21 Dec 23

Manitoba Environment, Climate and Parks
Environmental Compliance and Enforcement Branch
1007 Century St
Winnipeg, MB
R3H 0W4

Attention: **Edwyn Yazon, Environmental Engineer, Environmental Approvals**

Re: **Supplemental Information for the Notice of Alteration for GFL Facility at 1090 Kenaston Blvd, Winnipeg, Dangerous Goods Handling and Transportation Act Licence No. 334 HW (AMENDED)**

This letter is in response to the request for information, email received on September 18, 2023, based on a notice of application submitted by GFL Environmental Services Inc. (GFL) on September 13, 2022 for it's *Dangerous Goods Handling and Transportation Act* Licence No. 334 HW (the permit).

This response was amended on December 20, 2023 following further requests for information submitted to GFL through a phone conversation on December 18, 2023 and an email sent on December 20, 2023. The additional information represents Requests #17 – 20.

Responses to the request for clarification and/or additional information are on the following table.

Request #1	
Request	Provide an updated site plan to show the final placement of aeration box, shredder, and 50000-litre aboveground used oil tank. Provide also a one-page facility layout
Response	Included in Appendix A of this response.

Request #2	
Request	Clarify/describe how the treatment process in the aeration box eliminates the hazardous waste characteristics of materials.
Response	After reviewing the needs of the facility, GFL has decided to withdraw the request for the aeration box process from the application. The aeration box no longer forms part of this NoA and will be removed from the Facility.

Request #3	
Request	Relating to aeration box, provide a detailed description of the aeration process including the following: • volume of waste • type of waste • location • loading process • unloading process • testing protocol of VOC (before and after treatment) • volume or rate of treatment • details about receiving of materials before treatment • details about storing of materials before treatment • post treatment procedure including storage before offsite treatment
Response	As noted above aeration box no longer forms part of this NoA and will be removed from the Facility.

Request #4	
Request	Relating to air emission, provide a detailed description of the aeration process that includes the following: • exhaust gas ventilation system including design and specification • emission control measures • targeted emission standards • discharge rate • air pollution control system
Response	As noted above aeration box no longer forms part of this NoA and will be removed from the Facility.

Request #5	
Request	Describe the sampling and analysis of potential air pollutants released as stationary point. The description should include the following: • list of compounds for analysis • rational for sampling • methods used for sampling • analysis for each method • an explanation note to describe the state and types of samples for analysis • results of lab analysis • standards to compare analysis
Response	As noted above aeration box no longer forms part of this NoA and will be removed from the Facility.

Request #6	
Request	Describe how odour from the aeration process is mitigated to ensure an odour problem is not created from the process
Response	As noted above aeration box no longer forms part of this NoA and will be removed from the Facility.

Request #7	
Request	Describe the measures if/when the air pollution control system fails or malfunctions
Response	As noted above aeration box no longer forms part of this NoA and will be removed from the Facility.

Request #8	
Request	Please include the following in the shredding operation description: • volume capacity • shredding rate
Response	The shredder specifications are contained in Appendix B of this response. From an operational perspective, the shredder is capable of shredding materials at a rate of fifty (50) ton/hour.

Request #9	
Request	The proposal indicates shredding of mix of solids. The process will drain excess liquids. What are the liquids? Is there any hazardous component in the liquid?
Response	The liquids will primarily be non-regulated consumer goods such as beer and other alcohol containing beverages. The containers will typically be in aluminum cans and bulk packaging such as twenty-four (24) cans in a combination of plastic and cardboard overpacking. Other items that are proposed to be shredded are used oil filters. Typically, these will be large train type filter that not able to be processed in the current used oil processing equipment. These will produce used oil as product, which are disposed of in the waste oil containers at the Facility.

Request #10	
Request	What stage of the process is the liquid drained from materials?
Response	The liquid is drained during the shredding process with the solids and liquid exiting to the bottom of the shredder together, and then eventually disposed of in appropriate containers.

Request #11	
Request	Submit a design or specification of the floor sump and holding tank for containing the drained liquid.
Response	There is no drawing for the containment. The debris from shredding is collected in bins with a screen that will capture the solids and allow the liquids to accumulate at the bottom. The liquids are pumped out of the bin into a tank via a valve at the bottom of the bin.

Request #12	
Request	What are bulky industrial waste? Provide examples.
Response	Bulky industrial waste may include large bundles of cardboard, metals, glass, aluminum – larger items that cannot be placed into either a recycling program or in designated waste containers for disposal. This does not include any hazardous materials such as asbestos ceiling tiles, or construction waste such as drywall.

Request #13	
Request	Describe how noise and dust from the shredding process will be mitigated to ensure noise or dust problem is not created from the process.
Response	Shredding operations are completed inside building “B.” Noise generated from the operation of the shredder is contained within the building, which mitigates the opportunity for noise generation to the outside. Dust from the shredding operation is minimal and contained within the building. Any dust that is generated is swept up and disposed of at the conclusion of the shredding operation.

Request #14	
Request	Describe the potential explosion from shredding containers of incompatible products, and the mitigation measures to prevent explosion.
Response	Only non-flammable liquid or other non-hazardous containers are processed through the shredder. The materials are sorted prior to operation to ensure compatibility of materials being shredded.

Request #15	
Request	The addition of a 50,000-litre storage tank will increase GFL's current operation. This will also increase the vehicular traffic within the facility and nearby intersections. Please clarify how this addition will not change the environmental effects to the current operation.
Response	While the additional tank does provide for an increase on the volume of product that can be accepted at the facility, it is not anticipated that the volumes of product currently being accepted at the Facility will change. This does not increase vehicular traffic within the Facility and the nearby intersections. The additional tank is being brought in as a proactive measure to allow for GFL to accept product from one off events like emergency situations or seasonal surges in product disposals.

Request #16	

Request	Describe the following:
	• loading procedures
	• unloading procedures
	• spill containment measures
	• emergency response plan that includes the following hazards:
	  ○ accidental spill
	  ○ fire

Request #16	
Response	Attached to the response are the GFL SOPs: • GFL-PRF-LIQ-0032-1ALW-SOP - Bulk Waste Receiving • GFL-PRF-LIQ-0039-1ALW-SOP - Tank Farm Transfers • GFL-OLS-LIQ-3010-1ALW-SOP - Oil Truck Transfer (Loading From Tank Farm) • GFL-OLS-LIQ-3012-1ALW-SOP - Oil Truck Transfer (Loading) • GFL-OPS-LIQ-9018-1ALW-SOP - Bulk Waste Shipping - Waste Fuels • GFL-PRF-LIQ-0010-1ALW-SOP - Tank Farm Ops Spill containment procedures are detailed in each SOP for transfers. The ERP for the facility is attached to this response. There are no changes to the fundamentals of the response plan as this does not add any new hazards to the site and the tank is of a similar design to the doubled walled 50,000 L tank already on site. Once the tank has been authorized and put in place it will be added to the site plan and listing in the ERP.

Request #17 (AMENDED)	
Request	Add Tanks 10 and 11 to the site drawing.
Response	The tanks have been added to the site drawing in the .

Request #18 (AMENDED)	
Request	Add the missing Appendices info to the Facility Operational Plan.
Response	Added to the document.

Request #19 (AMENDED)	
Request	Please provide the volume of materials that GFL intends to shred daily.

Request #19 (AMENDED)	
Response	The amount that can be shredded is highly dependent on the material that is to be shredded. The shredder is designed to accept the following materials: • Aluminum • Wood • Paper and Cardboard • Plastic • Rubber • PVC profiles • Food Waste • Copper cables • WEEE • Glass Waste • Textile Waste • Tetra Pak Depending on the material to be shredded the site will be able to process approximately 500 - 2,000 kg /hr (based on current use in a similar facility). The typical waste type to be processed will be consumer alcohol products in aluminum cans with some cardboard and plastic packaging. This type of material can be processed through this shredder at approximately 2,000 kg/hr which would give the facility the capability to process approximately 16,000 kg of this waste in a shift.

Request #20 (AMENDED)	
Request	If the waste materials to be shredded are stored in Building B, kindly confirm if there is adequate space available for proper storage with spill containment features.
Response	The materials will be shredded into metal bins with bottom valves. Liquids will be drained from the bottom of the bin with cam lock flex hose to prevent spills into a tank in building "B". Materials to be shredded will either consist of non-regulated, Non-hazardous materials or solid hazardous waste/Dangerous goods packaged such that it can stored outside the building.

Request #21 (AMENDED)	
Request	Are alcohol-containing materials accepted for shredding? If yes, please confirm if they are classified as dangerous goods or hazardous waste.
Response	Any materials containing alcohol will be in consumer products for destruction (beer, cider, coolers).

Please direct any questions or concerns to the undersigned at 780 805 6107 or cprichard@gflenv.com.

Yours Sincerely,

GFL Environmental Services Inc.

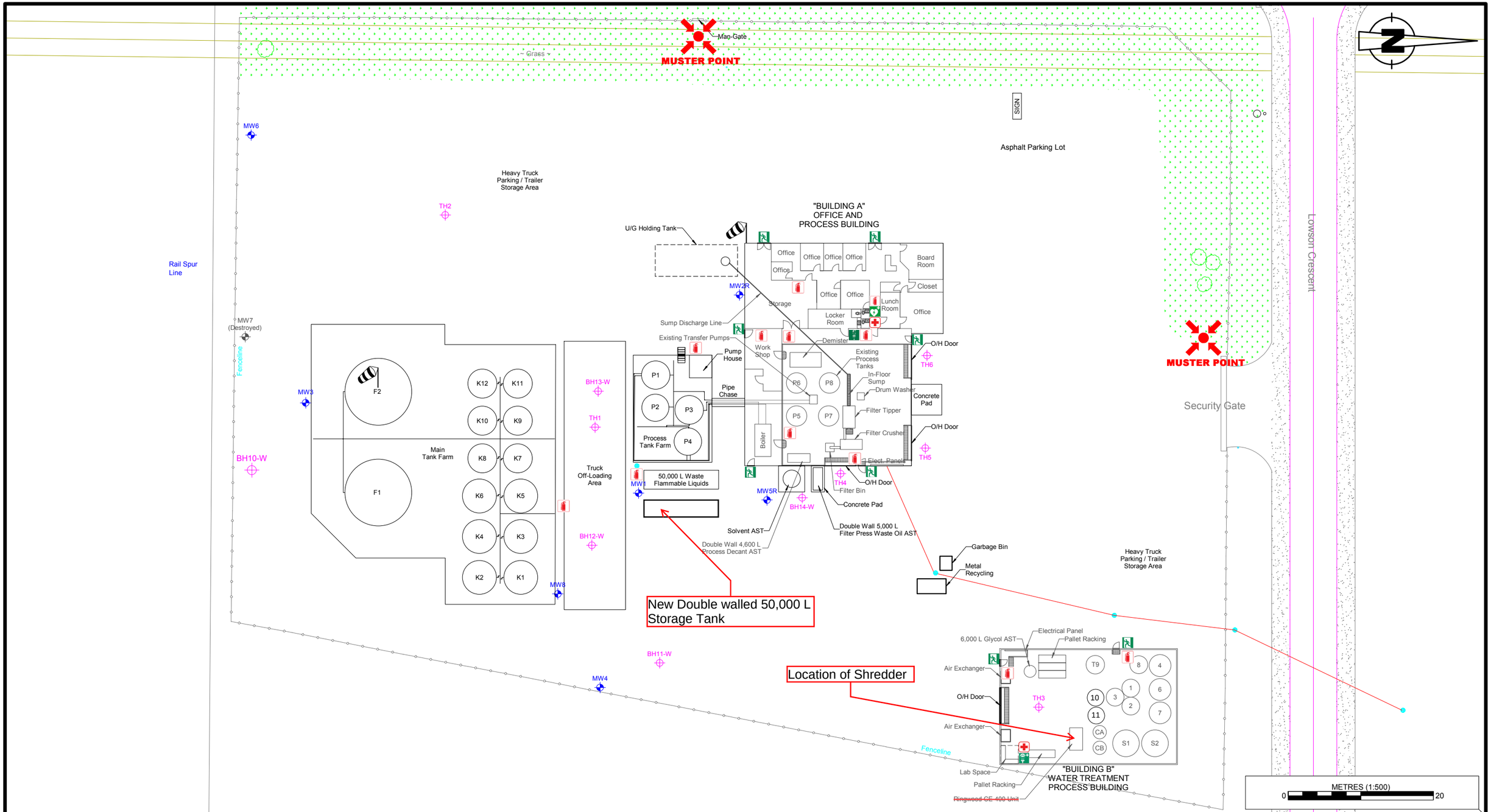
Cameron Prichard

Cameron Prichard
EHS Manager - Compliance
(cell): 780 805 6107
cprichard@gflenv.com

cc: Colin Dutton

APPENDICES

APPENDIX A: SITE LAYOUT



NOTES:

1. THIS DRAWING IS PREPARED FOR ILLUSTRATIVE PURPOSES ONLY. THIS IS NOT A LEGAL SURVEY. ALL MEASUREMENTS ARE IN METRES.
2. SITE COORDINATES: 49.838888° N, -97.208127° W.

LEGEND:

- FENCE
- MONITORING WELL
- BOREHOLE
- O/H POWER
- MUSTER POINT
- FIRE EXTINGUISHER
- EMERGENCY EXIT
- FIRST AID KIT
- EMERGENCY EYEWASH STATION
- EMERGENCY SHOWER AND EYEWASH
- AED
- WINDSOCK

REVISIONS

REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	

FIGURE 2

SITE LAYOUT AND EMERGENCY EQUIPMENT LOCATIONS

03 MAY 2018
GFL KENASTON FACILITY
1090 KENASTON BLVD, WINNIPEG, MB

DRAWN BY: SAM

CHECKED BY: GJW

APPENDIX B: SHREDDER SPECIFICATIONS

GSR LINE - **GL** LINE

MONOROTORI POTENZIATI

PRESTAZIONI SUPERIORI

I macinatori potenziati della linea GS e GL soddisfano standard qualitativi e livelli di performance elevati specialmente nel trattamento di RSU, plastiche, legno, gomma, carta e cartone e rifiuti industriali ingombranti. Potenti nella struttura e nel risultato, i macinatori potenziati sono caratterizzati da un'alta produttività e da una massima affidabilità. Grazie alla presenza di una griglia, questi macinatori permettono una produzione di materiale in uscita in pezzatura omogenea, preparando il materiale per eventuali lavorazioni e impieghi successivi. Inoltre, l'utilizzo di placchette intercambiabili permette veloci manutenzioni con fermi macchina ridotti. Le lame configurabili in base a spessore e numero rappresentano la grande flessibilità di queste macchine, mentre l'impiego di placchette intercambiabili con riporto anti usura proteggono la macchina da possibili danneggiamenti.

HIGH-POWERED SINGLE-SHAFT SHREDDERS

SUPERIOR PERFORMANCE

The high-powered shredders of the GS and GL line meet high standards of quality and performance especially for the processing of MSW, plastics, wood, rubber, paper and cardboard, and bulky industrial waste. With a powerful structure and performance, the high-powered shredders guarantee high productivity and reliability. Thanks to their screen, these shredders produce homogeneous output size, preparing the material for subsequent processing and uses. The use of interchangeable cutters also permits quick maintenance, minimizing downtime. The blades can be configured in various thicknesses and numbers for great flexibility, while the use of interchangeable cutters with a wear-resistant coating protects the machine from damage.

GSR480

GSR480 con rotore potenziato a 480 mm è un monorotore con spintore radiale e dotato di motorizzazione elettrica. La maggiore superficie macinante permette una maggiore produzione. La possibilità di avere il motoriduttore ad assi paralleli e l'inversione di marcia automatica fanno di queste macchine un monorotore dalle elevate prestazioni.

GSR480 *with its enhanced 480-mm rotor is a single-shaft shredder with a radial ram and an electric motor. It has an increased shredding surface for greater production. The possibility of having a gearmotor with parallel shafts and automatic reverse improves the performance of these single-shaft machines.*

GSR480 LINE

	GSR480/13	**GSR480/15**	**GSR480/18**
Ingombro \ *Overall dimension* \ mm	3.609 x 2.513 x 3.242	3.809 x 2.513 x 3.242	4.109 x 2.513 x 3.242
Camera di taglio \ *Cutting chamber* \ mm	1.130 x 1.350	1.130 x 1.550	1.130 x 1.850
Diametro rotore \ *Rotor diameter* \ mm	480	480	480
Peso \ *Weight* \ kg	10.000	12.000	15.000
Motore \ *Motor* \ kW	55	75	90
Lame \ *Blades*	Placchette \ *Cutters*	Placchette \ *Cutters*	Placchette \ *Cutters*
Dimensione placchette \ *Cutter dimensions* \ mm	60 x 60 x 20	60 x 60 x 20	60 x 60 x 20

APPENDIX C: SOPS

Appendix C1: Bulk Waste Receiving

Title	Bulk Waste Receiving		
Document No.	GFL-PRF-LIQ-0032-1ALW-SOP	**Page No.**	1 of 4
Document Owner	Regional Manager - Processing Facilities	**Version Number**	1.0
Approved by	Chad Wood	**Document Revision Date**	01-Feb-2021
Document Location:	Workhub		

1. JOB INFORMATION

Purpose and Scope of Job	Materials and Equipment Required	Repetitiveness
This document describes the correct methods to receive bulk waste materials at a GFL Processing Facility	• Tank Farm Inventory Report • Inbound paperwork (B.O.L, manifest, movement documents) • Clipboard • Pen • Scanning device (where applicable) • Scale • Sampling tools and container • Wheel chocks • Waste Surcharge Ticket • Tank • Treatment pad • Roll off bin • Desired implement • Fall Protection Harness (as required) • Ice Cleats (as required) • Headlamp (as required) • Safety Pylons (as required)	☒ 1 – Hourly ☐ 2 – Daily ☐ 3 – Weekly ☐ 4 – Monthly ☐ 5 - Annually

2. PROCESS OVERVIEW

Waste receiving includes the proper tools, steps and information to receive bulk waste at a GFL Processing Facility.

3. HAZARDS AND RISKS (Under normal operating conditions)

Hazard / Risk	Category	*Severity of Consequences*		*Likelihood of Outcome*		Overall Risk (A+B)
		Without Controls	*With Controls (A)*	*Without Controls*	*With Controls (B)*	
Chemical Exposure (Ingestion, Inhalation, Splash)	Chemical Exposure	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Spill	Environmental	*4 - Major*	*2 - Minor*	*2 - May occur in exceptional circumstances*	*1 - Doubtful occurance*	**3**
Fall from heights	Fall Potential	*5 - Catastrophic*	*2 - Minor*	*3 - Possible occurance*	*1 - Doubtful occurance*	**3**
Vehicle and equipment movements	Motorized Equipment	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Icy and/or muddy and uneven terrain	Slips Trips	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Climate	Climate (Heat / Cold)	*2 - Minor*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**

4. TRAINING & COURSES REQUIRED	FREQUENCY OF RETRAINING
Internal training and SOP review. Fall Arrest training.	Annual.

5. JOB PLANNING REQUIRED

Risk Mitigations	Additional Forms & Related Documents	Permits Required
☒ LMRA ☐ Toolbox Meeting ☐ FLRA ☐ Rescue Plan ☒ JSA/JHA ☐ Supervisor Sign Off ☒ Pre-task Inspection ☐ Post-task Inspection ☐ Other: _____	☐ Purchase Order ☒ Service Order ☒ Bill of Lading ☐ Customer / Client Signature Required ☐ Managers Approval ☒Other: manifest_____	☐ Hot Work ☐ Confined Space ☐ LOTO ☐ Excavation ☐ Critical Lift ☐ Working at Heights ☐ IDLH ☐ Traffic ☐ Other: _____

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Head	Standard hard hat	CSA certified & approved hard hat (CSA Z94.1-05). The hard hat is to be worn in the manner the manufacturer suggests – with the peak facing forward. The exterior of the hard hat should be maintained in a clean condition. Only required stickers shall be on the hard hat.
 Eyes / Face	Sidewall safety glasses	CSA certified & approved foam lined safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved foam lined safety glasses complete with side-shields. For Saskatchewan and Manitoba (or site specific requirement) please follow: CSA certified & approved foam lined safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved foam lined safety glasses complete with side-shields.
 Hearing	N/A	Earplugs as required (CSA Z94.2-02).
 Respiratory	N/A	Half-Mask APR w/ Honeywell 75SCL Defender cartridges (or equivalent). Operator must be fit tested to use APR or SCBA equipment.
 Hands	Leather Gloves	Standard issue leather-palmed gloves must be on the worksite for all hands on. Where needed, cut resistant, chemical resistant or hazard specific gloves, may be selected and used to address certain risks.

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK		
 **Body / Clothing**	High Vis, FR coveralls	Standard issue Fire Resistant (FR) rated Class 1 reflective coveralls Z96-09 (R2014).
 **Feet**	Safety Boots Met-guard boots	Boots must extend above the ankle, have Metatarsal protection, and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, MT/75 Metatarsal Protection standards, and be CSA approved Class 1 Steel Toe and Plate. For Saskatchewan and Manitoba (or site specific requirement) Boots must extend above the ankle, have Metatarsal protection, and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, MT/75 Metatarsal Protection standards, and be CSA approved Class 1 Steel Toe and Plate.
 **Chemical / Decontamination**	Eyewash kit available within 100m First aid kit available within 100m	DAP Decontamination Procedures – Remove soiled clothing, wash affected area with mild soap and water. SDS information reviewed prior to job task for chemicals or products (SDS attached to SOP).
 **Fire / Explosion**	Fire extinguisher available within 100m	Emergency plan reviewed and current. Fire Extinguishers nearby and checked.
 **Environmental Conditions**	Building airflow controlled, no additional measures necessary	
 **Environmental Damage**	Spill kit available within 100m	Spill Kit in place and fully stocked with supplies. Review protocols for any spill and thresholds for escalation.

