D) and email or fax it to the NWT 24-hour spill report line:

NWT 24-Hour Spill Report Line  
Phone: 867-920-8130  
Fax: 867-873-6924  
Email: [spills@gov.nt.ca](mailto:spills@gov.nt.ca)

## 4.3 Procedure for Containing and Controlling a Spill

Activate the spill response team. There should always be an on-scene commander (OSC) designated to respond to a potential spill. This person should be trained in spill response, Transportation of Dangerous Goods (TDG), and the Workplace Hazard Materials Information System (WHMIS). They should be familiar with the equipment and be knowledgeable about potential failures that could cause spills. They should also be familiar with the location of PPE required in cases of spill management and will be responsible for ensuring its use during the spill response protocols.

At the GNWT-MTS Syncro Yard, whoever discovers the spill first will be the OSC until an MTS employee arrives, at which point the MTS employee will take over.

The contractor for the barge and temporary storage sites should determine who will be designated as an OSC and should always have someone with adequate training and experience on site.

Determine the source of the spilled material. Using knowledge based on the source of the leak, colour, and smell, identify the spilled material. Check the SDS for hazards associated with any suspected materials.

Once the source and hazards have been identified, determine whether the spill can be stopped at the source and begin taking actions to clean up the spilled material.

#### 4.4 Containing a Spill on Land

Spills on land will primarily be on soil. Soil is a naturally absorbent material, so it will likely soak up most spilled material. Spills could also occur on a hard material, such as a road or parking lot; depending on the volume spilled, this could result in significant overland flow. Spills on land near water should be contained before they can reach the waterbody. The following are possible containment methods that can be used:

**Absorbents:** If the spill is small, use enough absorbent pads to soak up the liquid.

**Dykes:** Dykes can be built using soil to surround a spill on land. Dykes are constructed downslope and wider than the predicted flow path of the spill.

**Trenches:** Trenches can be dug out to contain spills if the top layer of soil is not rock. Shovels, axes, or an excavator can be used, depending on the size of the spill. A trench should be dug down deep enough to contain more than the expected volume of spilled material. Absorbents or a vacuum should be used to start collecting the spill material as soon as possible to prevent the contaminants from spreading.

#### 4.5 Containing a Spill on Water

Spills in the three fingers in the East Channel could get transported downstream quickly, and as such, any spills in these areas should be contained as quickly as possible. The following are possible containment methods that can be used:

**Absorbents:** A small spill, identified by an oily, rainbow-coloured sheen on the surface of the water, should be captured quickly using as many absorbent pads as it takes to remove the sheen.

**Oil spill containment boom:** For larger spills that cannot be absorbed immediately, use an oil spill containment boom. This floating, flexible boom can be used to surround the spill and prevent it from spreading while the spilled product is removed using a vacuum, if available, or using absorbent pads.

**Nets and absorbents:** If the spill occurs in moving water and cannot be surrounded easily with a boom, a floating net filled with absorbents can be used downstream to filter out surface spills as they flow through.

#### 4.6 Worst-Case Scenario

Dealing with a tank failure or other out-of-control leak at the GNWT-MTS Syncro Yard would present a possible worst-case scenario. In this case, follow the protocols in the GNWT-MTS Syncro Yard SCP (Appendix B).

A worst-case scenario at a soil storage area would be a punctured tank of fuel or other fluid. In this case, create a trench or collection pit downstream of the spill to contain the full volume of the tanks.

The most concerning in a worst-case scenario is a large spill on the river, in moving water. In this case, call an emergency response mobile unit to deal with the spill using appropriate equipment. In the interim, use absorbent booms and nets filled with absorbent pads to contain or slow down the spread of the leak over water.

#### **4.7 Procedure for Transferring, Storing, and Managing Spill-Related Wastes**

For disposing of contaminated materials related to any spills that occur at the GNWT-MTS Syncro Yard, follow the GNWT-MTS Syncro Yard SCP (Appendix B).

Contain sorbent pads and booms from spills on the barge and near the temporary storage sites in a leak-proof bag or other container and dispose of them at an approved facility. If small amounts of soil become contaminated from a leak, contain the soil, and dispose of it at an approved facility.