7. EMERGENCY PROCEDURES

Category	Procedure	Additional Details
7.1 MEDICAL EMERGENCY - TRAUMA		
Minor	• As per site Emergency plan	See lockout procedure
Major	• As per site Emergency plan	Call 911 for major emergencies
7.2 MEDICAL EMERGENCY – CHEMICAL EXPOSURE		
Eyes	• Wash eyes x 15 minutes, • seek medical attention	See SDS attached
Skin	• Wipe affected area down, • wash with soap and water, • monitor for any irritation, • seek medical attention if symptoms worsen	See SDS attached
Ingestion	• Do not induce vomiting • Seek medical attention	See SDS attached
7.3 ENVIRONMENTAL RELEASE PROCEDURES		
Under 5 L	• Control Spill using absorbent pads • Use spill kit	Contact supervisor Complete internal spill report
Over 200 L	• Control spill as much as possible • Report to supervisor immediately • Activate internal spill response procedures	Contact Supervisor Complete internal spill report
7.4 EQUIPMENT FAILURES		
Overheat / Seize	• Turn off equipment • Disconnect power	Report to supervisor
Pump/Hose Failure	• Close valves • Lock-out pump power supply (electric or pneumatic) • Remove any debris, assess failure mode	Report to supervisor

8. JOB SEQUENCE

Step No.	Task Steps	Possible Hazards / Concerns and Controls
1	Obtain copy of shipping paperwork (B.O.L, manifest and/or movement documents)	
2	Obtain a full weight/scale ticket of the delivery unit and contents where required. Utilized onsite scale where applicable and third party scale where onsite is not available.	
3	Ensure that the transport vehicle is in place and secured for unloading.	*Use wheel chocks to keep vehicle in position.*
4	Review the inbound waste paperwork to determine if further data is required on the waste streams about to be received. Ex. SDS	
5	Obtain a sample to check compatibility with contents of proposed receiving location or determine other characteristics of waste, such as water content, where required. Log sample in records and mark container with sample number corresponding to sample log. Store sample in required location.	

6	Cross reference the physical waste to be received against inbound paperwork and sample obtained so all are matching. If all do not match, stop immediately and contact your supervisor.	
7	Check proposed receiving location volume to ensure full volume of waste can be received into receiving location, or to determine how much of the shipment volume can safely be received in the receiving location without overfilling.	
8	Connect all required components to perform the offload. Refer to any SOP's for specific waste types.	
9	Carefully begin to offload waste.	*Chemical exposure, use proper PPE* *Release from container, have spill kit near*
10	Disconnect unload component and remove wheel chocks.	*Use spill tray to prevent any released liquid*
11	Obtain and empty weight/scale ticket of the delivery unit where required. Utilized onsite scale where applicable and third party scale where onsite is not available.	
12	Validate the volume of waste received against the inbound paperwork utilizing the tools at your disposal. This can included weights, tank calibration charts and/or gauging systems. Any discrepancies must be notified to the transport operator, your supervisor, inbound paperwork and waste surcharge ticket.	
13	Print name, sign, and date shipping paperwork as receiver.	
14	Submit all completed documents to your supervisor.	

9. DIAGRAMS / PHOTOS

Appendix C2: Tank Farm Transfers

Title	Tank Farm Transfers		
Document No.	GFL-PRF-LIQ-0039-1ALW-SOP	**Page No.**	1 of 4
Document Owner	Line of Business Manager - PRF	**Revision Number**	1.0
Approved by	Chad Wood	**Document Revision Date**	01-Feb-2021
Document Location:	WorkHub		

1. JOB INFORMATION

Purpose and Scope of Job	Materials and Equipment Required	Repetitiveness
The following SOP outline how to preform transfers within the tank farm and minimize the potential for injury, exposure, leaks/spills and operational issues.	• Site Standard PPE • Truck Transfer Pump	☐ 1 – Hourly ☒ 2 – Daily ☐ 3 – Weekly ☐ 4 – Monthly ☐ 5 - Annually

2. PROCESS OVERVIEW

This safe operating procedure entails determining which tanks needs to be transferred, opening and closing valves, applying and removing lockout locks to tanks, recording changes in tank levels and the amount of transfers. It also describes what paperwork needs to be recorded and explains what to do if a spill occurs.

3. HAZARDS AND RISKS (Under normal operating conditions)

Hazard / Risk	Category	*Severity of Consequences*		*Likelihood of Outcome*		Overall Risk (A+B)
		Without Controls	*With Controls (A)*	*Without Controls*	*With Controls (B)*	
Large spill causing contamination	Environmental	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Spill from not following procedure	Other: Spills	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**

4. TRAINING & COURSES REQUIRED

TRAINING & COURSES REQUIRED	FREQUENCY OF RETRAINING
Internal Training	Annually

5. JOB PLANNING REQUIRED

Risk Mitigations	Additional Forms & Related Documents	Permits Required
☐ LMRA ☐ Toolbox Meeting ☐ FLRA ☐ Rescue Plan ☐ JSA/JHA ☐ Supervisor Sign Off ☐ Pre-task Inspection ☐ Post-task Inspection ☐ Other: _____	☐ Purchase Order ☐ Service Order ☐ Bill of Lading ☐ Customer / Client Signature Required ☐ Managers Approval ☐ Other: _____	☐ Hot Work ☐ Confined Space ☐ LOTO ☐ Excavation ☐ Critical Lift ☐ Working at Heights ☐ IDLH ☐ Traffic ☐ Other: _____

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 **Head**	Standard hard hat	CSA certified & approved hard hat (CSA Z94.1-05). The hard hat is to be worn in the manner the manufacturer suggests – with the peak facing forward. The exterior of the hard hat should be maintained in a clean condition. Only required stickers shall be on the hard hat.

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK		
 **Eyes / Face**	Sidewall safety glasses	CSA certified & approved foam lined safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved foam lined safety glasses complete with side-shields. For Saskatchewan and Manitoba (or site specific requirement) please follow: CSA certified & approved foam lined safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved foam lined safety glasses complete with side-shields.
 **Hearing**	N/A	Earplugs as required (CSA Z94.2-02).
 **Respiratory**	N/A	Half-Mask APR w/ Honeywell 75SCL Defender cartridges (or equivalent). Operator must be fit tested to use APR or SCBA equipment.
 **Hands**	Leather Gloves	Standard issue leather-palmed gloves must be on the worksite for all hands on. Where needed, cut resistant, chemical resistant or hazard specific gloves, may be selected and used to address certain risks.
 **Body / Clothing**	High Vis, FR coveralls	Standard issue Fire Resistant (FR) rated Class 1 reflective coveralls Z96-09 (R2014).
 **Feet**	Steel Toes Boots	Boots must extend above the ankle and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05and be CSA approved Class 1 Steel Toe and Plate. For Saskatchewan and Manitoba (or site specific requirement) please follow: Boots must extend above the ankle, have Metatarsal protection, and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, MT/75 Metatarsal Protection standards, and be CSA approved Class 1 Steel Toe and Plate.
 **Chemical / Decontamination**	Eyewash kit available within 100m First aid kit available within 100m	DAP Decontamination Procedures – Remove soiled clothing, wash affected area with mild soap and water. SDS information reviewed prior to job task for chemicals or products (SDS attached to SOP).

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK		
 Fire / Explosion	Fire extinguisher available within 100m	Emergency plan reviewed and current. Fire Extinguishers nearby and checked.
 Environmental Conditions	Building airflow controlled, no additional measures necessary	Check for adequate airflow through absorbent media. Oil De-Misting and Air Scrubber Unit Functional.
 Environmental Damage	Spill kit available within 100m	Spill Kit in place and fully stocked with supplies. Review protocols for any spill and thresholds for escalation.

7. EMERGENCY PROCEDURES		
Category	**Procedure**	**Additional Details**
7.1 MEDICAL EMERGENCY - TRAUMA		
Minor	• As per site Emergency plan	See lockout procedure
Major	• As per site Emergency plan	Call 911 for major emergencies
7.2 MEDICAL EMERGENCY – CHEMICAL EXPOSURE		
Eyes	• Wash eyes x 15 minutes, • seek medical attention	See SDS attached
Skin	• Wipe affected area down, • wash with soap and water, • monitor for any irritation, • seek medical attention if symptoms worsen	See SDS attached
Ingestion	• Do not induce vomiting • Seek medical attention	See SDS attached
7.3 ENVIRONMENTAL RELEASE PROCEDURES		
Under 5 L	• Control Spill using absorbent pads • Use spill kit	Contact supervisor Complete internal spill report
Over 200 L	• Control spill as much as possible • Report to supervisor immediately • Activate internal spill response procedures	Contact Supervisor Complete internal spill report
7.4 EQUIPMENT FAILURES		
Overheat / Seize	• Turn off equipment • Disconnect power	Report to supervisor
Medium Jam	• Lock out equipment	Report to supervisor

	• ***At least two locks required for repair / unjam • Open side panel to release pressure • Remove any debris	

8. JOB SEQUENCE

Step No.	Task Steps	Possible Hazards / Concerns and Controls
1	Have a look at your See Level gauge and paperwork to double check how much product that you have collected that day.	*Caution: Not knowing how much product that you will be offloading could end up over filling the tank.*
2	Check the tank dip sheets to determine which tank is currently being filled and that there is enough room in the tank for the product that you intend on offloading.	*Caution: During burner fuel season, if you are offloading used oil or fuel, ensure that the tank is not tested product.*
3	Grab on oil absorbent pad and go up the stairs to pre-dip the tank that you intend on offloading into. Wipe the oil off of the dip stick to a level lower than the last dip that was recorded on the tank dip chart for that tank. Re dip the tank and confirm that it matches the last recorded dip.	*Caution: Ensure that you use three point contact while you ascend and descend the stairs on the tank.*
4	After confirming that the product will fit in the tank, you will connect the 4 inch hose from the manifold to your truck. You may require couplings/reducers to mate up with the offloading valve on your truck. You should place a drip tray at the point of connection to catch any spills/leaks prior to connecting the hose. Ensure that the 4 inch line is connected to the correct valve for the tank that you intend on offloading into.	*Caution: Ensure that the connecting end of the 4 inch line is higher that the lowest point in the line to prevent any possible residue from spilling onto the ground or equipment.*
5	Install or attach cam lock straps or bungies at every point of connection unless your fittings already have self-locking cam locks. A shim may be required in the ears of the cam lock fitting to ensure a tight fit.	*Danger: Failure to install cam lock straps could result in a leak or complete hose disconnect while transferring product.*
6	Engage the PTO to your pump and ramp up the RPM's accordingly.	*Caution: Listen carefully while you engage the PTO for any grinding or odd noises.*
7	Remove the pad lock from the manifold for the tank that you will be offloading into and store it in a safe place.	
8	Open all valves required to allow the product to flow unobstructed. Ensure that all truck internals are opened to avoid creating pressure in the tank. Double check that the bleeder valve on the manifold is closed.	*Danger: Failure to open all required valves will result in pressuring up the line(s) and a possible rupture of the lines.*
9	Slowly engage your pump while watching for leaks or a pressuring up of the line. Watch your See Level gauge to ensure that the product is offloading.	*Caution: If a leak is detected, put the pump in neutral and close the manifold valve. Clear the line and fix the leak.*
10	Once fully offloaded, you will put the pump in neutral and close the valve on the manifold. Open up the bleeder valve then go reverse your pump so that you can clear out the line. Walk the line while lifting the hose to ensure that you clear as much product as possible from the line. Once the line is clear, close the pump valve and put the pump in neutral. Close all remaining valves and internals. Turn off the PTO.	*Caution: Not closing all valves could cause a spill while disconnecting.*
11	Remove all straps (if required) and disconnect the line. Return the hose from the manifold to its original position.	*Caution: There may be residue in the hose. Keep the open end of the line elevated to prevent any spills.*
12	Place the lock back onto the manifold and ensure that it is closed.	
13	Re dip the tank that you offloaded into and record the volumes on the tank dip chart.	*Caution: Confirm that your dip closely resembles the volume that your See Level gauge stated.*

Appendix C3: Oil Truck Transfers (Loading From tank Farm)

Title	Oil Truck Transfer (Loading From Tank Farm)		
Document No.	GFL-OLS-LIQ-3010-1ALW-SOP	**Page No.**	1 of 6
Document Owner	Oil Services Liquid West	**Revision Number**	1.0
Approved by	Jason Henkel	**Document Revision Date**	27-Jun-2022
Document Location:	**Workhub**		

1. JOB INFORMATION

Purpose and Scope of Job	Materials and Equipment Required	Repetitiveness
The purpose of this work instruction is to ensure employees performing this task are aware of hazards and controls, so they can avoid injury and minimize spillage.	• Spill response kit • Rags and absorbents	☐ 1 – Hourly ☒ 2 – Daily ☐ 3 – Weekly ☐ 4 – Monthly ☐ 5 - Annually

2. PROCESS OVERVIEW

This work instruction trains employees the correct procedure on collecting, handling and disposal processes for liquid waste. The employees will be trained in what products are TDG regulated and what regulatory requirements accompany these collections. Employees are made aware of the procedure to follow when at a customer site and there is unlabeled/unknown the customer wants to be collected and all PPE required to do waste collection.

3. HAZARDS AND RISKS (Under normal operating conditions)

Hazard / Risk	Category	*Severity of Consequences*		*Likelihood of Outcome*		Overall Risk (A+B)
		Without Controls	*With Controls (A)*	*Without Controls*	*With Controls (B)*	
Connecting hoses	Pinch Points	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Entering and exiting customer sites in truck	Motorized Equipment	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Getting in and out of truck	Fall Potential	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Splashing of liquid in eyes	Chemical Exposure	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
When entering and working on customer sites	Other Workers in Area	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**

4. TRAINING & COURSES REQUIRED	FREQUENCY OF RETRAINING
TDG training Internal Training	Every 3 years Once, during on-the-job training and when SOP is updated

5. JOB PLANNING REQUIRED

Risk Mitigations	Additional Forms & Related Documents	Permits Required
☐ LMRA ☐ Toolbox Meeting ☐ FLRA ☐ Rescue Plan ☒ JSA/JHA ☐ Supervisor Sign Off ☐ Pre-task Inspection ☐ Post-task Inspection ☐ Other: _____	☒ Purchase Order ☒ Service Order ☒ Bill of Lading ☒ Customer / Client Signature Required ☐ Managers Approval ☐ Other: _____	☐ Hot Work ☐ Confined Space ☐ LOTO ☐ Excavation ☐ Critical Lift ☐ Working at Heights ☐ IDLH ☒ Traffic ☐ Other: _____

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Head	Standard hard hat	CSA certified & approved hard hat (CSA Z94.1-05). The hard hat is to be worn in the manner the manufacturer suggests – with the peak facing forward. The exterior of the hard hat should be maintained in a clean condition. Only required stickers shall be on the hard hat.
 Eyes / Face	Sidewall safety glasses	CSA certified & approved safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved safety glasses complete with side-shields.
 Hearing	N/A	Earplugs as required (CSA Z94.2-02).
 Respiratory	N/A	
 Hands	Nitrile-dipped Gloves	Standard issue Nitrile-dipped gloves must be on the worksite for all hands on. Where needed, cut resistant, chemical resistant or hazard specific gloves, may be selected and used to address certain risks.
 Body / Clothing	High Vis, FR coveralls	Standard issue Fire Resistant (FR) rated Class 1 reflective coveralls Z96-09 (R2014).
 Feet	Steel Toed Boots	Boots must extend above the ankle and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, and be CSA approved Class 1 Steel Toe and Plate.

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Chemical / Decontamination	Eyewash kit available within 100m First aid kit available within 100m	
 Fire / Explosion	Fire extinguisher available within 100m	Current emergency plan reviewed Fire Extinguishers nearby
 Environmental Conditions	Building and truck box/trailer ventilated, no additional measures necessary	
 Environmental Damage	Spill kit available within 100m	Spill Kit on truck or in storage area and fully stocked with supplies.

7. EMERGENCY PROCEDURES

Category	Procedure	Additional Details
7.1 MEDICAL EMERGENCY - TRAUMA		
Minor	• As per site Emergency plan	Know where first aid kit is
Major	• As per site Emergency plan	Call 911 for major emergencies
7.2 MEDICAL EMERGENCY – CHEMICAL EXPOSURE		
Eyes	• Wash eyes x 20 minutes, • seek medical attention	See SDSs, as available
Skin	• Wipe affected area down, • Wash with soap and water, • Monitor for any irritation, • Seek medical attention if symptoms worsen	See SDS, as available
Ingestion	• Do not induce vomiting • Seek medical attention	See SDS, as available
7.3 ENVIRONMENTAL RELEASE PROCEDURES		
Any amount	• Control spill using absorbent pads • Use spill kit	Contact supervisor Complete internal spill report

7.4 EQUIPMENT FAILURES		
Pump or tank failure	• Report to home base	Contact Supervisor

8.1 JOB SEQUENCE Oil Truck Transfer		
Step No.	**Task Steps**	**Possible Hazards / Concerns and Controls**
1	Complete morning pre-trip.	
2	Check if there is a height restriction for the truck.	
3	Locate collection point, Park truck in an area that least affects that business and which allows access to the required work area. Engage parking brake and block wheels.	CAUTION: Follow traffic safety rules, get out of vehicle and do a walk around to ensure area is clear of other vehicles, overhead wires, clutter and pedestrians NOTE: If tight, move vehicles or materials or else get a spotter to help you access the area. NOTE: If vehicles/materials cannot be moved and there is no spotter available, assess if you can do the job without having a collision. If unsure, notify ops you are unable to access the area needed. Report this to your Supervisor and the Dispatcher.
4	Attach the grounding strap to the truck frame.	DANGER: The movement of liquids can cause static electricity. Flammable liquids also create flammable vapor that can be ignited if static electricity sparks are created.
5	Check that the truck to be loaded into has enough capacity.	
6	Put down drip tray and/or spill pads where ever hose connections will be made.	
7	Hook up hoses and fittings, Secure locking pins or Velcro strips. Record fluid meter reading.	Note: Inspect all connections prior to loading for damage or loose fitment. CAUTION: Ensure Camlock fittings lock securely. If either “ear” of a Camlock fitting is missing OR if the connection otherwise does not seem to seal completely, take that hose out of service for repair/disposal and obtain a proper hose.
8	Open vent on truck tank or trailer to avoid creating pressure inside truck	
9	Open valves on tank farm and insure you are counted to correct tank, follow all pipes and make sure other tanks are closed and locked out.	Note: cross contamination can damage the load and cause adverse effects.
10	Open appropriate tank valves and engage PTO, if direct drive slowly remove foot from clutch to start pump / if hydraulically driven then proceed to slowly pull hydraulic pump handle. (Truck must be on as level of grade as possible to ensure accuracy of collection. Do not operate pump over 1000 R.P.M).	Note: Make sure pump is turning in correct direction before engaging. And correct valves are open or closed as required
11	Take sample vial and place under sample port spigot and open valve carefully so as not to overfill. Close valve and cap vial.	
12	Remain with the truck throughout the transfer. Allow the tank to load into truck. Monitor truck capacity throughout loading.	CAUTION: Remain near valves and pump shutoff throughout unloading in the event of a problem or spill.

8.1 JOB SEQUENCE Oil Truck Transfer		
Step No.	**Task Steps**	**Possible Hazards / Concerns and Controls**
		NOTE: In the event of a spill, stop the transfer immediately, contain it, notify manager and proceed with cleaning up the spill. Spills greater than 25 L must be reported internally. Spills greater than 200 L of Class 3 materials or of any material potentially entering a watercourse must be reported to the government.
13	When truck is a desired volume, close valve to tank farm, allow hoses to clear unhook hose from tank, return hose to truck, close valve to the suction side, shut off PTO pump.	Note: Be careful to watch for leaks and drips. NOTE: Make sure to hold lines up to ensure proper drainage. NOTE: Make sure to raise hose above pump level to ensure proper drainage.
14	Cap off hoses and secure in trays. Clean off hose, fittings and tools.	
15	Close any additional required tank farm valves	Note: leaving valves open could cause spills or issues for the next person that uses the load lines
16	Look over site to ensure you are not leaving any fittings, hoses or tools behind	
17	Clean up any oil that you have spilled and retain any materials involved in doing so. Dispose of them properly when you return to the yard.	
18	Read fluid meter, subtract this number from the previous number for total volume collected. .	
19	Obtain the vial label number that matches the collection statement number on tablet and affix it to the sample vial. Affix the duplicate label to the chain of custody sheet.	
17	Make sure all information is correct.	
19	Be sure after completing the collection that all valves and hoses closed and secure before travelling.	
23	Unload into appropriate tank. Or travel to unload site	NOTE: Follow proper unloading procedures.
25	Complete an offloading docket or inventory Sheet that summarizes totals	
26	Clean truck floor of any leakage or garbage.	
27	Deliver daily paperwork.	

8. DIAGRAMS / PHOTOS	
Step No.	**Description**

Appendix C4: Oil Truck Transfer (loading)

Title	Oil Truck Transfer (loading)		
Document No.	GFL-OLS-LIQ-3012-1ALW-SOP	**Page No.**	1 of 6
Document Owner	Oil Services Liquid West	**Revision Number**	1.0
Approved by	Jason Henkel	**Document Revision Date**	27-Jun-2022
Document Location:	**Workhub**		

1. JOB INFORMATION

Purpose and Scope of Job	Materials and Equipment Required	Repetitiveness
The purpose of this work instruction is to ensure employees performing this task are aware of hazards and controls, so they can avoid injury and minimize spillage.	• Spill response kit • Rags and absorbents	☐ 1 – Hourly ☒ 2 – Daily ☐ 3 – Weekly ☐ 4 – Monthly ☐ 5 - Annually

2. PROCESS OVERVIEW

This work instruction trains employees the correct procedure on collecting, handling and disposal processes for liquid waste. The employees will be trained in what products are TDG regulated and what regulatory requirements accompany these collections. Employees are made aware of the procedure to follow when at a customer site and there is unlabeled/unknown the customer wants to be collected and all PPE required to do waste collection.

3. HAZARDS AND RISKS (Under normal operating conditions)

Hazard / Risk	Category	*Severity of Consequences*		*Likelihood of Outcome*		Overall Risk (A+B)
		Without Controls	*With Controls (A)*	*Without Controls*	*With Controls (B)*	
Connecting hoses	Pinch Points	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Entering and exiting customer sites in truck	Motorized Equipment	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Getting in and out of truck	Fall Potential	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Splashing of liquid in eyes	Chemical Exposure	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
When entering and working on customer sites	Other Workers in Area	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**

4. TRAINING & COURSES REQUIRED	FREQUENCY OF RETRAINING
TDG training Internal Training	Every 3 years Once, during on-the-job training and when SOP is updated

5. JOB PLANNING REQUIRED

Risk Mitigations	Additional Forms & Related Documents	Permits Required
☐ LMRA ☐ Toolbox Meeting ☐ FLRA ☐ Rescue Plan ☒ JSA/JHA ☐ Supervisor Sign Off ☐ Pre-task Inspection ☐ Post-task Inspection ☐ Other: _____	☒ Purchase Order ☒ Service Order ☒ Bill of Lading ☒ Customer / Client Signature Required ☐ Managers Approval ☐ Other: _____	☐ Hot Work ☐ Confined Space ☐ LOTO ☐ Excavation ☐ Critical Lift ☐ Working at Heights ☐ IDLH ☒ Traffic ☐ Other: _____

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Head	Standard hard hat	CSA certified & approved hard hat (CSA Z94.1-05). The hard hat is to be worn in the manner the manufacturer suggests – with the peak facing forward. The exterior of the hard hat should be maintained in a clean condition. Only required stickers shall be on the hard hat.
 Eyes / Face	Sidewall safety glasses	CSA certified & approved safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved safety glasses complete with side-shields.
 Hearing	N/A	Earplugs as required (CSA Z94.2-02).
 Respiratory	N/A	
 Hands	Nitrile-dipped Gloves	Standard issue Nitrile-dipped gloves must be on the worksite for all hands on. Where needed, cut resistant, chemical resistant or hazard specific gloves, may be selected and used to address certain risks.
 Body / Clothing	High Vis, FR coveralls	Standard issue Fire Resistant (FR) rated Class 1 reflective coveralls Z96-09 (R2014).
 Feet	Steel Toed Boots	Boots must extend above the ankle and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, and be CSA approved Class 1 Steel Toe and Plate.

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Chemical / Decontamination	Eyewash kit available within 100m First aid kit available within 100m	
 Fire / Explosion	Fire extinguisher available within 100m	Current emergency plan reviewed Fire Extinguishers nearby
 Environmental Conditions	Building and truck box/trailer ventilated, no additional measures necessary	.
 Environmental Damage	Spill kit available within 100m	Spill Kit on truck or in storage area and fully stocked with supplies.

7. EMERGENCY PROCEDURES

Category	Procedure	Additional Details
7.1 MEDICAL EMERGENCY - TRAUMA		
Minor	• As per site Emergency plan	Know where first aid kit is
Major	• As per site Emergency plan	Call 911 for major emergencies
7.2 MEDICAL EMERGENCY – CHEMICAL EXPOSURE		
Eyes	• Wash eyes x 20 minutes, • seek medical attention	See SDSs, as available
Skin	• Wipe affected area down, • Wash with soap and water, • Monitor for any irritation, • Seek medical attention if symptoms worsen	See SDS, as available
Ingestion	• Do not induce vomiting • Seek medical attention	See SDS, as available
7.3 ENVIRONMENTAL RELEASE PROCEDURES		
Any amount	• Control spill using absorbent pads • Use spill kit	Contact supervisor Complete internal spill report

7.4 EQUIPMENT FAILURES		
Pump or tank failure	• Report to home base	Contact Supervisor

8. JOB SEQUENCE Oil Truck Transfer		
Step No.	**Task Steps**	**Possible Hazards / Concerns and Controls**
1	Complete morning pre-trip.	
2	Check if there is a height restriction for the truck.	
3	Locate customer waste collection point, Park truck in an area that least affects that business and which allows access to the required work area. Engage parking brake and block wheels.	CAUTION: Follow traffic safety rules, get out of vehicle and do a walk around to ensure area is clear of other vehicles, overhead wires, clutter and pedestrians NOTE: If tight, ask Customer to either move vehicles or materials or else provide a spotter to help you access the area. NOTE: If vehicles/materials cannot be moved and there is no spotter available, assess if you can do the job without having a collision. If unsure, notify Customer you are unable to access the area needed and will return later. Report this to your Supervisor and the Dispatcher.
4	Attach the grounding strap to the truck frame.	DANGER: The movement of liquids can cause static electricity. Flammable liquids also create flammable vapor that can be ignited if static electricity sparks are created.
5	Check that the truck to be loaded into has enough capacity.	
6	Put down drip tray and/or spill pads where ever hose connections will be made.	
7	Hook up hoses and fittings, Secure locking pins or Velcro strips. Record fluid meter reading.	Note: Inspect all connections prior to loading for damage or loose fitment. CAUTION: Ensure Camlock fittings lock securely. If either “ear” of a Camlock fitting is missing OR if the connection otherwise does not seem to seal completely, take that hose out of service for repair/disposal and obtain a proper hose.
8	Open vent on truck tank or trailer to avoid creating pressure inside truck	
9	Open appropriate tank valves and engage PTO, if direct drive slowly remove foot from clutch to start pump / if hydraulically driven then proceed to slowly pull hydraulic pump handle. (Truck must be on as level of grade as possible to ensure accuracy of collection. Do not operate pump over 1000 R.P.M).	Note: Make sure pump is turning in correct direction before engaging. And correct valves are open or closed as required
10	Take sample vial and place under sample port spigot and open valve carefully so as not to overfill. Close valve and cap vial.	
11	Remain with the truck throughout the transfer. Allow the tank to load into truck. Monitor truck capacity throughout loading.	CAUTION: Remain near valves and pump shutoff throughout unloading in the event of a problem or spill. NOTE: In the event of a spill, stop the transfer immediately, contain it, notify manager and proceed with cleaning up the spill. Spills greater than 25 L must be

8. JOB SEQUENCE Oil Truck Transfer		
Step No.	**Task Steps**	**Possible Hazards / Concerns and Controls**
		reported internally. Spills greater than 200 L of Class 3 materials or of any material potentially entering a watercourse must be reported to the government.
12	When customer tank is empty, allow hoses to clear unhook hose from stinger or tank, return hose to truck, close valve to the suction side, shut off PTO pump.	Note: Be careful to watch for leaks and drips. NOTE: Make sure to hold lines up to ensure proper drainage. NOTE: Make sure to raise hose above pump level to ensure proper drainage.
13	Cap off hoses and secure in trays. Clean off hose, fittings and tools.	
14	Look over customer site to ensure you are not leaving any fittings, hoses or tools behind	
	Clean up any oil that you have spilled and retain any materials involved in doing so. Dispose of them properly when you return to the yard.	
15	Read fluid meter, subtract this number from the previous number for total volume collected. .	CAUTION: The parking brake will prevent or limit unintentional vehicle movement due to uneven surface or collision from another vehicle.
16	Obtain the vial label number that matches the collection statement number on tablet and affix it to the sample vial. Affix the duplicate label to the chain of custody sheet. Store the sample vial for later transfer to the tank farm for later transfer to the tank farm	
17	Make sure all information on collection screen is correct.	
18	Have customer sign collection screen on tablet.	
19	Be sure after completing the collection that all valves and hoses closed and secure before travelling.	
20	Repeat procedure throughout work day.	
21	Once full or pickups are complete for the day, return to GFL home base.	CAUTION: Follow traffic safety rules.
22	Upon arriving at the GFL yard: - Inform Shop Supervisor	NOTE: Inform Operations Supervisor of any special handling needs.
23	Unload into appropriate tank.	NOTE: Follow proper unloading procedures.
25	Complete an offloading docket or inventory Sheet that summarizes totals	
26	Clean truck floor of any leakage or garbage.	
27	Deliver daily paperwork and sample to office for Entry.	

9. DIAGRAMS / PHOTOS	
Step No.	**Description**

Appendix C5: Bulk Waste Shipping – Waste Fuels

Title	Bulk Waste Shipping – Waste Fuels		
Document No.	GFL-OPS-LIQ-9018-1ALW-SOP	**Page No.**	1 of 5
Document Owner	Director of Operations	**Revision Number**	1.0
Approved by	Andrew Gingrich	**Document Revision Date**	29-Jun-2022
Document Location:	WorkHub		

1. JOB INFORMATION

1.1 Purpose and Scope of Job	1.2 Materials and Equipment Required	1.3 Repetitiveness
Purpose This SOP's purpose is to make aware of the various hazards that present themselves when loading fuel onto a unit for transport. After review of this document, an employee should understand the process as well as the reasons for why the listed precautions have been implemented. **Scope** This SOP is to be reviewed by any employee directly involved or assisting with the transfer of fuel to a vessel intended to be transported.	1. Standard PPE • Hard Hat • Safety Glasses • Gloves • Steel toes boots / rubber boots • Coveralls • Site Specific PPE for the area as required 2. Multimeter (Grounding) 3. Grounding Cables 4. Fall Arrest	☒ 1 – Hourly ☐ 2 – Daily ☐ 3 – Weekly ☐ 4 – Monthly ☐ 5 - Annually

2. PROCESS OVERVIEW

This SOP covers the process of set-up, transfer, and tear down in relation to loading fuel onto a vessel for transport.

3. HAZARDS AND RISKS (Under normal operating conditions)

Hazard / Risk	Category	*Severity of Consequences*		*Likelihood of Outcome*		Overall Risk (A+B)
		Without Controls	*With Controls (A)*	*Without Controls*	*With Controls (B)*	
Product Spillage throughout process.	Other _____ _____	*3 - Serious Injury Requiring Medical Aid*	*1 - Injuries not Requiring First Aid*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Fire/Explosion	Physical hazards	*4 - Serious Injury Resulting in Hospitilization*	*2 - Minor Injury or First Aid*	*3 - Possible occurance*	*1 - Doubtful occurance*	**3**
Falling off vessel during product volume check	Fall Potential (Pit / Edge)	*4 - Serious Injury Resulting in Hospitilization*	*1 - Injuries not Requiring First Aid*	*3 - Possible occurance*	*3 - Possible occurance*	**4**

4. TRAINING & COURSES REQUIRED	FREQUENCY OF RETRAINING
Internal Training	Annual

5. JOB PLANNING REQUIRED

5.1 Risk Mitigations	5.2 Additional Forms & Related Documents	5.3 Permits Required
☒ LMRA ☐ Toolbox Meeting ☐ FLRA ☐ Rescue Plan ☐ JSA/JHA ☐ Supervisor Sign off ☒ Pre-task inspection ☒ Post-task inspection ☐ Other: _____	☐ Purchase Order ☐ Service Order ☒ Bill of Lading ☐ Customer / Client signature required ☐ Managers Approval ☐ Other: If other, include here.	☐ Hot Work ☐ Confined Space ☐ LOTO ☐ Excavation ☐ Critical Lift ☒ Working at Heights ☐ IDLH ☐ Traffic ☒ Other: If other, include here Fall Arrest Training

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Head	Hard Hat	CSA certified & approved hard hat (CSA Z94.1-05). The hard hat is to be worn in the manner the manufacturer suggests – with the peak facing forward. The exterior of the hard hat should be maintained in a clean condition. Only required stickers shall be on the hard hat.
 Eyes / Face	Foam Framed Safety Goggles	ANSI Z87.1 for protection from radiant energy, flying sparks, splatter
 Hearing	Earplugs	N/A
 Respiratory	Full/Half Mask	CSA / ANSI Z49.1 Depending on the work being performed full face or half mask respirator may be required
 Hands	Leather Gloves	CSA / ANSI Z49.1 Flame Resistant Gloves

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK		
 **Body / Clothing**	High Vis, Fire Retardant coveralls	Standard issue Fire Resistant (FR) rated Class 1 reflective coveralls Z96-09 (R2014).
 **Feet**	Internal Met-Guard Boots	Boots must extend above the ankle, have Metatarsal protection, and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, MT/75 Metatarsal Protection standards, and be CSA approved Class 1 Steel Toe and Plate.
 **Chemical / Decontamination**	Eyewash kit available within 100m First aid kit available within 100m	DAP Decontamination Procedures – Remove soiled clothing, wash affected area with mild soap and water. SDS information reviewed prior to job task for chemicals or products (SDS attached to SOG).
 **Fire / Explosion**	Fire Extinguisher	Emergency plan reviewed and current. Fire Extinguishers available within reach and checked for function.
 **Environmental Conditions**	Building airflow controlled	No additional measures necessary
 **Environmental Damage**	Spill Kit	Spill Kit in place and fully stocked with supplies. Review protocols for any spill and thresholds for escalation. Available within 100m

7. EMERGENCY PROCEDURES		
Step No.	**Task Steps / Photo**	**Possible Hazards / Concerns and Controls**
7.1 MEDICAL EMERGENCY - TRAUMA		
Minor	• As per site Emergency plan	See lockout procedure
Major	• As per site Emergency plan	Call 911 for major emergencies
7.2 MEDICAL EMERGENCY – CHEMICAL EXPOSURE		
Eyes	• Wash eyes x 15 minutes, • seek medical attention	See SDS attached

Skin	• Wipe affected area down, • wash with soap and water, • monitor for any irritation, • seek medical attention if symptoms worsen	See SDS attached
Ingestion	• Do not induce vomiting • Seek medical attention	See SDS attached
7.3 ENVIRONMENTAL RELEASE PROCEDURES		
Under 5 L	• Control Spill using absorbent pads • Use spill kit	Contact supervisor Complete internal spill report
Over 200 L	• Control spill as much as possible • Report to supervisor immediately • Activate internal spill response procedures	Contact Supervisor Complete internal spill report
7.4 EQUIPMENT FAILURES		
Overheat / Seize	• Turn off equipment • Disconnect power	Report to supervisor
Medium Jam	• Lock out equipment • ***At least two locks required for repair / unjam • Open side panel to release pressure • Remove any debris	Report to supervisor

8. **JOB SEQUENCE PROCEDURE**		
Step No.	**Task Steps / Photo**	**Possible Hazards / Concerns and Controls**
1	Ensure park brakes are engaged on the unit to be filled.	
2	Fix chock blacks under the wheels of the unit to ensure no rolling takes place.	
3	Ensure that the vessel which is to be loaded is empty.	
4	Turn off cell phone and other electronic devices. If using a radio, make sure it is intrinsically safe. Otherwise, turn off the device.	
5	Ground the unit by attaching a grounding cable to the trailer and a grounded source. Ensure grounding with use of a multimeter, making sure there is no electrical current.	This process generates static electricity. Grounding is necessary to ensure that a fire/explosion doesn't occur.
6	Place drip trays under hose connections to ensure that the ground isn't contaminated throughout the process.	
7	Hook up hose from the source to the unit's vessel.	
8	Ensure that the hose is secured with use of straps on the hose's ears.	Movement of a unit's pump can vibrate a fitting's ears free, causing an environmental spill. The use of straps minimizes this risk.
9	Open up compartments on the vessel.	
10	Perform a circle check, making sure there are no potential blockages or leaks.	Think about where the pressure is going and ensure that the product has a clear path to your vessel.

11	Open valve on loading source (if applicable).	
12	Engage the pump to begin loading.	
13	Periodically check for leaks or malfunctions by performing a circle check.	
14	Continuously monitor the vessel's load level to ensure that the unit isn't overfilled.	Risk of overflowing vessel. This risk is increased when a unit is able to maximize the volume due to the low weight of the product being loaded. Ensure that the product level is being monitored to reduce this risk. If no gauges are available to check the product level, fall arrest will be required to manually check it.
15	Once load is complete, shut the fuel source's valve.	
16	Walk out the hose line to ensure residue product is loaded and not present in the hose.	Excess product may be left inside the transfer hose. To reduce the likelihood of a spill occurring while disconnecting, ensure there is no chance for product to be left contained inside the transfer hose.
17	Close the unit's loading valve and shut off pump.	
18	Perform circle check to ensure of no fluid leaks.	
20	Attach TDG placards with appropriate UN# to the unit which is to contain the transported fuel.	
21	Make sure B.O.L. and product's MSDS are on hand before departure.	

Appendix C6: Tank Farm Operations

Title	Tank Farm Operations		
Document No.	GFL-PRF-LIQ-0010-1ALW-SOP	**Page No.**	1 of 4
Document Owner	Processing Facilities	**Version Number**	1.0
Approved by	Chad Wood	**Document Revision Date**	01-Feb-2021
Document Location:	Workhub		

1. JOB INFORMATION

Purpose and Scope of Job	Materials and Equipment Required	Repetitiveness
The scope of this SOP is to cover the general operation of a tank farm. Specific procedures will be referenced as required.	• Tank Farm Inventory Report • Tank Farm Inspection • Pen • Hoses • Spill Trays • Fall Protection Harness (as required) • Ice Cleats (as required) • Headlamp (as required) • Safety Pylons (as required)	☐ 1 – Hourly ☒ 2 – Daily ☐ 3 – Weekly ☐ 4 – Monthly ☐ 5 - Annually

2. PROCESS OVERVIEW

Tank farm operations include proper facility inspection, inventory verification, offloading and loading of trucks, as well as tank to tank transfers and product sampling tasks**.**

3. HAZARDS AND RISKS (Under normal operating conditions)

Hazard / Risk	Category	*Severity of Consequences*		*Likelihood of Outcome*		Overall Risk (A+B)
		Without Controls	*With Controls (A)*	*Without Controls*	*With Controls (B)*	
Chemical Exposure (Ingestion, Inhalation, Splash)	Chemical Exposure	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Spill	Environmental	*4 - Major*	*2 - Minor*	*2 - May occur in exceptional circumstances*	*1 - Doubtful occurance*	**3**
Fall from heights	Fall Potential	*5 - Catastrophic*	*2 - Minor*	*3 - Possible occurance*	*1 - Doubtful occurance*	**3**
Vehicle and equipment movements	Motorized Equipment	*4 - Major*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Icy and/or muddy and uneven terrain	Slips Trips	*3 - Moderate*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Climate	Climate (Heat / Cold)	*2 - Minor*	*1 - Negligible*	*3 - Possible occurance*	*1 - Doubtful occurance*	**2**
Pressurized Lines	Line of Fire	*4 - Major*	*2 - Minor*	*3 - Possible occurance*	*1 - Doubtful occurance*	**3**

4. TRAINING & COURSES REQUIRED

TRAINING & COURSES REQUIRED	FREQUENCY OF RETRAINING
Internal training and SOP review. Fall Arrest training.	Annual.

5. JOB PLANNING REQUIRED

Risk Mitigations	Additional Forms & Related Documents	Permits Required
☒ LMRA ☐ Toolbox Meeting ☐ FLRA ☐ Rescue Plan ☒ JSA/JHA ☐ Supervisor Sign Off ☒ Pre-task Inspection ☐ Post-task Inspection ☐ Other: _____	☐ Purchase Order ☐ Service Order ☐ Bill of Lading ☐ Customer / Client Signature Required ☐ Managers Approval ☐ Other: _____	☐ Hot Work ☐ Confined Space ☐ LOTO ☐ Excavation ☐ Critical Lift ☐ Working at Heights ☐ IDLH ☐ Traffic ☐ Other: _____

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK

Category	Common Name	Additional Details
 Head	Standard hard hat	CSA certified & approved hard hat (CSA Z94.1-05). The hard hat is to be worn in the manner the manufacturer suggests – with the peak facing forward. The exterior of the hard hat should be maintained in a clean condition. Only required stickers shall be on the hard hat.
 Eyes / Face	Sidewall safety glasses	CSA certified & approved foam lined safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved foam lined safety glasses complete with side-shields. For Saskatchewan and Manitoba (or site specific requirement) please follow: CSA certified & approved foam lined safety glasses (CSA Z94.3-07 / Z93.3-02 / Z94.3-99). Prescription eyewear must also be CSA approved foam lined safety glasses complete with side-shields.
 Hearing	N/A	Earplugs as required (CSA Z94.2-02).
 Respiratory	N/A	Half-Mask APR w/ Honeywell 75SCL Defender cartridges (or equivalent). Operator must be fit tested to use APR or SCBA equipment.
 Hands	Leather Gloves	Standard issue leather-palmed gloves must be on the worksite for all hands on. Where needed, cut resistant, chemical resistant or hazard specific gloves, may be selected and used to address certain risks.

6. PERSONAL PROTECTIVE EQUIPMENT AND MEASURES FOR SPECIFIC TASK		
 **Body / Clothing**	High Vis, FR coveralls	Standard issue Fire Resistant (FR) rated Class 1 reflective coveralls Z96-09 (R2014).
 **Feet**	Safety Boots Met-guard boots	Boots must extend above the ankle, have Metatarsal protection, and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, MT/75 Metatarsal Protection standards, and be CSA approved Class 1 Steel Toe and Plate. For Saskatchewan and Manitoba (or site specific requirement) Boots must extend above the ankle, have Metatarsal protection, and additionally be CSA approved with Grade 1 protection. Rubber boots must meet CSA Z195-09 / ASTM F2413-11 or OSHA standard ASTM F2413-05, MT/75 Metatarsal Protection standards, and be CSA approved Class 1 Steel Toe and Plate.
 **Chemical / Decontamination**	Eyewash kit available within 100m First aid kit available within 100m	DAP Decontamination Procedures – Remove soiled clothing, wash affected area with mild soap and water. SDS information reviewed prior to job task for chemicals or products (SDS attached to SOP).
 **Fire / Explosion**	Fire extinguisher available within 100m	Emergency plan reviewed and current. Fire Extinguishers nearby and checked.
 **Environmental Conditions**	Building airflow controlled, no additional measures necessary	
 **Environmental Damage**	Spill kit available within 100m	Spill Kit in place and fully stocked with supplies. Review protocols for any spill and thresholds for escalation.