#### **4.8 Procedure for Restoring Affected Areas, Providing Regulatory Inspectors with Status Updates, and Cleanup Completion**

After a spill that is of a volume that is immediately reportable has been contained, the contractor will consult the lead agency inspector assigned to the file to determine the next steps and the level of required cleanup. The inspector may require a site-specific study to confirm that proposed cleanup levels are acceptable. Factors that may be considered are the replacement of soil and restoration of vegetation. The impacts from minor spills will be significantly harmful than that of an immediately reportable spill; however, depending on the size of spill, the spill reporting agency may require some extra steps or restoration effort after the spill has been contained, cleaned up, and reported.

## **5 TRAINING AND EXERCISES**

The contractor will be responsible for providing a qualified supervisor and for training employees in spill response. All on-site workers on the project will have their basic first aid and WHMIS training before working on the project. Any personnel involved in the handling or transportation of hazardous materials will receive TDG training and will maintain a valid TDG certificate. A training session on spill prevention and response will be held for all individuals before project start-up. Training seminars, including those on the proper use of spill kits on both land and water, will provide hands-on training for individuals on spill response procedures and equipment. The training seminars will cover:

- Individual roles and responsibilities regarding spill prevention, detection, response, and cleanup;
- Locations of paper copies of the SCP, maps, spill kits, and the types of kits at each working location;
- Equipment available for spill response;
- Content of spill kits;
- Initial spill response actions and spill reporting procedures;
- Spill response and cleanup actions; and
- Mock exercises: The contractor will conduct training sessions and mock exercises as part of worker orientation, which should cover spills on land and on water.

The contractor is responsible for keeping records of all attendees of the training session and exercises, as well as copies of their training certificates (e.g., first aid, WHMIS, spill response).

## 6 MEDIA AND PUBLIC ENQUIRIES

All enquiries from media or otherwise are to be directed to GNWT – Public Affairs and Communications. Environmental incidents, such as spills, attract local interest and media attention. Site workers will not make any statements on behalf of the contractor or GNWT-INF to the media or the public.

Employees will respond to any requests from local authorities or emergency workers, which will help to minimize the spill and its impacts. The project workers will refer all other requests for information to the GNWT – Public Affairs and Communications. This may include questions from reporters, environmental agencies, or local residents affected by a spill.

When questions are asked, employees should keep the response polite and professional; for example, “I’m sorry, I am not the spokesperson for the project. Please write down your name, media affiliation, and contact information. I will have the project spokesperson contact you as soon as possible.”

In the event that questions are persistent or if concerned local community members become aggressive, employees should remain calm and not engage; if necessary, apologize and make an excuse to exit the conversation. If the contractor is local, friends and family of the project workers may ask for information; employees should be reminded that they must keep the details of the spill confidential.

## CLOSURE

This spill contingency plan was prepared for the Government of Northwest Territories – Department of Infrastructure for the Hay River Harbour restoration project in 2023.

The services provided by Associated Environmental Consultants Inc. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,

Associated Environmental Consultants Inc.

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## REFERENCES

Associated Environmental Consultants Inc. (Associated). 2023a. Hay River Harbour Restoration – Sediment and Erosion Control Plan.

Canadian Council of Ministers of the Environment (CCME). 1999. Canadian Water Quality Guidelines for the Protection of Aquatic Life: Total Particulate Matter and Summary Tables.

Indian and Northern Affairs Canada. 2007. Guidelines for Spill Contingency Planning. Available at: <http://www.ainc-inac.gc.ca/ai/scr/nt/ntr/pubs/SCP-eng.asp>.

## APPENDIX A – SAFETY DATA SHEETS FOR SPILLABLE MATERIALS

# SAFETY DATA SHEET

## ENVIRON<sup>TM/MC</sup> MV 32



000003000466

Version 4.6

Revision Date 2022/07/12

Print Date 2022/07/12

### SECTION 1. IDENTIFICATION

Product name : ENVIRON<sup>TM/MC</sup> MV 32

Product code : ENVMV32P20, ENVMV32IBC, ENVMV32DRM,  
ENVMV32DCT, ENVMV32, ENVMV32BLK

#### Manufacturer or supplier's details

Petro-Canada Lubricants Inc.  
2310 Lakeshore Road West  
Mississauga ON L5J 1K2  
Canada  
Telephone : 1-905-403-6785

#### Emergency telephone number

Emergency telephone number : CHEMTREC: 1-800-424-9300;  
Poison Control Centre: Consult local telephone directory for  
emergency number(s).