7. EMERGENCY PROCEDURES

Category	Procedure	Additional Details
7.1 MEDICAL EMERGENCY - TRAUMA		
Minor	• As per site Emergency plan	See lockout procedure
Major	• As per site Emergency plan	Call 911 for major emergencies
7.2 MEDICAL EMERGENCY – CHEMICAL EXPOSURE		
Eyes	• Wash eyes x 15 minutes, • seek medical attention	See SDS attached
Skin	• Wipe affected area down, • wash with soap and water, • monitor for any irritation, • seek medical attention if symptoms worsen	See SDS attached
Ingestion	• Do not induce vomiting • Seek medical attention	See SDS attached
7.3 ENVIRONMENTAL RELEASE PROCEDURES		
Under 5 L	• Control Spill using absorbent pads • Use spill kit	Contact supervisor Complete internal spill report
Over 200 L	• Control spill as much as possible • Report to supervisor immediately • Activate internal spill response procedures	Contact Supervisor Complete internal spill report
7.4 EQUIPMENT FAILURES		
Overheat / Seize	• Turn off equipment • Disconnect power	Report to supervisor
Pump/Hose Failure	• Close valves • Lock-out pump power supply (electric or pneumatic) • Remove any debris, assess failure mode	Report to supervisor

8. JOB SEQUENCE

Step No.	Task Steps	Possible Hazards / Concerns and Controls
1	Complete tank farm inspection prior to any other tasks. Reference document GFL-PRF-LIQ-0002-1ALW-SOP for specific procedures.	
2	Verify all inventory and tank levels prior to beginning other tasks. Update tank farm inventory tracking sheet.	
3	Load any scheduled outbound units. Refer to [SOP] for specific procedures.	
4	Offload any scheduled inbound units. Refer to [SOP] for specific procedures.	
5	Conduct any transfers as required. Refer to [SOP] for specific procedures. This can include: • Oil / fuel blending • Oil / fuel skimming (water tanks) • Production to sales tank transfer	
6	Complete tank farm housekeeping items as required including: • Empty and clean manifold cabinets and drip trays • Empty and clean portable spill trays	*Wear chemical resistant gloves, and use absorbent material to clean spills, leaks.*

	• Empty tank farm garbage can • Clean the containment ring exterior • Clean hose trays and check for leaks • Empty and clean sample port drip trays • Empty agitator containment pails	

7	Complete tank farm safety and security items including:
	• Check all fire extinguishers and place them correctly
	• Test the high level alarm of each tank by pressing the Test button. The alarm will produce sound if it is in working condition
	• Verify all containment structures including the tanks themselves
	• Close and lock all tank, manifold, and sample port valves
	• Clear standing water from the containment ring
	• Pressure test all hoses as required
	  ○ Each hose sent for pressure testing must first be cleaned
	  ○ Use a vac truck to clear the hose of liquids
	  ○ Use a pressure washer to further clean any remaining residues
	  ○ Palletize and wrap all hoses to be sent for pressure testing
	• Clear all obstructions from tank farm access and egress routes
	• Ensure windsock is visible and intact
	• Test each gauge board
	
	Notify a supervisor of any deficiencies.	

8	Inspect the pumps and pump shack. • Verify compressed air supply • Close pump bleed valves • Secure all hose connections with cams and straps. • Empty and clean the filter baskets • Empty and clean the pump containment tray • Check spare parts stock, notify supervisor if more parts are needed	

9. DIAGRAMS / PHOTOS

Step No.	Description

Step No.	Description

APPENDIX D: DRAFT OPERATIONS PLAN

OPERATIONS PLAN

GFL Environmental Incorporated
Winnipeg 1090 Kenaston Office and Facility

1090 Kenaston Boulevard
Winnipeg, Manitoba
Client File No.: 4320.10
License No.: 334 HW
Permit: 23647

21 DEC 2023

EXTERNAL EMERGENCY CONTACT LIST

Agency	Phone Number	Notes
Winnipeg Fire Paramedic Service	911	
Winnipeg Police Service	911	
RCMP	911	
Manitoba Environmental Emergency Hotline	(204) 944-4888	24-hour Emergency Line
GFL Emergency Hotline (Manitoba)	(204) 987-9600	24-hour Emergency Line
GFL Incident Reporting Hotline	1(866) 417-2797	24-hour Emergency Line
Manitoba Poison Centre	1 (855) 776-4766	24-hour Emergency Line
Manitoba Hydro	(204) 480-5900 in Wpg or 1 (888) 624-9376	24-hour Emergency Line
Canadian National Railway Police	1(800) 465-9239	24-hour Emergency Line

FACILITY PROFILE

Facility Location: 1090 Kenaston Boulevard
Winnipeg, MB

GPS Coordinates: 49.838888° N
97.208127° W

Land Location: Lot 3, Plan 9153, WLTO in OTM Lots 60 to 63, Parish of Saint Boniface

Facility Area: 1.25 hectares (3.1 acres)

Emergency Contact: (204) 987-9600 (24 Hours)

Approval No.:

334 HW	Operating License pursuant to *The Dangerous Goods Handling Transportation Act* (No Expiry)
23647	Permit to Operate a Petroleum Storage Facility pursuant to the *Storage and Handling of Petroleum Products and Allied Products Regulation*
MBG04810	Generator Registration for 1090 Kenaston Blvd., Winnipeg (No Expiry)
MBC20058	Hazardous Waste Transportation Licence (No Expiry)
MBR04811	Receiver Registration for 1090 Kenaston Blvd., Winnipeg (No Expiry)

Issuing Authority: Manitoba Sustainable Development

Proposed Operations:
1. Bulking, processing, and blending of designated hydrocarbons with used oil
2. Temporary storage of hazardous waste
3. Bulking of non-hazardous waste streams
4. Bulking of hazardous waste streams
5. Processing and recycling of used oil filters
6. Processing and recycling of aerosol containers
7. Drum washing and rinsate collection
8. Temporary storage, bulking and treatment of non-regulated industrial wastewater

Authorized Materials:
Class 2.1 – Flammable Compressed Gas
Class 2.2 – Non-Flammable, Non-toxic, Compressed Gas
Class 2.3 – Toxic Compressed Gas
Class 3 – Flammable Liquids
Class 4.1 – Flammable Solids
Class 4.2 – Spontaneously Combustible

Class 4.3 – Water Reactive
Class 5.1 – Oxidizing Substances
Class 5.2 – Organic Peroxides
Class 6.1 – Toxic Substances
Class 8 – Corrosive Substances
Class 9 – Miscellaneous Products and Substances (including, but not limited to: environmentally hazardous substances, lithium batteries, nitrate fertilizers)

Site Sensitivity: (line of sight measurements)

Nearest surface water:	240 metres (m) (Southwest) 675 m (West) 1,000 m (Northeast)
Nearest residence:	500 m (East)
Nearest water well:	Water well locations not field confirmed in area
Nearest school:	1.4 kilometers (km) (Southeast, Linden Meadows School) 1.6 km (East, Van Walleghem School)
Nearest hospital:	5.3 km (Southeast, Victoria General Hospital)
Nearest prison:	3.7 km (North, Winnipeg Youth Centre) 13.0 km (Northwest, Women's Correctional Centre)

Emergency Access: Primary Site Access: North Gate – Entrance off Lowson Crescent

Response Distance:

Fire Station No.12:	1.2 km (North, 1780 Taylor Avenue)
Fire Station No. 22	5.1 km (Southeast, 1567 Waverly Street)
Fire Station No. 11:	6.1 km (North, 1705 Portage Avenue)

Storage Capacity:

Tank ID No.	Contents / Process	Capacity (L)
Main Tank Farm		
K1	Waste Hydrocarbons	119,300
K2	Waste Hydrocarbons	119,300
K3	Waste Hydrocarbons	119,300
K4	Waste Hydrocarbons	119,300
K5	Waste Hydrocarbons	119,300
K6	Waste Hydrocarbons	119,300
K7	Waste Hydrocarbons	124,500
K8	Waste Hydrocarbons	124,500
K9	Waste Hydrocarbons	124,500
K10	Waste Hydrocarbons	124,500
K11	Waste Hydrocarbons	124,500
K12	Waste Hydrocarbons	124,500
F1	Waste Hydrocarbons	640,000
F2	Waste Hydrocarbons	640,000
Process Tank Farm		
P1	Waste Water / Oil / Light Ends	60,000
P2	Waste Oil	60,000
P3	Processed Oil	60,000
P4	Waste Oil	60,000
Interior Process Tanks		
P5	Process Oil	15,230
P6	Process Oil	15,230
P7	Process Oil	15,230
P8	Process Oil	15,230
PST1	Process Sludge Tank	4,600

Tank ID No.	Contents / Process	Capacity (L)
Ancillary External Tanks		
FPT1	Filter Press Tank	5,000
B1	Waste Hydrocarbons	50,000
B2	Waste Hydrocarbons	50,000
S1	Virgin Solvent	4,510
Wastewater Treatment Plant		
Tank 1	Wastewater	12,000
Tank 2	Wastewater	12,000
Tank 3	Wastewater	12,000
Tank 4	Wastewater	20,000
Tank 6	Wastewater	20,000
Tank 7	Wastewater	20,000
Tank 8	Wastewater	10,000
Tank 9	Wastewater	20,000
Tank S1	Wastewater	31,000
Tank S2	Wastewater	31,000
Tank 10	Wastewater	11,000
Tank 11	Wastewater	11,000

Shipping Modes:
Single axle, Tandem, Triaxle, and Dry Van Trailers
Highway Transport Dry Van Trailers
Bulk Liquid Tankers
Vacuum Trucks

Security Features:
1. Perimeter barbed wire chain link fence
2. Authorized access policy with Visitor Sign-In.
3. Security night lighting
4. Camera surveillance of processing and outdoor storage areas, exterior yard, and shop interior
5. 24hr fire and smoke detectors

Safety Features:
1. High level alarms on single walled storage tanks containing hazardous materials
2. Strategically installed fire extinguisher stations
3. Strategically installed spill stations
4. Emergency decontamination shower
5. Emergency medical and eye wash stations
6. Wind socks
7. Secondary containment (110%) for all storage tank areas
8. Automatic external defibrillator (AED) installed in Main Office of Building A

Environmental Monitoring:
1. Daily facility inspections
2. Scheduled monitoring and sampling of 8 on-Site groundwater monitoring wells

RECORD OF REVISIONS

Revision Number	Date (dd-mmm-yyyy)	Revision Description
1.0	27 Mar 2020	Initial development
1.1	12 Sep 2022	Changes from new licence 334 HW General Update
1.2	24 Nov 2022	Addition of 2 wastewater tanks Addition of Air Management Section General update
1.3	06 Mar 2023	Removal of WWTP from wastewater treatment Revised Burner fuel processing Added specifications for burner fuel processing General updates
1.4	21 Dec 2023	Addition of 50,000 L double walled Waste Hydrocarbon Tank Addition of shredder to building “B”

TABLE OF CONTENTS

1 INTRODUCTION

GFL Environmental Inc. (GFL) has developed this Operations Plan (OP) outlining general operational procedures at GFL's 1090 Kenaston Boulevard Facility (Facility) in Winnipeg, Manitoba (MB). The legal description of the property is identified as Lot 3, Plan 9153, WLTO in OTM Lots 60 to 63, Parish of Saint Boniface. The Facility operates under MB Conservation and Climate (MBCC) *Dangerous Goods Handling and Transportation Act* License 334 HW issued 6 April 2020 and Permit to Operate a Petroleum Storage Facility #23647. Copies of the License and Permit are provided in Appendix B and C. The Facility operates under the following registrations:

- MB Generator Number MBG0410
- MB Receiver Number MBR04811
- MB Carrier Number MBC20058

The location of the Facility is presented in Appendix A1, while the Facility layout, groundwater monitoring well locations and locations of emergency muster points are presented in Appendix A2.

This Plan has been developed based on the requirements of GFL's License. In addition to this manual, other documents related to the operation of the Facility include:

- Emergency Response Plan;
- GFL Safety & Health Plan; and
- Decommissioning and Reclamation Plan.

The operational year at the Facility runs from 01 January to 31 December of each calendar year.

1.1. SITE DESCRIPTION

The Facility is comprised of a 11,750 square metre (m^2) fenced compound encompassing an office building with attached processing shop and wash bay approximately 750 m^2 in size within the central portion of Facility (Building A). GFL's Wastewater Treatment plant is located within a second building 375 m^2 in size located near the northeast corner of the Facility (Building B). Highway transport trailer units and intermodal shipping containers are located within the vicinity of the main building. Two AST compounds are located south of the main building. An inventory of Facility ASTs is updated with MSD as per Permit No. 23647. GFL completes daily inspections of the Facility and exterior facilities as well maintains a 24-hour spill response team to respond and remediate any release within the Facility property limits. Waste oil and filter collection trucks, vacuum trucks and specialized trucks are parked south of the main building and along the north property line in the vicinity of the process building. The northwest portion of the property is asphalt-paved from the entrance gate on Lowson Crescent to the southwest corner of the main office building. The remainder of the yard is surfaced with gravel.

Building A (Main Office and Processing Area) is a single story, slab on grade, pre-engineered commercial building that has been expanded several times since the building was originally constructed in the 1980s. Administrative spaces with reception, offices, supply storage, a conference room, and a lunchroom are located within Building A. All contractors, delivery personnel, and members of the public arriving at the Facility are required to sign-in with Reception in Building A and following sign-in and orientation, are escorted, as required, by a GFL representative. The office area is segregated from all other areas of Building A by lockable doors and is designated as a Personal Protective Equipment (PPE) free zone.

Building B (Processing Building) is a single story, slab on grade, pre-engineered commercial building located in the northeast corner of the Facility property. Building B is equipped with high efficiency ventilation, a lab/ office area for bench testing, storage areas for equipment and supplies, and a processing area.

1.2. SITE SECURITY

Site security at the Facility include the following measures:

- Perimeter barbed wire chain link fence
- Authorized access policy with Visitor Sign-In
- Security night lighting
- Camera surveillance of processing and outdoor storage areas and the exterior yard

- 24hr fire and smoke detectors

1.3. SAFETY FEATURES

Safety features or equipment at the Facility include the following:

- High level alarms on single walled storage tanks containing hazardous materials
- Strategically installed fire extinguisher stations
- Strategically installed spill stations
- Emergency decontamination shower
- Emergency medical and eye wash stations
- Windsocks
- Secondary containment (110%) of all storage areas (storage tanks and drum containers)
- Automatic external defibrillator (AED) installed in Main Office of Building A

2 FACILITY MAINTENANCE

2.1. FACILITY RECORDS

GFL records the dates of waste movements, inspections, findings, and all corrective actions taken in hardcopy, or an electronic database maintained for that purpose. Copies of all plans, records, inspection logs, waste acceptance documentation, and monitoring data will be retained in digital or hardcopy format until written authorization for disposal of documents is granted by MBCC.

GFL will cooperate fully with all requests pertaining to MBCC inspections or audits.

2.2. FACILITY INSPECTIONS

All inspections completed at the Facility are documented and digital copies of the associated forms retained. Inspections are completed in accordance with the requirements of the License and include:

- Daily site inspections:
    - Hazardous Waste processing and storage areas including: Building A; Building B; the yard; and aboveground storage tank (AST) farms and secondary containment.
- Daily equipment and pre-trip inspections
- Weekly site inspections:
    - Domestic Waste Disposal Collection Areas
- Monthly site inspections:
    - Fire extinguisher inspections and maintenance with third-party maintenance completed annually.
    - Monthly air horn testing

Each of the inspection types is completed as dictated by the respective forms. Each completed form is signed or initialed by the individual completing the inspection and dated.

Any unsafe operating conditions or spills/leaks are immediately reported to a Supervisor and through the GFL incident reporting system. The occurrence is also documented in hardcopy or digital format. GFL will repair, replace, or rectify any identified issues immediately to prevent further adverse effects or unsafe working conditions.

2.3. GROUNDWATER MONITORING WELLS

Groundwater monitoring wells installed at the Facility have been completed with locked stick-up protectors. Groundwater monitoring wells are routinely inspected for damage and to ensure locks are in place.

2.4. SPILLS & REMEDIATION

Any spills or releases that occur at the Facility are immediately reported to the District Manager and through the GFL Mobile Safety App. GFL undertakes all appropriate measures to immediately stop, contain, and mitigate a spill or release if safe to do so. Remedial activities will be completed immediately, and all contaminated materials will be handled appropriately based on the nature of the material spilled.

Upon notification of spills considered reportable in the *MB Environmental Accident Reporting Regulation 439/87*, MBCC will be contacted, and the spill reported to the on-call Environmental Protection Officer immediately. If directed by MBCC, GFL will submit a spill report prepared by a Qualified Person.

Contents of the spill report will include, but not be limited to the following:

1. Name and telephone number of person reporting.
2. Name, address and telephone number of facility and owner /operator.
3. Date, time and type of incident.
4. Name and quantity of materials (s) involved.
5. Extent of injuries, if any.
6. An assessment of actual or potential hazards to human health or the environment, where this is applicable.
7. Corrective actions taken to mitigate or remediate the environmental impacts resulting from the incident.
8. Estimated quantity and disposition of recovered material that resulted from the incident.

Significant spills or releases may require activation of the Facility ERP and implementation of additional emergency measures. The Facility District Manager will assess the need to implement the ERP based on the size and nature of the release.

3 WASTE ACCEPTANCE

3.1. ACCEPTABLE WASTES

A list of permitted wastes for acceptance at the Processing Facility is provided below.

Depending on the nature and volume of the material as identified in the waste acceptance process, GFL will process, bulk, recycle, and/or dispose of the wastes at a third-party facility.

- Non-regulated waste materials
- Class 2.1 – Flammable Compressed Gas
- Class 2.2 – Non-Flammable, Non-Toxic Compressed Gas
- Class 3 – Flammable Liquids and Combustible Liquids
- Class 4.1 – Flammable Solids
- Class 4.2 – Spontaneously Combustible
- Class 4.3 – Water Reactive
- Class 5.1 – Oxidizing Substances
- Class 5.2 – Organic Peroxides
- Class 6.1 – Toxic Substances
- Class 8 – Corrosive Substances
- Class 9 – Miscellaneous Products and Substances (including, but not limited to: environmentally hazardous substances, lithium batteries, etc.)

Any materials that are determined unacceptable at the Facility will be temporarily stored on-site pending further characterization and transportation for off-site disposal or recycling.

3.2. PROHIBITED WASTES

The following wastes are prohibited for acceptance at the facility:

- Class 1 – Explosive Substances;
- Class 6.2 – Infectious Substances;
- Class 7 – Radioactive Materials; and
- Polychlorinated Biphenyl (PCBs) in concentrations in excess of 50 ppm.

3.3. WASTE PROFILING

The majority of the waste received at the facility is from long term clients with established waste profiles. In these cases, the wase is scheduled for receipt at the facility using established waste codes based on previous profiling.

The evaluation of new wastes to be received at the site begins when the client sends GFL a request for quote or waste collection/delivery from their respective site. Once the communication from the client is received the following process is started:

- An SDS or any information that the client has the substance is requested by GFL
- If the information provided is sufficient to characterize the waste the waste is coded by the GFL West Technical Team
    - GFL has an internal waste code system that is used for tracing waste through the management system from receipt to either destruction or transfer to a third-party site.
- If the waste is deemed unacceptable or there is not enough information to characterize the waste a waste profile is then created. The waste profile will look at one or more the following items:
    - Mode of generation
    - Physical properties (pH, state, ignitability)
    - Mix of products
    - Laboratory analysis
- Once a waste is accepted it can either be coded to a pre-existing code based on GFLs history of waste receiving, or have a new code generated if the substance dose not match items received in the past
- When the waste is assigned a code, it can be scheduled for pick-up or deliver to site
- When received at site there are procedures in place to confirm the waste matches the cods assigned it.
    - Waste that does not conform to the assigned code triggers an investigation to potentially reclassify the waste to an appropriate code.

4 GENERAL FACILITY OPERATIONS

4.1. WASTE RECEIVING AREA

GFL utilizes van body and truck/trailer combination units to collect hazardous and non-hazardous wastes originating from non-GFL commercial and industrial waste generators throughout Manitoba as well from other GFL locations. Periodically, waste materials are delivered by third party carriers as well members of the public. Upon arrival to the Facility, incoming hazardous and non-hazardous wastes received in small means of containment (drums, intermediate bulk containers (IBCs), cylinders, pails, lab packs, and bins) are offloaded at the overhead door in the waste receiving area within Building A and catalogued by GFL's trained technicians. All containers are inspected by GFL personnel for proper identification/labels, damage, and leaks upon arrival at the Facility.

GFL procedures for handling and storage of different types of waste are accessible on the Workhub system.

4.2. DRUM STORAGE AREA

Following the arrival of waste materials to the waste receiving area in Building A, the interior drum storage area is utilized for the temporary storage of up to 200 – 205 litre (L) drum equivalents of waste awaiting sampling and characterization, processing, treatment, bulking, or repackaging for off-site recycling or disposal. Incompatible wastes are segregated in different areas of the storage area to prevent accidental mixing. Drums of used lubricating and hydraulic oil, fuels, water, glycol, and solvents are transferred into dedicated ASTs within the Process and Main Tank Farms for further processing. Containerized waste is also stored in appropriate locations outside of Building A in specific locations in the yard. Anything stored outside is in good condition and only stored while awaiting processing and/or loadout to end disposal facilities.

4.3. LIQUID STORAGE

The Facility includes an AST tank farm containing both double walled tanks and single walled tanks inside of a secondary containment berm. All tanks present at the Facility are listed within the MBCC Permit. Hazardous and non-hazardous liquids as well as waste and virgin products are stored in these tanks and may contain:

- Waste oil;
- Wastewater;
- Virgin solvents;
- Waste flammable liquids; and/or
- Waste glycol.

4.4. WASTE OIL SAMPLING

The waste oil sampling program was developed to ensure that concentrations of contaminants in the waste oil are below the regulatory guideline values prior to shipping from the Facility to end users. For the purpose of this Protocol, “batch” means bulked waste oil collected from individual collection points and stored in a designated AST until the tank capacity is reached.

1. A 5 millilitre (mL) sample will be obtained from each collection point at the time of collection and will be retained until the Certificate of Analysis (COA) is obtained for the batch.
2. Waste oil will be collected and stored in a designated AST until the capacity of the AST is reached. The contents of the tank will represent one batch of waste oil.
3. The designated AST will be locked out and a representative sample will be collected and submitted to an accredited laboratory for analysis of the following parameters at a minimum:
    - flashpoint;
    - water content; and
    - PCB concentration.

    Parameters in addition to the minimum requirements may be analyzed based on client/end-user requirements for each batch.
4. If concentrations of any constituents exceed regulatory guidelines, the AST will remain locked out and additional measures or processing will be required. Waste oil with elevated flashpoints or water contents may be blended or allowed to phase separate. Additional samples will be collected for laboratory analysis following processing to confirm that the designated AST meets required specifications.

    In the event that PCBs are detected in concentrations exceeding the regulatory limits, GFL will immediately notify MBCC and Environment Canada. Each stored sample from the individual customer service orders will be sent for analysis to determine the source of the PCB contamination. The results of this analysis will also be forwarded to the appropriate authorities and GFL will make provisions for proper disposal of the contaminated batch.
5. No waste oil will leave GFL’s approved storage facilities for third-party sale, recycling, or disposal until the laboratory analyses confirms the batch meets regulatory guidelines. Copies of the laboratory results are available to the end-user for each outgoing shipment from the batch as requested.

4.5. OIL FILTER PROCESSING

A self-contained oil filter processor is used to mechanically press residual oil from used oil filters and to reduce the volume of metal filters. Drums containing used oil filters collected from GFL customers are emptied onto a sorting table to manually remove foreign objects including non-confirming steel waste, and debris. The sorted filters are then loaded into the processor and consolidated into compressed metal bricks while recovering residual oil from within the filters. The processed brick is then transferred by conveyor to cut open totes. Drained bricks are staged for loadout to designated off-site recyclers. Used lubricating oil recovered from the processing of used filters is transferred to an exterior 5,000 L double walled AST equipped with a high level sensor and audible alarm. Once the AST reaches its rated capacity, the tank contents are transferred to the bulk tank farm for further processing.

Information on the maintenance and operation of the oil filter crusher is kept on file at the facility.

Drums used for the collection of used oil filters are inspected for damage and cleaned in a drum washer for resupply to client locations. Drums in poor condition are rendered unfit for reuse and placed in the scrap metal bin for off-site recycling. Plastic drums rendered unfit for reuse are currently placed in a GFL plastics trailer for off-site processing and recycling.

4.6. BURNER FUEL PROCESSING

GFL prepares burner fuel for use in commercial and industrial burner applications. The burner fuel is prepared by processing used lubricating oil and mixing with waste fuels at various ratios depending on customer specifications to create a fuel product with a flash point greater than 38° Celsius (C).

Upon arrival at the Facility, bulk used lubricating oil is offloaded to the Process Tank Farm to await processing.

Involves operations which will separate and remove contaminants and water in used oil so that this oil becomes suitable for reuse.

In this process used, lubricating oil is purified for reuse. Since the waste oil is collected from various sources, the composition of each batch will vary depending on the type and brand of oil, the additives used, the degree to which the oil and additives were used, and other factors..

Prior to treatment, GFL tests all used oil to ensure its suitability.

Treatment can be as simple as particle filtration or as complex as the integration of multiple unit processes for a complete oil treatment to meet the ASTM spec ROF4 through ROF6.

The standards used to determine quality of the product are defined in the SDS for Alternative Fuel-Flammable, Section 3: Composition/Information in Ingredients (refer to Appendix D)

Refer to Processing Oil into DAO SOP GFL-PRF-LIQ-0011-310A-SOP for a detailed description of the process. The SOP is kept electronically on the GFL Workhub system

4.6.1. Pre-treatment

Pre-treatment of used oil involves removing any free water within the oil. One way of doing this is by placing it in large settling tanks, which separates the oil and water, so that this oil becomes suitable for reuse.

4.6.2. Treatment

Further processing steps include:

- Filtration
- Dewatering
- Purification

4.6.2.1. Filtration

Particle filtration is a system that separates solids from liquids using either physical or mechanical means. When it comes to used oil, particle filtration is commonly one of the first steps in the treatment.

There are a number of different filters that can be used within particle filtration. A few options are available because certain aspects of the oil to be treated can vary greatly, depending on the system where the water is being used.

The characteristics that most commonly affect filter choice include the density of particles, particle size, shape, quantity, and texture. Any other substances present within the oil also affect the type of filter required for the system. Three common filter types for particle filtration are bag, cartridge, and self-cleaning filters.

4.6.2.2. Dewatering

Water is found in used oil as free water or bound water, for example in emulsions. The term dewatering is usually taken to mean the removal of free water. Where water has been emulsified with oil, the emulsion has to be "broken" with a demulsifier before the water can be separated from the oil.

Dewatering is a simple process relying on the separation of aqueous and oil phases over time under the influence of gravity. The used oil is allowed to stand in a tank (raw waste oil) and free water drops to the bottom where it can be drained, treated (wastewater treatment) and discharged appropriately depending on quality and local regulations.

Heating and circulating the used oil in a tank and driving off the water through evaporation can speed up the dewatering process. The "dried" or dehydrated oil is then suitable for further processing if required.

4.6.2.3. Purification

Used oil feedstock is transferred to a reaction tank and mixed with a small quantity of surfactant and heated to about 75C°. The chemical surface-active reagent is added to the tank and after blending with the oil is allowed to stand. This allows the mixture to separate into two "phases" - i.e. oil and water-based or aqueous. The reagent causes the contaminants to accumulate in the aqueous phase, which settles to the bottom of the tank and is drained off as slurry. This phase contains water, used oil contaminants, including metals and some of the oil additives. The water is dried off, leaving a solid waste that must be disposed of.

Chemical analyses are carried out prior to the oil being introduced into the system in order to establish the condition of the used oil and to thus be able to define the intensity of treatment and additivities that will be necessary to obtain the required end characteristics

4.7. PLASTICS PROCESSING

Currently, empty HDPE plastic oil jugs and bulk oil pails are collected from customer locations in drums and 6 mil polyethylene clear plastic bags for delivery to the Facility. Upon receipt, the jugs and pails are catalogued in the waste receiving area, inspected to ensure they are suitable for transport, and loaded into a GFL containment trailer until at full capacity and shipped off to an approved 3rd party processor.

4.8. DRUM CRUSHER

GFL utilizes a self-contained, drum crusher to compact surplus metal drums and drums that are not suitable for reuse. Prior to insertion in the drum crusher, residual liquids are recovered, and the drum washed in the drum washer. Following crushing, the drum is placed into the scrap metal bin for off-site recycling. Recovered liquids are collected in drums and once reaching the rated capacity are transferred to the Process Tank Farm for further processing.

Information on the maintenance and operation of the drum crusher is kept on file at the facility.

4.9. SHREDDER

GFL utilizes an industrial shredder to process a variety of waste types such as, but not limited to:

- consumer goods (beverages containing alcohol in aluminum and glass packaging);
- non-regulated wastes; and
- Oil filters not suitable for the onsite crusher (train filters).

Items are fed into the shredder with shredded materials collected in metal bins with screens inserted to leave a space at the bottom for liquids to accumulate leaving solid materials at the top. Residual liquids are recovered through a valve at the bottom of the bin and transferred to the Building “B” tanks if it is a non-regulated fluid suitable for industrial wastewater disposal, or to the Process Tank Farm for further processing if it is oil.

Information on the maintenance and operation of the shredder is kept on file at the facility.

4.10. PAINT PROCESSING

All waste paints are shipped offsite to appropriate disposal facilities

4.11. AEROSOLS PROCESSING

GFL utilizes an aerosol can puncturing device to remove residual liquids from used aerosol cans received at the Facility so that the metal containers can be recycled, and the liquids bulked in drums for off-site recycling. Aerosols received by GFL primarily consist of paint cans with residual amounts of paint. The system is verified by the United States Environmental Protection Agency (EPA) and certified by the California EPA for the processing of waste aerosol cans. The processor safely punctures the can, allowing the contents to be released to a sealed drum equipped with an air purifying filter to remove organic vapours expelled from the drum. Once the drum reaches its rated capacity, the drum is sealed and prepared for transport to a certified recycler. The spent metal aerosol cans are placed into the scrap metal bin for off-site recycling.

Information on the maintenance and operation of the can puncturing device is kept on file at the facility.

4.12. GAS PROCESSING

Gases that are not hazardous to the environment or humans are released in a controlled manner and the containment vessels punctured prior to recycling. Gases, which are hazardous to humans, the environment or otherwise forbidden by regulation such as the Environmental Code are packaged and transported off-site to an approved disposal facility.

4.13. HAZARDOUS AND NON-HAZARDOUS WASTE BULKING

4.13.1. Pumping

Flammable liquids as well as non-flammable liquids are pumped from small means of containment and intermediate bulk containers (IBCs) into tanks for storage or blending.

4.13.2. Small Means of Containment Bulking

Small containers such as consumer packaged brake fluid, lamp kerosene, portable fuel cans, etc. are bulked into small means of containment prior to further processing, or shipment for disposal or recycling.

4.14. WASTEWATER TREATMENT

Incoming wastewater is received from our customers in drums and IBC totes as well as bulk loads from vacuum trucks and transport trailers to Building B where a GFL trained technician performs initial characterization. GFL will sends all received and accumulated wastewater to an appropriately licenced disposal well.

The current tank infrastructure associated with the wastewater treatment plant is summarized below.

- 2 – 12,000 L vertical polyethylene tanks – Tanks T1 and T3 (Inlet tanks).
- 3 – 20,000 L vertical polyethylene tanks – Tanks T4, T6 and T7 (Primary treatment tanks).
- 1 – 10,000 L cone bottom polyethylene tank – Tank T8 (Inlet settlement tank).
- 1 – 22,000 L vertical polyethylene tank – Tank T9 (Polishing tank).
- 2 – 31,000 L vertical single walled steel tanks – Tanks S1 and S2 (Secondary treatment tank).
- 2 – 11,000 L cone bottom polyethylene tanks – Tanks 10 and 11(Storage tanks)

Currently, the total tankage volume available for wastewater treatment within Building B is 200,000 L. This volume is currently meeting our needs and is not expected to be expanded in the near future.

Waste sludge from the tanks is packaged and transported to GFL's Saskatoon Facility for processing and disposal.

4.15. STORM WATER MANAGEMENT

Surface water accumulating within the secondary containment structures the two Tank Farms is inspected on a daily basis. If sufficient volumes are encountered in the containment area, they are recovered with a GFL vacuum truck and transported to the WWTP for treatment prior to discharge to the City of Winnipeg Water Treatment Plan. If the WWTP is not able to treat the water based on incoming volumes, the collected water will be transferred to one of the ASTs within the Main Tank Farm for either treatment in the WWTP or for off-site disposal.

The area surrounding the Facility is slightly elevated and contained within perimeter berms to contain all surface water within the property limits. If substantial surface water accumulates within the property boundaries, GFLs vacuum truck is dispatched to collect the surface water and transport it to the WWTP. Surface water outside of the Facility does not enter the Facility as a result of site grading and the perimeter berms and is allowed to flow to the City of Winnipeg storm sewer system.

4.16. WASTE STORAGE

Containers (drums, IBCs, pails etc.) and bulk waste materials are temporarily stored in designated exterior storage areas or Building A in preparation for one of the other processes listed.

4.17. DECONTAMINATION, NEUTRALIZATION, RINSING AND PURGING

Containers, vessels, equipment and materials previously containing or impacted with hazardous and non-hazardous waste are received at the Processing Facility and on the exterior processing pad. Decontamination, neutralization, rinsing and purging of containers, vessels, equipment and materials is completed to remove residual products. Residual products are bulked for further processing or off-site disposal while the decontaminated items are either stored for reuse within GFL, recycled, disposed or returned to vendors for recycling or disposal.

4.18. WASTE CHARACTERIZATION AND ANALYSIS

Many materials are sampled and analyzed before shipment off-site to ensure the product meets the requirements of end disposer/ recyclers or regulatory requirements. Most analysis is conducted by third party accredited laboratories, with some analysis performed in-house (non-accredited laboratory) when not needing to satisfy regulatory requirements. Samples are archived and stored until all materials that they represent are transported off-site.

4.19. SHIPPING/ RECEIVING

Hazardous and non-hazardous materials are received at the Facility in compliance with the Facility License. Accepted materials handled, processed, bulked, or treated at the Facility, are then shipped off site to end user disposal/ treatment/ recycling facilities that are verified to operate under the relevant regulations of the jurisdiction in which they operate.

5 AIR EMISSIONS MANAGEMENT

A dedicated air treatment system is located in Building A as listed in clause 61 of the permit. The tanks in this area are used for dewatering which requires heating of used oil that could potentially produce vapors that could be released to the environment. The tank vents are connected to a scrubber system to remove organic materials from the gas effluent stream prior to releasing from the building. The scrubber system is inspected daily, and the carbon media is replaced as per manufacturers recommended intervals.

Information on the maintenance and operation of the scrubber system is kept on file at the facility.

Tanks in building B are for wastewater, due to the nature of the material no air emission controls are in place.

All tanks located outside buildings as listed in clauses 58, 59, and 60 are used for storage purposes only. Under normal operating conditions these tanks produce negligible levels of emissions and therefore do not have a dedicated air management system in place.

There is an activated carbon filtration system available to be placed on the passive ventilation nozzle of any storage tank upon the request of an Environmental Officer.

6 ENVIRONMENTAL MONITORING

Environmental monitoring at the Facility is completed based on the requirements outlined in the License.

6.1. REGULATORY GUIDELINES – GROUNDWATER

The most appropriate comparative assessment values for groundwater samples collected from the Facility are the Canadian Council of Ministers of the Environment (CCME) Canadian Environmental Quality Guidelines (CEQG), 2015, for water quality, protection of aquatic life, freshwater. In addition, the Ontario Ministry of Environment and Climate Change (MOECC) Soil, Groundwater, and Sediment Standards – Environmental Protection Act (EPA), 2011, non-potable groundwater guidelines were also used for regulatory comparison.

6.2. GROUNDWATER MONITORING & SAMPLING METHODOLOGY

Groundwater monitoring and sampling at the Facility is to be completed on an annual basis.

Prior to each monitoring session, the locked monitoring wells will be unlocked, and the condition of the cover recorded on the groundwater monitoring log. Each groundwater monitoring well (MW) will be monitored for headspace combustible vapour concentrations (CVCs) using a combustible vapour analyzer, set to methane elimination mode, and calibrated to a known hexane standard. An oil/water interface probe will be used to measure the depth to groundwater (DTW), bottom (DTB), and LNAPL, if present, within each monitoring well in reference to top of casing (toc) and recorded on the groundwater monitoring log. Clean dedicated disposal bailers will be used to bailer check the surface of the groundwater within each monitoring well to confirm the absence of LNAPL. Each MW will be purged of a minimum of 3 equivalent well volumes of water or until dry. The MWs will be allowed to recover to a minimum of 80% prior to sampling with a single-use disposable bailer. During sampling, each groundwater sample will be measured for field-based parameters of electrical conductivity (EC), pH, and temperature utilizing a multi-parameter water meter.

Groundwater samples collected from the monitoring wells will be transferred into clean, laboratory supplied bottles, field preserved as required and labeled according to a pre-determined sample identification protocol. Samples will be kept cool in an ice-chilled cooler until the samples were delivered to an accredited laboratory under COC documentation.

During the collection of groundwater samples at the Facility new, clean disposable nitrile gloves are worn for the collection of each sample and all sampling equipment is cleaned and inspected between samples or single-use disposable equipment is utilized to minimize the possibility of cross-contamination.

Groundwater samples will be submitted for laboratory analysis of the following parameters:

- Hydrocarbon Analysis will include: benzene, toluene, ethylbenzene, xylene (BTEX), PHC Fractions F1 (C_6 to C_{10}) and F2 (C_{10} to C_{16}).
- Detailed Salinity/ Routine Analysis include: pH, Ca, K, Mg, Na, CO_3, HCO_3, SO_4, Cl, Total Dissolved Solids (TDS), and electrical conductivity (EC).
- Total and dissolved metals analysis will include: Al, Sb, As, Ba, Be, Bi, Cd, Cr, Co, Cu, Fe, Pb, Hg, Mn, Mo, Ni, Se, Ag, Sr, Tl, Sn, Ti, U, V and Zn.

MW locations are presented in appendix A2.

Results of the groundwater monitoring and sampling program will be summarized in the annual report as well the Annual Groundwater Monitoring and Sampling Report.

GFL will assess and evaluate the situation and potential risks and will determine an appropriate course of action. All corrective actions to address deteriorating groundwater conditions will be provided to MBCC for approval prior to implementation. GFL will implement the corrective actions immediately following receipt of regulatory approval.

6.3. QUALITY ASSURANCE / QUALITY CONTROL

Quality Assurance / Quality Control (QA/QC) measures implemented at the Facility are comprised of the following:

- Senior supervision of field staff;
- Use of third party trained personnel;
- Written field instructions;

- Documentation of all field activities;
- Duplicate soil samples were collected from the remedial excavation;
- COC documentation for sample submission;
- Use of an accredited laboratory;
- Adherence to laboratory sampling and analysis protocols including hold times, sample containers, preservatives, detection limits, and approved methodologies;
- Procedures to confirm accurate transcription of laboratory data into tables;
- Review of laboratory QC performance (standards, spike recoveries, etc.) to confirm results are within acceptable limits; and
- Decontamination of sampling tools between samples.

Blind duplicate samples will be submitted for laboratory analysis to assess potential sampling or laboratory error on a one-in-ten sample basis. For duplicate samples, the Relative Percent Difference (RPD) is calculated to assess the closeness of the results from the two samples. RPDs are calculated as follows:

RPD (%) = 100% x ABS (X – Y)/[(X + Y)/2]

X = the concentration of the original sample

Y = the concentration of the blind field duplicate sample

The RPD value is considered reliable if the calculated value is below 50 percent (%). RPDs were not calculated for parameters if the measured concentrations were less than five times the laboratory LDL.

7 GENERAL HEATH & SAFETY

All GFL personnel working at the Facility must adhere to the GFL Health & Safety Plan and the requirements outlined therein.

7.1. PERSONAL PROTECTIVE EQUIPMENT

GFL is committed to the health, safety, and well-being of all Facility personnel. Minimum personal protective equipment (PPE) required by all staff at the Facility include:

- Flame-retardant (FR) coveralls;
- High visibility stripes or traffic vest;
- Safety glasses;
- CSA-approved safety boots;
- CSA- approved hard hat; and
- Task-appropriate safety gloves.

Additional PPE may be required depending on the task or location in which work is being completed and may include, but not be limited to:

- Hearing protection (required at all times when working on or near equipment with noise levels in excess of 85 decibels (dB)).
- Respirators with appropriate filter cartridges;
- Job-specific gloves (nitrile, rubber, cut-resistant, chemical-resistant, etc.);
- CSA-approved rubber boots; and/or
- Disposable coveralls.

Areas in the vicinity of the office and staff parking lots, and a pedestrian corridor from the main office/shop building to the Processing Facility have been designated as a PPE-free areas.

7.2. PERSONNEL TRAINING

At a minimum, all GFL Personnel working at the Facility will be trained in:

- Globally Harmonized System (GHS) and Workplace Hazardous Materials Information System (WHMIS);
- Transportation of Dangerous Goods (TDG); and
- GFL-specific training including, but not limited to Job Hazard Assessments (JHAs), Last Minute Risk Assessments (LMRAs) the contents of the Facility Operations Plan, the ERP, and Safety Program.

Depending on the role of personnel, more specific training may be provided such as First Aid / CPR; mobile powered equipment training for each specific type of equipment an individual may operate.

A record of all personnel training will be maintained, and renewal training booked accordingly.

7.3. FACILITY TOOLBOX MEETINGS

GFL operational personnel at the Facility participate in daily toolbox safety meetings at the start of each shift to identify and discuss the potential risks, hazards, and mitigation methods associated with the work scheduled for the day. All tailgate meetings will be signed by all personnel in attendance and copies of the documentation are retained.

Facility personnel are required to complete LMRAs throughout the day prior to completing tasks associated with their work. JHAs are completed for tasks considered to be more hazardous.

Example copies of the toolbox meetings and JHA forms are provided in Appendix E.

7.4. GROUND DISTURBANCE

Any ground disturbance activities completed at the Facility extending beyond 0.15 metres (m) below ground surface (bgs) must be completed in accordance with applicable provincial and federal ground disturbance requirements and procedures.

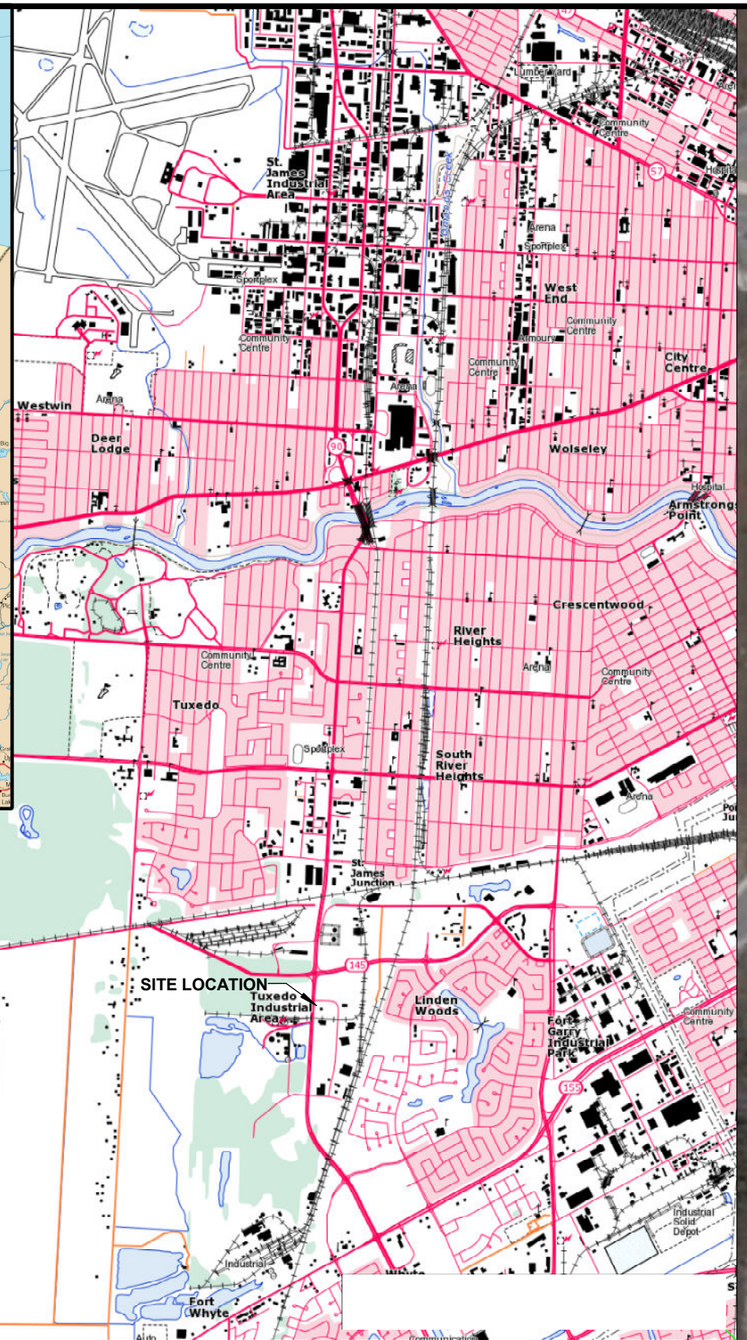
GFL will ensure that all personnel involved in the ground disturbance activities have received proper training in ground disturbance procedures (Ground Disturbance Levels I and/or II).