#### Recommended use of the chemical and restrictions on use

Recommended use : ENVIRON MV is designed as heavy duty hydraulic power  
transmission fluids for use in equipment, which must operate  
over a wide range of temperatures. Typically, ENVIRON MV  
Oils are used in hydraulic systems, machine tools, hydraulic  
presses, rotary compressors, and centrifugal pumps. The  
ashless, or zinc-free, additive system used in ENVIRON MV  
oils makes them especially suitable for use in environmentally  
sensitive areas.

Prepared by : Product Safety: +1 905-491-0565

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the Hazardous Products Regulations

Not a hazardous substance or mixture.

#### GHS label elements

Not a hazardous substance or mixture.

#### Other hazards

None known.

IARC : No component of this product present at levels greater than  
or equal to 0.1% is identified as probable, possible or  
confirmed human carcinogen by IARC.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Lubricating oils (petroleum), C15-30,	72623-86-0	50 - 70

# SAFETY DATA SHEET

## ENVIRON<sup>TM/MC</sup> MV 32

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hydrotreated neutral oil-based; Baseoil — unspecified		
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil — unspecified	72623-87-1	20 - 30
2,6-di-tert-butylphenol	128-39-2	0.1 - 1

Actual concentration or concentration range is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- If inhaled : Move to fresh air.  
Artificial respiration and/or oxygen may be necessary.  
Seek medical advice.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Wash skin thoroughly with soap and water or use recognized skin cleanser.  
Wash clothing before reuse.  
Seek medical advice.
- In case of eye contact : Remove contact lenses.  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Obtain medical attention.
- If swallowed : Rinse mouth with water.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Never give anything by mouth to an unconscious person.  
Seek medical advice.
- Most important symptoms and effects, both acute and delayed : First aider needs to protect himself.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No information available.
- Specific hazards during firefighting : Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : Carbon oxides (CO, CO<sub>2</sub>), sulphur oxides (SO<sub>x</sub>), hydrogen sulphide (H<sub>2</sub>S), alkyl mercaptans, sulfides, smoke and irritating vapours as products of incomplete combustion.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

**SAFETY DATA SHEET**  
**ENVIRON™/MC MV 32**



000003000466

Version 4.6

Revision Date 2022/07/12

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
 Ensure adequate ventilation.  
 Evacuate personnel to safe areas.  
 Material can create slippery conditions.  
 Mark the contaminated area with signs and prevent access to unauthorized personnel.  
 Only qualified personnel equipped with suitable protective equipment may intervene.
- Environmental precautions : Do not allow uncontrolled discharge of product into the environment.
- Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.  
 Remove all sources of ignition.  
 Soak up with inert absorbent material.  
 Non-sparking tools should be used.  
 Ensure adequate ventilation.  
 Contact the proper local authorities.

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : None known.
- Advice on safe handling : For personal protection see section 8.  
 Smoking, eating and drinking should be prohibited in the application area.  
 Use only with adequate ventilation.  
 In case of insufficient ventilation, wear suitable respiratory equipment.  
 Avoid contact with skin, eyes and clothing.  
 Do not ingest.  
 Keep away from heat and sources of ignition.  
 Keep container closed when not in use.
- Conditions for safe storage : Store in original container.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Keep in a dry, cool and well-ventilated place.  
 Keep in properly labelled containers.  
 To maintain product quality, do not store in heat or direct sunlight.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Lubricating oils (petroleum),	72623-86-0	TWA (Mist)	5 mg/m3	CA AB OEL



# SAFETY DATA SHEET

## ENVIRON<sup>TM/MC</sup> MV 32

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C15-30, hydrotreated neutral oil-based; Baseoil — unspecified				
		STEL (Mist)	10 mg/m <sup>3</sup>	CA AB OEL
		TWAEV (Mist)	5 mg/m <sup>3</sup>	CA QC OEL
		STEV (Mist)	10 mg/m <sup>3</sup>	CA QC OEL
		TWA (Mist)	1 mg/m <sup>3</sup>	CA BC OEL
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil — unspecified	72623-87-1	TWA (Mist)	5 mg/m <sup>3</sup>	CA AB OEL
		STEL (Mist)	10 mg/m <sup>3</sup>	CA AB OEL
		TWAEV (Mist)	5 mg/m <sup>3</sup>	CA QC OEL
		STEV (Mist)	10 mg/m <sup>3</sup>	CA QC OEL
		TWA (Mist)	1 mg/m <sup>3</sup>	CA BC OEL
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Personal protective equipment

**Respiratory protection** : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Filter type** : organic vapour filter

**Hand protection Material** : neoprene, nitrile, polyvinyl alcohol (PVA), Viton®.

**Remarks** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eye protection** : Wear face-shield and protective suit for abnormal processing problems.