Prior to the initiation of any ground disturbance activities, GFL will contact MB One Call to arrange for underground utility locates to be performed within the work area. GFL will also contact any underground service providers with utilities in the area that do not subscribe to the One Call service to perform locates. A private utility contractor will also be contacted to provide utility locate services for privately owned utilities. The results of all locates completed will be documented and discussed with all personnel directly involved with the ground disturbance. Markings from underground utility locates are valid for 10 business days and must be renewed if work is not completed within that timeframe. Markings that are destroyed or not clear must also be re-marked by the utility locate service provider.

APPENDICES

APPENDIX A: FIGURES

A1: Facility Location



NOTES:

1. THIS DRAWING IS PREPARED FOR ILLUSTRATIVE PURPOSES ONLY. THIS IS NOT A LEGAL SURVEY. ALL MEASUREMENTS ARE IN METRES.
2. SITE COORDINATES: 49.838888° N, -97.208127° W.
3. TOPOGRAPHIC MAP COURTESY OF NATURAL RESOURCES CANADA GEOGRATIS, 2017.
4. AERIAL IMAGERY COURTESY GOOGLE EARTH, 2017.
5. INSET MAP COURTESY OF CANADA-MAPS.ORG, 2017.

LEGEND:

PROPERTY LINE (APPROXIMATE)

REVISIONS

REVISED BY / DATE
REVISED BY / DATE
REVISED BY / DATE
REVISED BY / DATE
REVISED BY / DATE
REVISED BY / DATE

FIGURE 1

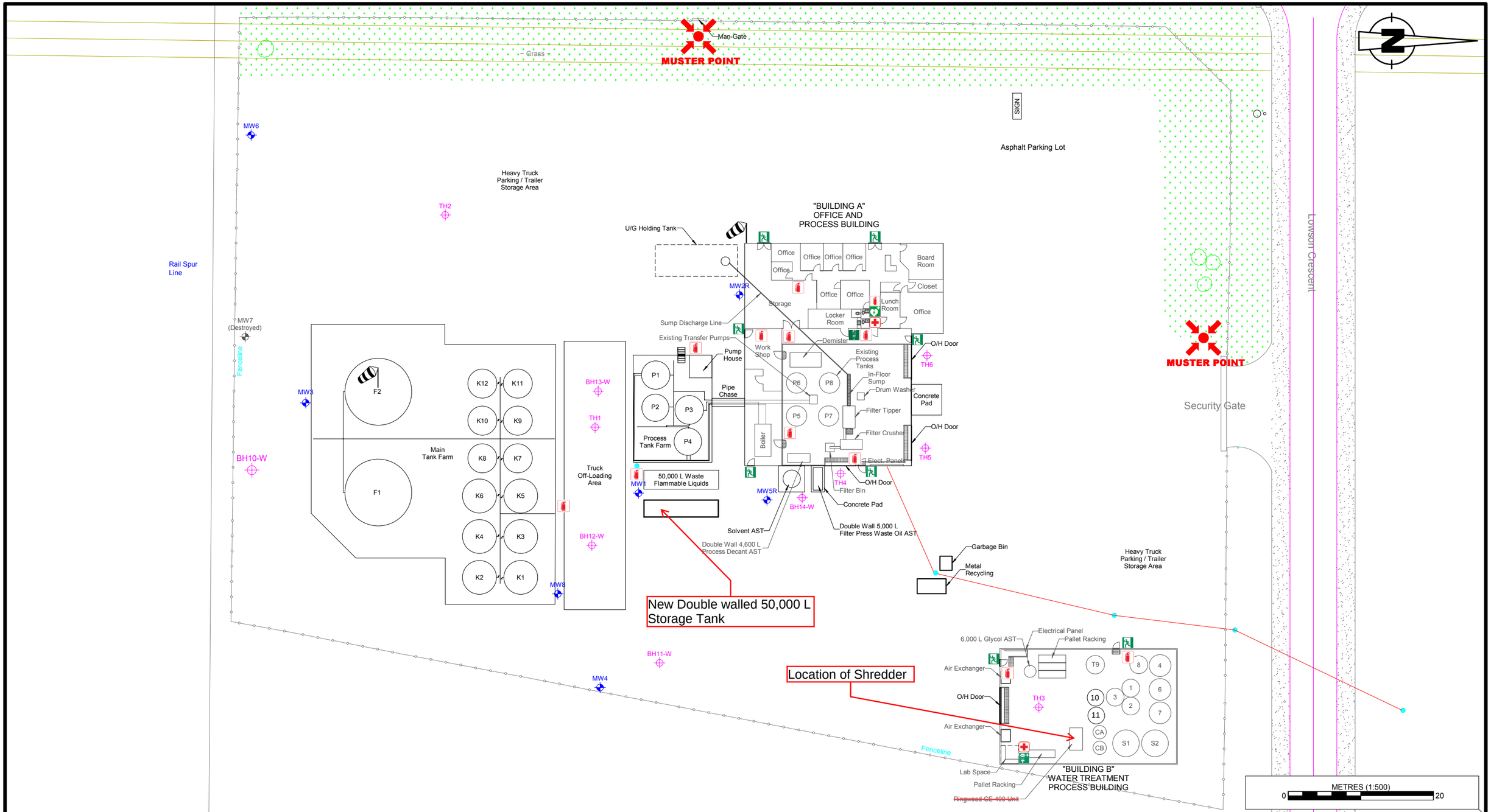
SITE LOCATION

03 MAY 2018
GFL KENASTON FACILITY
1090 KENASTON BLVD, WINNIPEG, MB

DRAWN BY: SAM

CHECKED BY: GJW

A2: Facility Layout and Groundwater Monitoring Well Locations



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1. THIS DRAWING IS PREPARED FOR ILLUSTRATIVE PURPOSES ONLY. THIS IS NOT A LEGAL SURVEY. ALL MEASUREMENTS ARE IN METRES.
2. SITE COORDINATES: 49.838888° N, -97.208127° W.

LEGEND:

- FENCE
- MONITORING WELL
- BOREHOLE
- O/H POWER
- MUSTER POINT
- FIRE EXTINGUISHER
- EMERGENCY EXIT
- FIRST AID KIT
- EMERGENCY EYEWASH STATION
- EMERGENCY SHOWER AND EYEWASH
- AED
- WINDSOCK

REVISIONS

REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	
REVISED BY / DATE	

FIGURE 2

SITE LAYOUT AND EMERGENCY EQUIPMENT LOCATIONS

03 MAY 2018
GFL KENASTON FACILITY
1090 KENASTON BLVD, WINNIPEG, MB

DRAWN BY: SAM

CHECKED BY: GJW

APPENDIX B: MBCC PERMITS 334HW

Manitoba
Conservation and Climate
Environmental Stewardship Division
Environmental Approvals Branch
1007 Century Street, Winnipeg, Manitoba R3H 0W4
T 204 945-8321 **F** 204 945-5229

FILE NO.: 4320.10

April 6, 2020

Brent Laroque
EHS Compliance Manager
GFL Environmental Inc.
100 Cory Road
Saskatoon, SK
S7K 3J7

Dear Brent Laroque:

Enclosed is **Dangerous Goods Handling and Transportation Act Licence No. 334HW**, issued to **GFL Environmental Inc.** for the continued operation of a storage, processing, treatment, bulking, blending and transfer facility ('the Facility') of non-hazardous and hazardous waste solids, liquids and gases, to be known as GFL Kenaston Facility in accordance with the application filed pursuant to The Dangerous Goods Handling and Transportation Act dated November 17, 2017, the additional information received on May 24, 2019 and June 17, 2019.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact Nada Suresh, District Supervisor in Winnipeg at (204) 945-8214 or nada.suresh@gov.mb.ca.

Pursuant to Section 25 of The Dangerous Goods Handling and Transportation Act, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation and Climate within 30 days of the date of the Licence.

Sincerely,

Original signed by

Shannon Kohler
Director
Dangerous Goods Handling and Transportation Act

c: Yvonne Hawryliuk/Nada Suresh: Environmental Compliance and Enforcement
Siobhan Burland Ross: Environmental Approvals
Public Registries

NOTE: Confirmation of receipt of this Licence No. 334HW (by the Licencee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space below and email a copy of this letter to Cory.Graham@gov.mb.ca by April 17, 2020

On behalf of GFL Environmental Inc. **Date**

THE DANGEROUS GOODS HANDLING and TRANSPORTATION ACT
LOI SUR LA MANUTENTION ET LE TRANSPORT DES MARCHANDISES DANGEREUSES

Manitoba

LICENCE

File No.: 4320.10 **Licence No./Licence nº : 334 HW**

Issue Date/Date de délivrance : April 06, 2020

In accordance with The Dangerous Goods Handling and Transportation Act (C.C.S.M. c. D12) /
Conformément à la Loi sur la manutention et le transport des marchandises dangereuses
(C.P.L.M. c. D12)

THIS LICENCE IS ISSUED TO:/CETTE LICENCE EST DONNÉE À:

GFL ENVIRONMENTAL INC.;

"the Licencee"

for the continued operation of a storage, processing, treatment, bulking, blending and transfer facility ('the Facility') of non-hazardous and hazardous waste solids, liquids and gases, to be known as GFL Kenaston Facility located at Lot 3 Plan 9153 WLTO in OTM Lots 60 to 63 Parish of Saint Boniface; commonly known as 1090 Kenaston Boulevard, Winnipeg, Manitoba in accordance with the application filed pursuant to The Dangerous Goods Handling and Transportation Act dated November 17, 2017, the additional information received on May 24, 2019 and June 17, 2019, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,
"accredited laboratory" means an analytical facility accredited by the Standards Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation and Climate to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

"Act" means The Dangerous Goods Handling and Transportation Act, C.C.S.M.c.D 12;

"affected area" means a geographical area, excluding the property of the Facility;

"approved" means approved by the Director or assigned Environment Officer in writing;

"biomedical waste" means waste that is derived from animals or humans or bio-research, or as defined by CCME in the Guideline for the Management of Biomedical Waste in Canada, PN 1060, or any future amendment thereof;

"blending" means the mixing of non-chlorinated hydrocarbons into used oil or processed oil in order to produce a homogeneous liquid;

"Building A" means the office and process building as identified on Figure 2, dated 16 April 2019;

"Building B" means the Water Treatment Process building as identified on Figure 2, dated 16 April 2019;

"burner fuel" means the combustible product resulting from the processing, blending and treatment of used oil; treated in accordance with industry standards and in a method recognized by Manitoba Conservation and Climate such that it is no longer identified as a hazardous waste under the Hazardous Waste Regulation, or any future amendment thereof;

"Closure Plan" means a plan indicating the actions to be taken for the closure of the Facility;

"containment area" means an area that is equipped or designed with an impermeable barrier that prevents leaks or spills from reaching outside the specified area;

"contaminant" means a contaminant as defined in The Dangerous Goods Handling and Transportation Act, as amended from time to time;

"daily" means any 24-hour period;

"days" means calendar days unless otherwise indicated;

"dangerous goods" means any product, substance or organism designated in the regulations, or conforming with the criteria set out in the regulations, or in any regulation adopted in accordance with The Dangerous Goods Handling and Transportation Act, and includes hazardous wastes;

"Director" means an employee so designated pursuant to The Dangerous Goods Handling and Transportation Act;

"drum" means a container having a capacity of 205 litres;

"drum equivalent" means a volume of 205 litres;

"Environment Officer" means an employee so designated pursuant to The Dangerous Goods Handling and Transportation Act;

"hazardous waste" means a product, substance or organism as defined in The Dangerous Goods Handling and Transportation Act, or any future amendment thereof;

"lab pack" means small quantities of compatible wastes in containers that are placed in a drum and surrounded by sorbent material;

"licenced carrier" means a person who has a valid licence to transport hazardous waste pursuant to Manitoba Regulation 195/2015 under The Dangerous Goods Handling and Transportation Act, or any future amendment thereof;

"National Fire Code" means the National Fire Code of Canada 2010, issued by the Canadian Commission on Building and Fire Codes, National Research Council of Canada, as amended from time to time;

"noise nuisance" means an unwanted sound, in an affected area, which is annoying, troublesome, or disagreeable to a person:

a) residing in an affected area;
b) working in an affected area; or
c) present at a location in an affected area which is normally open to members of the public;

if the unwanted sound

d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different persons falling within clauses a), b) or c), who do not live in the same household; or
e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c) and the Director is of the opinion that if the unwanted sound had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

"odour nuisance" means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant or disagreeable to a person:

a) residing in an affected area;
b) working in an affected area; or
c) present at a location in an affected area which is normally open to members of the public;

if the odour, smell or aroma

d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different

persons falling within clauses a), b) or c), who do not live in the same household; or

e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c) and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

"oil" means any petroleum or synthetic crankcase oil, engine oil, hydraulic fluid, transmission fluid, gear oil, heat transfer f1uid, or other f1uid capable of use for lubricating purposes in machinery or equipment;

"operator" means a person who is responsible for the day-to-day maintenance and operation of the Facility;

"PCB waste" means a PCB liquid, a PCB solid or a piece of PCB equipment that is taken out of service for the purpose of disposal;

"permanently closed" means that the Facility is not operated for a period of 12 months or more;

"Post-Closure Plan" means a plan indicating the actions to be taken for the care, maintenance, and monitoring of the Facility after closure, that will prevent, mitigate, or minimize the threat to public health and the environment;

"processing" at this Facility includes: processing of used oil, processing of burner fuel, the separation by skimming or settling of liquids and contaminants, bulking of non-hazardous materials, aerosol puncturing, used oil filter crushing, and wastewater treatment;

"registered generator" means a person who is registered as a hazardous waste generator pursuant to Manitoba Regulation 195/2015 under The Dangerous Goods Handling and Transportation Act, or any future amendment thereof;

"secondary containment" means an impermeable barrier that prevents leaks from the primary storage tank system from reaching outside the containment area;

"small containers" means containers having a capacity of less than 205 litres;

"small quantity retail hazardous waste" means hazardous waste that has been generated by and collected from retail stores and that cannot be sold by the store due to damaged containers or other situations that cause the substance to become a waste;

"solvent" means a non chlorinated aliphatic hydrocarbon derived liquid with a flash point not less than 23°C;

"Standard Methods for the Examination of Water and Wastewater" means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation;

"tote" means a container with a capacity of approximately 1000 litres used to contain hazardous waste;

"Transportation of Dangerous Goods Regulations" means the Transportation of Dangerous Goods Regulations, SOR/2001-286, made under the Transportation of Dangerous Goods Act, 1992 (Canada), as amended from time to time;

"transport vehicle" means any of the trucks or trailer units designed to transport dangerous goods either in bulk or in containers;

"used oil" means petroleum-derived or synthetic lubrication oil that has become unsuitable for its original purpose due to the presence of physical or chemical impurities or the loss of original properties if the oil falls within any of the following categories:

a) lubrication oils for internal combustion engines such as motor oil, vehicle crankcase oil and engine lubricating oil;
b) transmission fluids, gearbox and differential oils; and
c) hydraulic fluids;

"used oil filter" means an oil filter containing used oil that through use, storage, handling, defect, damage or other similar circumstances can no longer be used for its original purpose;

"used oil products and material" means used oil, used oil filters or used oil containers; and

"wastewater" means any liquid containing a contaminant as defined in The Dangerous Goods Handling and Transportation Act, associated with or resulting from Facility operations which is discharged into the environment.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. The Licencee shall, at all times maintain a copy of this Licence at the Facility or at the premises from which the Facility's operations are managed.

2. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the Facility, at all times.

3. The Licencee shall notify the Director, in writing, of any intention or agreement to lease any part or portion of the Facility's property, including buildings or structures, where such leasing might involve the establishment of any other development with a potential for emissions which may affect the environment.

4. The restrictions and conditions of this Licence are severable. If any restriction or condition of this Licence, or the application thereof, to any circumstances is held invalid, the application of such restriction or condition to other circumstances and the remainder of this Licence shall not be affected thereby.

5. Nothing in this Licence shall be construed to relieve the Licencee from civil or criminal penalties.

Future Sampling

6. The Licencee shall at the request of the Director:
   a) conduct special studies to determine ambient air quality within the vicinity of the Facility and/or emission testing for specified air pollutants in a manner satisfactory to the Director; and
   b) submit a report containing the ambient air quality data and/or the emission testing data and all other related data to the Director within ninety (90) days after completion of the studies.

7. In addition to any terms or conditions specified in this Licence, the Licencee shall, upon the request of the Director:
   a) sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
   b) determine the environmental impact associated with the release of any pollutant(s) from the Facility;
   c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
   d) provide the Director within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.

Sampling Methods

8. The Licencee shall, unless otherwise specified in this Licence:
   a) carry out all preservations and analyses on liquid samples in accordance with the methods prescribed in the most current edition of Standard Methods for the

Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director;

b) carry out all sampling of, and preservation and analyses on soil or air samples in accordance with methodologies approved by the Director;
c) have all analytical determinations undertaken by an accredited laboratory; and
d) report the results to the Director, in writing and in an electronic form acceptable to the Director within sixty (60) days of the samples being taken, or within another time frame as specified by the Director.

9. Notwithstanding Clause 8 of this licence, where analysis are carried out on waste substances in order to determine the classification of the substances, the Licencee is not required to submit the analysis results to the Director, except on request.

Maintain Records

10. The Licencee shall, unless otherwise specified by this Licence, retain all records relating to this Licence during the full life of operation of the Facility, and after closure, for such period of time as may be specified by the Director. Records may be transferred from their original form to other accepted forms for information storage. These records shall be made available to an Environment Officer upon request.

Reporting Format

11. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in written and electronic format, in such form (including number of copies) and of such content as may be specified by the Director or Environment Officer, and each submission shall be clearly labelled with the Licence Number and File Number associated with this Licence.

Remedial Measures

12. The Licencee shall carry out, as deemed necessary by the Director or Environment Officer, any remedial measures or modifications in respect to matters authorized under this Licence.

Responsible Party

13. The Licencee shall designate an employee, within sixty (60) days of the date of issuance of this Licence, as the Licencee's Environmental Coordinator, whose job description will include assisting the Licencee in complying with the limits, terms and conditions in this Licence and assisting Senior Management of the Licencee to manage environmental issues at the Facility. The name of the Environmental Coordinator shall be submitted in writing to the Director within fourteen (14) days of appointment and any subsequent appointment.

Fire Reporting

14. The Licencee shall in the event of a fire which continues in excess of thirty (30) minutes or requires implementation of the Emergency Response Plan or requires fire suppression assistance from personnel outside of the Facility (e.g., fire department):
    a) call the fire department; and
    b) report the fire by calling the 24 hour Environmental Emergency Report Line (204) 944-4888 (toll free 1-855-944-4888), identifying the type of materials involved and the location of the fire.

Approvals and Permits

15. The Licencee shall comply with all the applicable requirements of:
    a) Manitoba Regulation 188/2001, or any future amendment thereof, respecting the Storage and Handling of Petroleum Products and Allied Products;
    b) Manitoba Regulation 195/2015, or any future amendments thereof, respecting Hazardous Waste; and
    c) Manitoba Office of the Fire Commissioner.

Air and Noise Emissions

16. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation, or alteration of the Facility, and shall take such steps as the Director may specify to eliminate or mitigate an odour nuisance.

17. The Licencee shall not cause or permit a noise nuisance to be created as a result of the operation or alteration of the Facility, and shall take such steps as the Director may require to eliminate or mitigate a noise nuisance.

18. The Licencee shall maintain a plan for the management of air emissions from the tank farms, and all other storage structures and areas; and provide to an Environment Officer upon request.

Equipment Breakdown

19. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling the 24-hour environmental accident reporting line at 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.

20. The Licencee shall, following the reporting of an event pursuant to Clause 19:
    a) identify the repairs required to the mechanical equipment;

b) undertake all repairs to minimize unauthorized discharges of a pollutant;
c) complete the repairs in accordance with any written instructions of the Director; and
d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.

Spills

21. The Licencee shall equip the Facility with spill cleanup equipment and supplies.

22. The Licencee shall take action to promptly clean up any spill or leakage and repackage the waste if any hazardous waste container leaks, cracks or otherwise causes a spill during loading or unloading. Any material resulting from such a cleanup shall be handled as hazardous waste and shall be packaged and disposed of in accordance with applicable regulations.

23. The Licencee shall in the event of an Environmental Accident as defined in The Dangerous Goods Handling and Transportation Act and Regulations thereunder, take all necessary actions to report the spill in accordance with regulatory requirements, contain the spill, manage the impacted environment and restore the environment to the satisfaction of the Director.

Compliance Monitoring

24. The Licencee shall, for the purpose of compliance monitoring, notify the Director verbally and in writing, concerning any actual or anticipated breach or failure to meet any specification, limit, term or condition of this Licence, as soon as possible after discovery, and in any event within two (2) working days of discovery.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Facility Operations

25. The Licencee shall only use the Facility for receiving, storing, repacking, consolidating, bulking, blending, processing and shipping of hazardous and non hazardous waste solids, liquids and gases.

26. The Licencee shall whenever liquid hazardous wastes are being transferred to or from the cargo tank of a vehicle, or to or from the storage tanks, or any other transfer systems, supervise the transfer at all times and in such a manner that the flow of liquids can be immediately shut off.

27. The Licencee shall carry out truck to truck or other container type transfer of hazardous wastes only within an area with containment to prevent a spill to the environment, unless otherwise approved by the Director.

28. The Licencee shall operate the Facility in such a manner that containment would occur to any possible liquid spilled from vehicles or lines during the transfer of liquid hazardous wastes; and delivery hoses and lines can be drained before they are disconnected.

Signage

29. The Licencee shall clearly post at the entrance to the hazardous waste storage area of the Facility:
    a) the name of the Licencee;
    b) the hours of operation of the Facility;
    c) a 24 hour emergency phone number; and
    d) a conspicuous sign, marked as a hazardous waste storage area and not accessible to unauthorized personnel.

Waste Receipt and Transport

30. The Licencee shall only receive those materials identified within the May 24, 2019 submission at the Facility; specifically the materials identified in Schedule A of this Licence.

31. The Licencee shall not accept the following hazardous wastes at the Facility without the written approval of the Director:
    a) TDG Class 1 (explosives or materials which are capable of detonation or of explosive decomposition or reaction at normal temperature and pressure);
    b) TDG Class 6.2 (infectious substances);
    c) TDG Class 7 (radioactive materials controlled under the Nuclear Safety and Control Act);
    d) biomedical waste; or
    e) waste containing polychlorinated biphenyls (PCBs) in concentrations in excess of 50 parts per million (ppm).

32. The Licencee shall receive hazardous wastes from companies in Manitoba that are generators registered pursuant to Manitoba Regulation 195/2015 under The Dangerous Goods Handling and Transportation Act, as amended from time to time, or under an approval of similar type in another jurisdiction (if the jurisdiction requires approval).

33. Notwithstanding Clause 32, the Licencee may accept small quantity retail hazardous wastes, but shall operate such that the materials:
    a) are only bulked at the Facility;
    b) are not stored at the Facility for longer than 180 days; and
    c) are sent to a licenced hazardous waste disposal or recycling facility.

34. The Licencee shall only allow transport of hazardous waste received at the Facility to:

a) a hazardous waste disposal facility licensed in accordance with The Dangerous Goods Handling and Transportation Act;
b) a consignee who operates a used oil burner in accordance with the Hazardous Waste Regulation;
c) a consignee who operates a used oil collection facility in accordance with the Hazardous Waste Regulation;
d) a facility otherwise approved by the Director pursuant to an Order; or
e) a facility operating under an approval of similar type in another jurisdiction.

35. The Licencee shall use only licenced carriers to transport hazardous wastes from the Facility.

36. The Licencee shall transport hazardous waste to or from the Facility only when the hazardous waste is accompanied by a hazardous waste movement document, or a dangerous goods shipping document, as appropriate.

Retention of Liquids

37. The Licencee shall carry out any draining, flushing or cleaning of containers or transport vehicles performed at the Facility in a manner which retains any wash water and contaminants on the Facility and the retained fluids shall be disposed of in a manner approved by the Director.

Facility Access

38. The Director, or an Environment Officer, may, without incurring liability for so doing, enter the Facility for the purpose of:
    a) investigating, inspecting and carrying out tests at the Facility; and
    b) examining, making copies of, or taking extracts from any records of the Facility pursuant to an investigation, inspection, or test under this Licence.
39. The Licencee shall lock the Facility in a manner that prevents unauthorized delivery of hazardous waste when the trained personnel are not present at the Facility.

40. The Licencee shall, when the operator or other trained personnel is not present at the Facility to accept materials, restrict access to the Facility with a gate and lock.

Facility Security

41. The Licencee shall equip the Facility with a security system to detect intrusion and a fire detection system in all buildings. Alarms must be monitored at a remote location and must be in good operating order at all times.

General Storage

42. The Licencee shall inspect the Facility on a daily basis and any unauthorized

materials found at the Facility during the daily inspections are to be placed in secure storage or removed from the Facility immediately.

43. The Licencee shall maintain a record of current inventory of hazardous waste materials in storage at the Facility and provide to an Environment Officer upon request.
44. The Licencee shall segregate hazardous wastes with incompatible characteristics to the greatest degree possible within the Facility.

45. The Licencee shall maintain the storage areas of the buildings in a condition capable of retaining any spillage which may occur. Concrete floor surfaces must be sealed to facilitate clean-up operations in the event of a spill within the building. Floor drains or catch basins are not permitted in the storage area unless they are connected only to an on-site holding tank or sump.

46. The Licencee shall only park transport vehicles or roll-off containers carrying hazardous waste in a containment area.

47. The Licencee shall park overnight at the Facility no more than twenty (20) transport vehicles that are carrying hazardous waste at a time. Approval from an Environment Officer is required for additional transport vehicles to park overnight.

48. The Licencee shall locate within secondary containment all transport vehicles carrying hazardous waste that are parked at the Facility in excess of eight hours or when the Facility does not have operators on site.

Storage of Hazardous Waste

49. The Licencee shall store hazardous waste in a container that must be:

    a) constructed of a material that is compatible with the hazardous waste being stored;
    b) designed and constructed to withstand damage during handling and transportation;
    c) sealable to prevent the release of its contents and prevent any other substance from entering the container; and
    d) labelled prominently with a weather resistant label with the name of the hazardous waste in the container.

50. The Licencee shall only store hazardous wastes outdoors in a structure that is covered by roofing or another means approved by the Director that ensures precipitation cannot enter the storage area.

51. Clause 50 does not apply to hazardous wastes that are stored in a container or other structure approved by the Director.

52. The Licencee shall not store at the Facility, at any time, totes, drums and small containers containing hazardous waste, in excess of 1500 drum equivalents, unless otherwise approved by the Director.

53. Notwithstanding Clause 52 the Licencee shall comply with the National Fire Code volume quantities as set out for inside storage for dangerous goods.

54. The Licencee shall store hazardous waste as described in Clause 52 of this Licence:

    a) in single pallet rows not more than 2 drum heights or 240 centimetres in height;
    b) with a minimum aisle width between rows of 60 centimetres; and
    c) with a maximum row width not to exceed 150 centimetres.

55. The Licencee shall not store hazardous waste as described in Clause 52 of this Licence for a period exceeding 180 days from the date of receipt of the hazardous waste, except for lab packs, where a 180 day period for storage will commence on the date the lab pack is filled.

56. The Licencee shall, upon completion of a lab pack, properly label and mark the outer container and attach an inventory of the contents to the container. The date of completion of filling of the lab pack shall also be indicated on the inventory.

57. The Licencee shall not store more than 50 in-process lab packs at the Facility. The in-process lab packs shall be segregated from the other incompatiblehazardous wastes in storage.

Tank Farm

58. The Licencee shall not have more than the following tanks within the main tank farm:
    a) 6 – 120 000 Litre vertical storage tanks identified as Tanks K1 to K6.
    b) 6 – 124 500 Litre vertical storage tanks identified as Tanks K7 to K12.
    c) 2 – 640 000 Litre vertical storage tanks identified as Tank F1 and F2.
    d) 1 – 50 000 Litre horizontal storage tank identified as Tank B1.

59. The Licencee shall not have more than the following tanks within the process tank farm:
    a) 4 – 60 000 Litre vertical storage tanks identified as Tanks P1 to P4.

60. The Licencee shall not have more than the following tanks in proximity to Building A:
    a) 1 – 5 000 Litre filter press waste oil AST tank identified as FPT1.
    b) 1 - 4 510 Litre solvent AST tank identified as S1

61. The Licencee shall not have more than the following tanks within Building A:
    a) 4 – 15 230 Litre vertical storage tanks identified as Tanks P5 to P8

b) 1 – 4 600 Litre tank for process decant AST identified as PST1.

62. The Licencee shall not have more than the following tanks within Building B:
    a) 3 – 12 000 Litre vertical poly tanks identified as Tanks T1 to T3.
    b) 3 – 20 000 Litre vertical poly tanks, identified as Tanks T4, T6 and T7.
    c) 1 – 10 000 Litre cone bottom poly tank, identified as Tank T8.
    d) 1 – 22 000 Litre vertical poly tank identified as Tank T9.
    e) 2 – 31 000 Litre vertical steel tank identified as Tank S1 and S2.
63. The Licencee shall maintain oil storage tank areas with a containment system that is in compliance with the CCME Environmental Code of Practice (PN 1326).

64. The Licencee shall maintain the secondary containment system in a manner that does not interfere with the net capacity requirements inside the secondary containment system. At no time shall the additional precipitation volume impede the secondary containment capacity requirements.

65. The Licencee shall only remove precipitation that has accumulated in the secondary containment area if there have been no documented releases, spills, leaks or discharges of used oil (from the previous removal to the current). In the event a documented spill has occurred, the Licencee must receive authorization from an Environment Officer prior to removal of any accumulated liquid. If any accumulated liquid may be contaminated, it shall be sampled and tested for appropriate parameters by an accredited laboratory prior to any request for removal. Contaminated accumulated liquid shall be treated through an oil-water separator or handled as hazardous waste.

66. The Licencee shall maintain the high level alarms within the process tanks in operational condition while there is any product in the tanks.

67. The Licencee shall equip and maintain a granular activated carbon filtration system or other approved filtration system on the passive ventilation nozzle of any storage tank upon the request and in the timeframe specified by an Environment Officer.

Used Glycol

68. The Licencee shall operate such that used glycols:
    a) are only bulked at the Facility;
    b) are not treated at the Facility except for filtration, skimming, and/or settling to remove contaminants;
    c) are not blended with any other material at the Facility;
    d) are not stored in excess of a maximum volume of 125 000 Litres;
    e) are not stored at the Facility for longer than 180 days; and
    f) are sent to a licenced waste disposal or recycling facility.

Waste Gasoline and Diesels

69. The Licencee shall operate such that waste gasoline and diesels:
    a) are only bulked and/or blended with used oil or processed oil at the Facility;
    b) are not treated at the Facility except for filtration, skimming, and/or settling to remove contaminants;
    c) are not stored in excess of a maximum volume of 1 200 000 Litres;
    d) are not stored at the Facility for longer than 180 days; and
    e) are sent to a licenced hazardous waste disposal or recycling facility unless they are used in the blending process.

Waste Solvents

70. The Licencee shall operate such that waste solvents:
    a) are only bulked and/or blended with used oil or processed oil at the Facility;
    b) are not treated at the Facility except for filtration, skimming, and/or settling to remove contaminants;
    c) are not stored in excess of a maximum volume of 50 000 Litres;
    d) are not stored at the Facility for longer than 180 days; and
    e) are sent to a licenced hazardous waste disposal or recycling facility unless they are used in the blending process.

Burner Fuel Processing

71. The Licencee shall equip and maintain every tank utilized for used oil processing with a granular activated carbon filtration system on the passive ventilation nozzle.

72. Within six (6) months of issuance of this Licence; the Licencee shall develop and maintain an Operations Manual that includes:
    a) details on the process by which used oil is processed, blended or treated to create burner fuel;
    b) the parameters tested to determine burner fuel quality (including limits or range to be considered burner fuel in accordance with applicable Federal fuel regulations);
    c) reference to applicable industry standards or codes;
    d) a copy of the Safety Data Sheets for the burner fuel; and
    e) sampling and recording schedules for each batch of burner fuel.

73. The Licencee shall provide the Operations Manual to the Director or Environment Officer, upon request and in the time specified.

74. The Licencee shall process burner fuel in accordance with the Operations Manual developed pursuant to Clause 72 of this Licence and subject to any terms and conditions set by the Director.

75. The Licencee shall keep a log of volumes of waste oil processed and the resultant volumes of burner fuel and sludge generated.

76. The Licencee shall store all sludge in storage tanks clearly designated within the storage tank farm, or in a manner approved by the Director.

Public Used Oil Products and Material Collection

77. The Licencee shall have the operator visually inspect each individual container of used oil that is received from the public for contamination before the contents are transferred to the storage tank.

78. The Licencee shall only have the operator or other trained personnel employed by the Licencee transfer used oil into the storage tank.

Used Oil Filters

79. The Licencee may recycle used oil filters received at the Facility.

80. The Licencee shall process by crushing and draining the used oil filters received from the public or from registered generators prior to shipment to a recycler.

Waste Plastic Containers

81. The Licencee shall receive waste plastic containers at the Facility; and shall;

    a) verify the residue last contained, if not oil;
    b) store containers in a storage container or equivalent equipped with a false floor and collection system; prior to shipment from the Facility; or
    c) store the containers in a manner approved by the Director.

Sludge Containment Facility

82. The Licencee shall construct and maintain the Sludge Containment Facility so that;
    a) the constructed containment area shall be sized to contain 110% of the volume of the shale bin (liquid capacity);
    b) the secondary containment impermeable barrier shall be 60 mil HDPE, at minimum; and
    c) notify the designated Environment Officer once the shale bin and containment is installed, prior to utilization.

83. The Licencee shall ensure that sludge received at the Facility:
    a) is sampled prior to mixing with other waste or materials, if chemistry or characteristics is unknown;
    b) is transferred from delivery vehicles to the steel mixing bins on a surface that contains any spills; and
    c) is stored within the steel mixing bins until treatment or disposal occurs.

Aerosol Can Splitter

84. The Licencee may operate an aerosol can splitter and must maintain the aerosol can splitter in such a manner to not emit or create aerosol emissions.

Material Disposal

85. The Licencee shall test any unknown or unidentified materials that are to be disposed of or transported off the Facility to determine whether they are hazardous.

86. Any materials that are determined to be a hazardous waste shall be disposed of at a licenced hazardous waste disposal facility.

Wastewater

87. The Licencee shall direct all wastewater generated as a result of any activity at the Facility, to a sump or sumps properly designed to contain such liquids.

88. The Licencee shall treat any wastewater generated at the Facility, or wastewater received for treatment in Building B or send the wastewater for disposal to a licenced wastewater disposal facility.

89. The Licencee shall send for disposal to a licenced hazardous waste disposal facility all wastewater that is hazardous.

90. The Licencee shall not discharge non-hazardous wastewater beyond the property boundaries of the Facility except any discharge which conforms to and is directed to the sanitary sewer system in accordance with Pollution Prevention Plan IWSB-PP-753 and the City of Winnipeg Sewer By-Law No. 92/2010, as amended from time to time; or wastewater which is hauled to a City of Winnipeg Wastewater Treatment Facility.

Solid Waste

91. The Licencee shall dispose of all non-hazardous solid waste generated or collected at the Facility, which is not recycled, only to a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 or any future amendment thereof, or a Licence issued pursuant to The Environment Act.

Facility Inspection

92. The Licence shall conduct daily inspections of the Facility to ensure that all pieces of equipment and the storage and treatment operations are operated in a manner that

will not negatively impact the environment. Any deficiencies detected during these daily inspections, that might negatively impact the environment shall be promptly corrected. The inspection must include, as applicable, an observation of:

a) the condition of every hazardous waste container and all piping and ancillary equipment;
b) the condition of the secondary containment system and of any other mechanism that prevents the release of hazardous waste; and
c) any indications of a release of hazardous waste or of any deterioration of containers, piping, ancillary equipment or a secondary containment system that increases the likelihood of a release.

93. The Licencee shall record each inspection required by Clause 92 of this Licence. The record shall include the date of the inspection, the name of the person who conducted the inspection, the observations made by that person during the inspection and recommendations for remedial action and actions undertaken.

94. The records of this inspection required by Clause 93 shall be made available to an Environment Officer upon request.

Trained Personnel

95. The Licencee shall provide training for all persons who will be assigned duties at the Facility in:
    a) transportation of dangerous goods;
    b) regulatory requirements; and
    c) procedures pertaining to the operation of the facility including spill response.

96. The records of the training of Clause 95 shall be made available for inspection by an Environment Officer upon request.

97. The trained personnel shall be on site at all times when the Facility is open to receive waste or materials.

Emergency Response

98. The Licencee shall prepare, within ninety (90) days of the date of issuance of this Licence, and maintain an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety “Emergency Response Planning Guide” or other emergency planning guidelines acceptable to the Director.

99. The emergency response contingency plan shall be designed to minimize hazards from fires, explosions or any unplanned release of hazardous waste or contaminants.

100. The Licence shall keep a copy of the emergency response contingency plan on site, in a location accessible to all persons who will be assigned duties at the Facility, at all times.

101. A copy of the emergency response contingency plan shall be made available to an Environment Officer upon request.

102. The Licencee shall review the emergency response contingency plan on an annual basis, as a minimum, and make revisions as required.

103. Within sixty (60) days of the issuance of this Licence, the Licencee shall update and maintain a fire safety plan, which shall be kept at the Facility and made available upon request for inspection by an Environment Officer. The Licencee shall notify the Winnipeg Fire Paramedic Service of the types of activities occurring at the Facility and the availability of a fire safety plan.

Annual Reporting

104. The Licencee shall, on or before the 15th day of April of each year and beginning in 2021, submit to the Director an annual report with respect to all activities at the Facility conducted pursuant to this Licence during the previous calendar year. The format of the report shall be approved by the Director and contain, as a minimum, the following information:
    a) a summary of any changes to the Operations Manual or Standards of Clause 72;
    b) a summary of all calibration and equipment maintenance records;
    c) summary reports and details of all incidents that require implementation of the contingency plan; and
    d) with respect to any monitoring programs:
        i. the date(s), exact place, and time(s) of sampling or measurements;
        ii. the date(s) analyses were performed;
        iii. the individual(s) who performed the analyses;
        iv. documentation to verify the appropriate certification of the laboratory used to perform the analyses; and
        v. quality assurance and quality control data.

Annual Hazardous Waste Receiver Report

105. The Licencee shall, on or before the 31st day of March of each year, submit to the Director an annual report respecting the hazardous waste received by the Facility pursuant to this Licence during the previous calendar year and the manner in which the waste was treated or disposed as defined in Manitoba Regulation 195/2015 under

The Dangerous Goods Handling and Transportation Act. The report shall be made on a form approved by the Director or submitted in a format acceptable to the Director.

Groundwater Monitoring

106. The Licencee shall sample, store and analyze monitoring well samples using approved field and laboratory techniques for dissolved analysis. The analytical results shall be retained in a format acceptable to the Director.

107. The Licencee shall sample the groundwater monitoring wells once per year for conductivity, pH, and temperature, OVCs, PHC Fractions F1, F2, F3, F4, BTEX and VOCs. or selected parameter, and at a frequency, as approved by the Director.

108. The Licencee shall include in the Annual Report of Clause 104 the results of the groundwater sampling analyses, complete with previous results and trends.

Moderations, Alterations and Decommissioning

109. The Licencee shall obtain approval in writing from the Director for any proposed alteration to the Facility before proceeding with the alteration.

110. Within one (1) year prior to imminent closure of the Facility the Licencee shall submit, for the approval of the Director, a formal detailed Closure and Post-Closure Plan for the Facility.

111. The Licencee shall implement and maintain the approved Closure and Post-Closure Plan; subject to terms and conditions set by the Director at the time of approval.

112. The Licencee shall, at the request of the Director, in the event that the Facility is permanently closed, conduct an investigation in accordance with "Environmental Site Assessments in Manitoba", (June 2016), to the satisfaction of the Director, to identify any contamination which may have resulted from the operation of the Facility.

113. The Licencee shall, where the investigation referred to in Clause 112 of this Licence shows that contamination of the environment has occurred, submit a remediation proposal, within ninety (90) days, to the Director and, upon approval of this proposal by the Director, the required remediation shall be carried out by the Licencee.

Insurance and Financial Assurance

114. The Licencee shall prepare, within six (6) months of the date of this Licence, a remediation and closure plan assessment, satisfactory to the Director, that includes, but is not limited to, the following:
    a) estimated cost to assess the impacts of the Facility to soil and groundwater;

b) estimated cost to remediate impacts of the Facility identified in the assessment referred to in Clause 114 (a); and
c) estimated cost to decommission the Facility.

115. The Licencee shall maintain and post with Manitoba Conservation and Climate, in the amount determined in Clause 114 of this Licence:
a) a permit bond issued by a surety company licenced to do business in the Province of Manitoba;
b) an irrevocable letter of credit; or
c) another acceptable security satisfactory to the Director.

116. The Permit bond, irrevocable letter of credit, or other security and renewals thereof, referenced in Clause 115 of this Licence, shall remain in place for the duration of the operation and decommissioning of the Facility. The Director may order forfeiture of the permit bond, irrevocable letter of credit, or other security, either in whole or in part, by giving written notice to that effect to the Licencee, upon the Director being satisfied that the Licencee is in breach of any specification, limit, term or condition of this Licence, or for reimbursement of any costs or expenses incurred by the Province of Manitoba in rectifying environmental damage caused or contributed to by the operation of the Facility.

117. The Licencee shall, every 5 years or more frequently at the Licencee's preference or the request of the Director, carry out a review of the assessment completed pursuant to Clause 114 of this licence and accordingly update the amount of the permit bond, irrevocable letter or credit or other security required by Clause 115 of this licence.

118. The Licencee shall maintain valid Environmental Impairment Liability insurance providing coverage subject to a minimum limit of $1,000,000 Cdn per occurrence or claim, including coverage for gradual, and sudden and accidental pollution. Coverage to include on-site and off-site clean up costs, and be placed with insurers satisfactory to the Province of Manitoba. The Province of Manitoba is to be added as an Additional Insured on the policy. The policy shall contain a clause stating that the Insurer will give Manitoba 60 days prior written notice in case of a reduction in coverage or policy cancellation.

REVIEW AND REVOCATION

A. This Licence replaces The Dangerous Goods Handling and Transportation Act Licence No. 69 HW RR which is now hereby rescinded.

B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has failed or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.

C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new Application pursuant to The Dangerous Goods Handling and Transportation Act.

"original signed by"

Shannon Kohler
Director
The Dangerous Goods Handling and
Transportation Act

Consignor (Generator) **Registration No.:** MBG04810
Consignee **(Receiver)** Registration No.: **MBR04811**

Schedule A to
Licence No. 334 HW, Clause 30

Hazardous Waste
TDG Class 2 Gasses (all divisions);
TDG Class 3 Flammable Liquids;
TDG Class 4 Flammable solids (all divisions)
TDG Class 5.1 Oxidizers
TDG Class 5.2 Organic peroxides
TDG Class 6.1 Toxic Substances
TDG Class 8 Corrosive
TDG Class 9 Miscellaneous Products, Substances or Organisms
Used Oil
Used oil filters
Waste plastic containers
Used glycol
Wastewater

APPENDIX C: PETROLEUM STORAGE FACILITY PERMIT 23647

Permit #/ Nº de permis: **23647**

Manitoba

Permit to Operate a Petroleum Product or Allied Petroleum Product Storage Tank System / Permis d'exploiter un système de stockage de produits du pétrole ou de produits apparentés

Issued under the Authority of Manitoba Regulation MR 188/2001 *Storage and Handling of Petroleum Products and Allied Products Regulation* pursuant *to The Dangerous Goods Handling and Transportation Act*. / Délivré en vertu de l'autorité du Règlement du Manitoba 188/2001, Règlement sur le stockage et la manutention des produits du pétrole et des produits apparentés, en vertu de la Loi sur la manutention et le transport des marchandises dangereuses.