**Skin and body protection** : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

**Protective measures** : Wash contaminated clothing before re-use.

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Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use.  
Wash face, hands and any exposed skin thoroughly after handling.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : viscous liquid

Colour : Pale, straw-yellow.

Odour : Mild petroleum oil like.

Odour Threshold : No data available

pH : No data available

Pour point : -48 °C (-54 °F)

Boiling point/boiling range : No data available

Flash point : 239 °C (462 °F)  
Method: Cleveland open cup

Fire Point : No data available

Evaporation rate : No data available

Flammability : Low fire hazard. This material must be heated before ignition will occur.

Auto-Ignition Temperature : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.8462 kg/l (15 °C / 59 °F)

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-octanol/water : No data available

Viscosity

Viscosity, kinematic : 33.8 cSt (40 °C / 104 °F)

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6.7 cSt (100 °C / 212 °F)

Explosive properties : Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

### SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions : Hazardous polymerisation does not occur. Stable under normal conditions.

Conditions to avoid : No data available

Incompatible materials : Reactive with oxidising agents, reducing agents and acids.

Hazardous decomposition products : May release CO<sub>x</sub>, SO<sub>x</sub>, PO<sub>x</sub>, H<sub>2</sub>S, sulfides, alkyl mercaptans, methacrylate monomers, alkenes, diphenylamine, smoke and irritating vapours when heated to decomposition.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Eye contact  
Ingestion  
Inhalation  
Skin contact

#### Acute toxicity

##### Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: No data available

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: No data available

##### Components:

#### Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil — unspecified:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

#### Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil — unspecified:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

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Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

**Skin corrosion/irritation**

**Product:**

Remarks : No data available

**Serious eye damage/eye irritation**

**Product:**

Remarks : No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

NOEC (Fish): > 100 mg/l  
Exposure time: 28 Days

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

NOEC (Daphnia (water flea)): > 20 mg/l  
Exposure time: 21 Days

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Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): > 9,000 mg/l/Exposure time: 72 h  
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (algae)): > 1 mg/l/Exposure time: 72 h  
Remarks: No toxicity at the limit of solubility

Toxicity to microorganisms : Remarks: No data available

**Persistence and degradability**

**Product:**

Biodegradability : Result: Inherently biodegradable.

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Offer surplus and non-recyclable solutions to a licensed disposal company.  
Waste must be classified and labelled prior to recycling or disposal.  
Send to a licensed waste management company.  
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**National Regulations**

**TDG**

Not regulated as a dangerous good



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### SECTION 15. REGULATORY INFORMATION

The components of this product are reported in the following inventories:

- DSL : On the inventory, or in compliance with the inventory
- TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
- IECSC : On the inventory, or in compliance with the inventory

### SECTION 16. OTHER INFORMATION

#### Full text of other abbreviations

- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
- CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
- CA BC OEL : Canada. British Columbia OEL
- CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
- ACGIH / TWA : 8-hour, time-weighted average
- CA AB OEL / TWA : 8-hour Occupational exposure limit
- CA AB OEL / STEL : 15-minute occupational exposure limit
- CA BC OEL / TWA : 8-hour time weighted average
- CA QC OEL / TWA EV : Time-weighted average exposure value
- CA QC OEL / STEV : Short-term exposure value

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;

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SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

For Copy of SDS : Internet: [lubricants.petro-canada.com/sds](http://lubricants.petro-canada.com/sds)  
Western Canada, telephone: 1-800-661-1199; fax: 1-800-378-4518  
Ontario & Central Canada, telephone: 1-800-268-5850; fax: 1-800-201-6285  
Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 1-800-201-6285  
For Product Safety Information: 1 905-491-0565

Prepared by : Product Safety: +1 905-491-0565

Revision Date : 2022/07/12  
Date format : yyyy/mm/dd

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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