Issued to:
Délivré à :

GFL ENVIRONMENTAL INC
1090 Kenaston Blvd, Winnipeg, MB R3P 0R7

Business Name:
Nom commercial :

GFL ENVIRONMENTAL INC KENASTON BLVD

Location:
Emplacement :

1090 Kenaston Blvd, Winnipeg

This permit is restricted to the storage tank system described herein and is subject to the requirements of Manitoba Regulation 188/2001 *Storage and Handling of Petroleum Products and Allied Products Regulation* and the conditions listed below. / Ce permis vise uniquement le système de stockage décrit aux présentes et est assujetti aux exigences du Règlement du Manitoba 188/2001, Règlement sur le stockage et la manutention des produits du pétrole et des produits apparentés, ainsi qu'aux conditions ci-dessous.

Type of storage tank system:
Type de système de stockage :

Aboveground Storage Tank
Bulk Plant

Conditions:/
Conditions :

1. This permit must be displayed in a noticeable location at or near the storage tank(s) for which the permit has been issued. / Ce permis doit être affiché à un endroit évident aux réservoirs de stockage pour lesquels il a été délivré ou à proximité de ces réservoirs.
2. The owner or operator of the storage tank system must comply with the conditions listed in Section 28 of the Regulation / Le propriétaire ou l'exploitant du système de stockage doit se conformer aux conditions énumérées à l'article 28 du Règlement.
3. Aboveground storage tank systems must be protected from mechanical damage from vehicles or other sources./Les systèmes de stockage hors sol doivent être protégés des dommages mécaniques causés par des véhicules ou par d'autres éléments.

Note:
Remarque :

This permit may be suspended for non-compliance of any provision of the Storage and Handling of Petroleum Products and Allied Products Regulation or The Dangerous Goods Handling and Transportation Act. / Le présent permis peut être suspendu pour non-conformité aux dispositions du Règlement sur le stockage et la manutention des produits du pétrole et des produits apparentés ou de la Loi sur la manutention et le transport des marchandises dangereuses.

Issue Date:/
Date de délivrance :

2005-04-19

Kristal Harman
Director, The Dangerous Goods Handling and Transportation Act
Directrice, Loi sur la manutention et le transport des marchandises dangereuses

APPENDIX D: ALTERNATE FUEL-FLAMMABLE SDS

ALTERNATE FUEL-FLAMMABLE

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 01/20/2023 Date of Issue: 01/31/2023 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: ALTERNATE FUEL-FLAMMABLE

Synonyms: Burner Fuel/ Industrial Burner Fuel/Recycled Oil

1.2. Intended Use of the Product

Industrial Burner Fuel.

1.3. Name, Address, and Telephone of the Responsible Party

Company

GFL ENVIRONMENTAL INC – Western Liquid Division
4208 84 Avenue, Edmonton, ALBERTA
T: (780) 485-5000
F: (780) 485-5001

1.4. Emergency Telephone Number

Emergency Number : (24 HR) CANUTEC: 1-613-996-666 (CALL COLLECT); GFL ENVIRONMENTAL INC, 1- 888-504-7100

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Flam. Liq. 3	H226
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Muta. 1B	H340
Carc. 1A	H350
Repr. 2	H361
STOT SE 3	H336
STOT RE 1	H372
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Acute 2	H401
Aquatic Chronic 2	H411

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :

GHS02 GHS07 GHS08 GHS09

Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) : H226 - Flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H336 - May cause drowsiness or dizziness.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361 - Suspected of damaging fertility or the unborn child.

H372 - Causes damage to organs (adrenals, bone marrow, liver, lymph nodes, kidney, stomach, and thymus) through prolonged or repeated exposure.
H373 - May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.
H401 - Toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US/CA) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe gas, vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS).
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, provincial, territorial and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. This material or its emissions may defat skin, cause contact dermatitis, or aggravate existing skin disease. Contains sulfur, may release small amounts of hydrogen sulfide. Hydrogen sulfide is a highly flammable, explosive, toxic gas, and may be fatal. Gas can accumulate in the headspace of closed containers, use caution when opening sealed containers. Heating the product or containers can cause thermal decomposition of the product and release hydrogen sulfide. Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with systemic toxicity. See also Section 11 – Toxicological Information. Contains trace amounts of arsenic, cadmium, chromium and lead which are carcinogenic, mutagenic and toxic to reproduction.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	% *	GHS Ingredient Classification
Petroleum	(CAS No) 8002-05-9	60 - 85	Flam. Liq. 1, H224 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 1B, H350 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Distillates, petroleum, solvent-dewaxed heavy paraffinic	(CAS No) 64742-65-0	15 - 30	Acute Tox. 4 (Inhalation:dust,mist), H332 Carc. 1B, H350 Repr. 2, H361 STOT RE 1, H372 Asp. Tox. 1, H304
Fuel oil No. 2	(CAS No) 68476-30-2	15 - 30	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 2, H411
Gasoline, natural	(CAS No) 8006-61-9	15 - 30	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Glycerin	(CAS No) 56-81-5	<= 10	Not classified
Water	(CAS No) 7732-18-5	<= 10	Not classified
Benzene	(CAS No) 71-43-2	<= 5	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Ethylbenzene	(CAS No) 100-41-4	<= 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:vapor), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304

			Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Toluene	(CAS No) 108-88-3	<= 5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	<= 5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:vapor), H332 Skin Irrit. 2, H315 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Acute 2, H401
Lead	(CAS No) 7439-92-1	<= 0.025	Carc. 1B, H350 Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Comb. Dust

Full text of H-phrases: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation. Causes skin irritation. May cause drowsiness and dizziness. Harmful if inhaled. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May be fatal if swallowed and enters airways. Causes damage to organs (adrenals, bone marrow, liver, lymph nodes, kidney, stomach, and thymus) through prolonged or repeated exposure. May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.

Inhalation: High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness.

Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

Chronic Symptoms: Causes serious eye irritation. Causes skin irritation. May cause drowsiness and dizziness. Harmful if inhaled. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May be fatal if swallowed and enters airways. Causes damage to organs (adrenals, bone marrow, liver, lymph nodes, kidney, stomach, and thymus) through prolonged or repeated exposure. May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Sulfur oxides. Hydrogen sulfide.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe gas, vapor, mist or spray. Do not handle until all safety precautions have been read and understood.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Handle in accordance with standard industrial practices, and ensure appropriate ventilation. Avoid all contact with skin, eyes, clothing. Do not release into the environment.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid contact with eyes, skin and clothing. Use only outdoors or in a well-ventilated area. Do not breathe gas/mist/vapors/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Storage Area: Hydrogen sulfide vapors may be evolved from long-term heated storage and/or agitated transport. H_2S is corrosive to most metals. It can cause steel pipe to become blistered, pitted, and brittle.

7.3. Specific End Use(s)

Industrial Burner Fuel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Petroleum (8002-05-9)		
USA OSHA	OSHA PEL (TWA) (mg/m³)	2000 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	350 mg/m³
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	1800 mg/m³ (15 min)
USA IDLH	US IDLH (ppm)	1100 ppm (10% LEL)

Fuel oil No. 2 (68476-30-2)		
USA ACGIH	ACGIH TWA (mg/m³)	100 mg/m³ (inhalable fraction and vapor)
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans
Manitoba	OEL TWA (mg/m³)	100 mg/m³ (inhalable fraction and vapor)
Newfoundland & Labrador	OEL TWA (mg/m³)	100 mg/m³ (inhalable fraction and vapor)
Nova Scotia	OEL TWA (mg/m³)	100 mg/m³ (inhalable fraction and vapor)
Nunavut	OEL STEL (mg/m³)	150 mg/m³ (vapor)
Nunavut	OEL TWA (mg/m³)	100 mg/m³ (vapor)
Northwest Territories	OEL STEL (mg/m³)	150 mg/m³ (vapor)
Northwest Territories	OEL TWA (mg/m³)	100 mg/m³ (vapor)
Prince Edward Island	OEL TWA (mg/m³)	100 mg/m³ (inhalable fraction and vapor)
Saskatchewan	OEL STEL (mg/m³)	150 mg/m³ (vapor)
Saskatchewan	OEL TWA (mg/m³)	100 mg/m³ (vapor)

Glycerin (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (mist, total particulate) 5 mg/m³ (mist, respirable fraction)
New Brunswick	OEL TWA (mg/m³)	10 mg/m³ (mist)
Nunavut	OEL STEL (mg/m³)	20 mg/m³ (mist)
Nunavut	OEL TWA (mg/m³)	10 mg/m³ (mist)
Northwest Territories	OEL STEL (mg/m³)	20 mg/m³ (mist)
Northwest Territories	OEL TWA (mg/m³)	10 mg/m³ (mist)
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³ (mist)
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³ (mist)
Yukon	OEL TWA (mg/m³)	30 mppcf (mist)

		10 mg/m³ (mist)
Benzene (71-43-2)		
USA ACGIH	ACGIH TWA (ppm)	0.5 ppm
USA ACGIH	ACGIH STEL (ppm)	2.5 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Human Carcinogen
USA ACGIH	Biological Exposure Indices (BEI)	25 µg/g Kreatinin Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: end of shift (background) 500 µg/g Kreatinin Parameter: t,t-Muconic acid - Medium: urine - Sampling time: end of shift (background)
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm 1 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	5 ppm (see 29 CFR 1910.1028)
USA OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm
USA NIOSH	NIOSH REL (TWA) (ppm)	0.1 ppm
USA NIOSH	NIOSH REL (STEL) (ppm)	1 ppm
USA IDLH	US IDLH (ppm)	500 ppm
Manitoba	OEL STEL (ppm)	2.5 ppm
Manitoba	OEL TWA (ppm)	0.5 ppm
New Brunswick	OEL STEL (mg/m³)	8 mg/m³
New Brunswick	OEL STEL (ppm)	2.5 ppm
New Brunswick	OEL TWA (mg/m³)	1.6 mg/m³
New Brunswick	OEL TWA (ppm)	0.5 ppm
Newfoundland & Labrador	OEL STEL (ppm)	2.5 ppm
Newfoundland & Labrador	OEL TWA (ppm)	0.5 ppm
Nova Scotia	OEL STEL (ppm)	2.5 ppm
Nova Scotia	OEL TWA (ppm)	0.5 ppm
Prince Edward Island	OEL STEL (ppm)	2.5 ppm
Prince Edward Island	OEL TWA (ppm)	0.5 ppm
Yukon	OEL Ceiling (mg/m³)	32 mg/m³
Yukon	OEL Ceiling (ppm)	10 ppm

Toluene (108-88-3)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA ACGIH	Biological Exposure Indices (BEI)	0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 0.3 mg/g Kreatinin Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background)
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	375 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m³)	560 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	150 ppm
USA IDLH	US IDLH (ppm)	500 ppm
Manitoba	OEL TWA (ppm)	20 ppm
New Brunswick	OEL TWA (mg/m³)	188 mg/m³
New Brunswick	OEL TWA (ppm)	50 ppm
Newfoundland & Labrador	OEL TWA (ppm)	20 ppm
Nova Scotia	OEL TWA (ppm)	20 ppm

Nunavut	OEL STEL (ppm)	60 ppm
Nunavut	OEL TWA (ppm)	50 ppm
Northwest Territories	OEL STEL (ppm)	60 ppm
Northwest Territories	OEL TWA (ppm)	50 ppm
Prince Edward Island	OEL TWA (ppm)	20 ppm
Saskatchewan	OEL STEL (ppm)	60 ppm
Saskatchewan	OEL TWA (ppm)	50 ppm
Yukon	OEL STEL (mg/m³)	560 mg/m³
Yukon	OEL STEL (ppm)	150 ppm
Yukon	OEL TWA (mg/m³)	375 mg/m³
Yukon	OEL TWA (ppm)	100 ppm

Ethylbenzene (100-41-4)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA ACGIH	Biological Exposure Indices (BEI)	0.15 g/g Kreatinin Parameter: Sum of mandelic acid and phenylglyoxylic acid - Medium: urine - Sampling time: end of shift (nonspecific)
USA OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	435 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m³)	545 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	125 ppm
USA IDLH	US IDLH (ppm)	800 ppm (10% LEL)
Manitoba	OEL TWA (ppm)	20 ppm
New Brunswick	OEL STEL (mg/m³)	543 mg/m³
New Brunswick	OEL STEL (ppm)	125 ppm
New Brunswick	OEL TWA (mg/m³)	434 mg/m³
New Brunswick	OEL TWA (ppm)	100 ppm
Newfoundland & Labrador	OEL TWA (ppm)	20 ppm
Nova Scotia	OEL TWA (ppm)	20 ppm
Nunavut	OEL STEL (ppm)	125 ppm
Nunavut	OEL TWA (ppm)	100 ppm
Northwest Territories	OEL STEL (ppm)	125 ppm
Northwest Territories	OEL TWA (ppm)	100 ppm
Prince Edward Island	OEL TWA (ppm)	20 ppm
Saskatchewan	OEL STEL (ppm)	125 ppm
Saskatchewan	OEL TWA (ppm)	100 ppm
Yukon	OEL STEL (mg/m³)	545 mg/m³
Yukon	OEL STEL (ppm)	125 ppm
Yukon	OEL TWA (mg/m³)	435 mg/m³
Yukon	OEL TWA (ppm)	100 ppm

Xylenes (o-, m-, p- isomers) (1330-20-7)		
USA ACGIH	ACGIH TWA (ppm)	100 ppm
USA ACGIH	ACGIH STEL (ppm)	150 ppm
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA ACGIH	Biological Exposure Indices (BEI)	1.5 g/g Kreatinin Parameter: Methylhippuric acids - Medium: urine - Sampling time: end of shift
USA OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm

Manitoba	OEL STEL (ppm)	150 ppm
Manitoba	OEL TWA (ppm)	100 ppm
New Brunswick	OEL STEL (mg/m³)	651 mg/m³
New Brunswick	OEL STEL (ppm)	150 ppm
New Brunswick	OEL TWA (mg/m³)	434 mg/m³
New Brunswick	OEL TWA (ppm)	100 ppm
Newfoundland & Labrador	OEL STEL (ppm)	150 ppm
Newfoundland & Labrador	OEL TWA (ppm)	100 ppm
Nova Scotia	OEL STEL (ppm)	150 ppm
Nova Scotia	OEL TWA (ppm)	100 ppm
Nunavut	OEL STEL (ppm)	150 ppm
Nunavut	OEL TWA (ppm)	100 ppm
Northwest Territories	OEL STEL (ppm)	150 ppm
Northwest Territories	OEL TWA (ppm)	100 ppm
Prince Edward Island	OEL STEL (ppm)	150 ppm
Prince Edward Island	OEL TWA (ppm)	100 ppm
Saskatchewan	OEL STEL (ppm)	150 ppm
Saskatchewan	OEL TWA (ppm)	100 ppm
Yukon	OEL STEL (mg/m³)	650 mg/m³
Yukon	OEL STEL (ppm)	150 ppm
Yukon	OEL TWA (mg/m³)	435 mg/m³
Yukon	OEL TWA (ppm)	100 ppm

Lead (7439-92-1)		
USA ACGIH	ACGIH TWA (mg/m³)	0.05 mg/m³
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA ACGIH	Biological Exposure Indices (BEI)	30 µg/100ml Parameter: Lead - Medium: blood - Sampling time: not critical (Note: Women of child bearing potential, whose blood Pb exceeds 10 µg/dL, are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 µg/dL. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficits. The blood Pb of these children should be closely monitored and appropriate steps should be taken to minimize the child's exposure to environmental lead.)
USA OSHA	OSHA PEL (TWA) (mg/m³)	50 µg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.050 mg/m³
USA IDLH	US IDLH (mg/m³)	100 mg/m³
Manitoba	OEL TWA (mg/m³)	0.05 mg/m³
New Brunswick	OEL TWA (mg/m³)	0.05 mg/m³
Newfoundland & Labrador	OEL TWA (mg/m³)	0.05 mg/m³
Nova Scotia	OEL TWA (mg/m³)	0.05 mg/m³
Nunavut	OEL STEL (mg/m³)	0.15 mg/m³
Nunavut	OEL TWA (mg/m³)	0.05 mg/m³
Northwest Territories	OEL STEL (mg/m³)	0.15 mg/m³
Northwest Territories	OEL TWA (mg/m³)	0.05 mg/m³
Prince Edward Island	OEL TWA (mg/m³)	0.05 mg/m³
Saskatchewan	OEL STEL (mg/m³)	0.15 mg/m³
Saskatchewan	OEL TWA (mg/m³)	0.05 mg/m³
Yukon	OEL STEL (mg/m³)	0.45 mg/m³ (dust and fume)
Yukon	OEL TWA (mg/m³)	0.15 mg/m³ (dust and fume)

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Dark Brown Liquid
Odor	:	Characteristic Petroleum Odor
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	23 - 60 °C (73.4 - 140 °F) (Variable: typically >= 38 °C and usually >= 65.5 °C)
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20°C	:	Not available
Relative Density	:	Not available
Specific Gravity	:	0.7 - 0.95
Solubility	:	Insoluble in water
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
Evaporation rate (water=1)	:	> 1.0

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability: May form flammable or explosive vapor-air mixture. Flammable liquid and vapor.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Inhalation:dust,mist: Harmful if inhaled.

LD50 and LC50 Data:

ALTERNATE FUEL-FLAMMABLE	
ATE US/CA (dust, mist)	2.18 mg/l/4h

Skin Corrosion/Irritation: Causes skin irritation.

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: May cause genetic defects.

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs (adrenals, bone marrow, liver, lymph nodes, kidney, stomach, and thymus) through prolonged or repeated exposure. May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness or dizziness.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

Chronic Symptoms: May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Causes damage to organs through prolonged or repeated exposure.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Petroleum (8002-05-9)	
LD50 Oral Rat	> 4300 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	2.18 mg/l/4h
Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)	
LC50 Inhalation Rat	4.71 mg/l/4h (reported as > 4.7 mg/l/4h)
Fuel oil No. 2 (68476-30-2)	
LD50 Oral Rat	12 g/kg
LD50 Dermal Rabbit	4720 µl/kg
LC50 Inhalation Rat	4.6 mg/l/4h
Gasoline, natural (8006-61-9)	
LC50 Inhalation Rat	300 g/m³ (Exposure time: 5 min)
Glycerin (56-81-5)	
LD50 Oral Rat	23000 mg/kg
LD50 Dermal Rabbit	> 10 g/kg
LC50 Inhalation Rat	> 570 mg/m³ (Exposure time: 1 h)
Benzene (71-43-2)	
LD50 Oral Rat	810 mg/kg
LD50 Dermal Rabbit	> 8200 mg/kg

LC50 Inhalation Rat	44.66 mg/l/4h
Toluene (108-88-3)	
LD50 Oral Rat	2600 mg/kg
LD50 Dermal Rabbit	12000 mg/kg
LC50 Inhalation Rat	25.7 mg/l/4h
Ethylbenzene (100-41-4)	
LD50 Oral Rat	3500 mg/kg
LD50 Dermal Rabbit	15400 mg/kg
LC50 Inhalation Rat	17.2 mg/l/4h (Exposure time: 4 h)
Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 Oral Rat	> 5000 mg/kg
LC50 Inhalation Rat	29.08 mg/l/4h
ATE US/CA (dermal)	1,100.00 mg/kg body weight
ATE US/CA (vapors)	11.00 mg/l/4h
Petroleum (8002-05-9)	
IARC Group	3
Benzene (71-43-2)	
IARC Group	1
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity, Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
OSHA Specifically Regulated Carcinogen List	In OSHA Specifically Regulated Carcinogen list.
Toluene (108-88-3)	
IARC Group	3
Ethylbenzene (100-41-4)	
IARC Group	2B
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC Group	3
Lead (7439-92-1)	
IARC Group	2A
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Petroleum (8002-05-9)	
LC50 Fish 1	< 7.1 mg/l (Species: Pimephales promelas, Exposure time 96 h)
LC50 Other Aquatic Organisms 1	2.7 mg/l LL50 96 hr (Kelp forest mysid shrimp)
EC50 Daphnia 1	6.9 mg/l (Exposure time: 48 h)
Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)	
LC50 Fish 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
Fuel oil No. 2 (68476-30-2)	
LC50 Fish 1	35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
Gasoline, natural (8006-61-9)	
LC50 Fish 1	56 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
Glycerin (56-81-5)	
LC50 Fish 1	54000 (51000 - 57000) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Benzene (71-43-2)	
LC50 Fish 1	10.7 - 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	8.76 - 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 2	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Toluene (108-88-3)	
LC50 Fish 1	15.22 (15.22 - 19.05) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	5.46 (5.46 - 9.83) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
NOEC Chronic Crustacea	0.74 mg/l (Ceriodaphnia dubia)

Ethylbenzene (100-41-4)	
LC50 Fish 1	11.0 - 18.0 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	1.8 - 2.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LC50 Fish 1	3.3 mg/l
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
LC50 Fish 2	2.661 (2.661 - 4.093) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
NOEC Chronic Crustacea	1.17

Lead (7439-92-1)	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 1	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 Fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

12.2. Persistence and Degradability

ALTERNATE FUEL-FLAMMABLE	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

ALTERNATE FUEL-FLAMMABLE	
Bioaccumulative Potential	Not established.

Gasoline, natural (8006-61-9)	
Log Pow	2.1 - 6.0

Glycerin (56-81-5)	
BCF Fish 1	(no bioaccumulation)
Log Pow	-1.76

Benzene (71-43-2)	
BCF Fish 1	3.5 - 4.4
Log Pow	2.1

Toluene (108-88-3)	
Log Pow	2.7

Ethylbenzene (100-41-4)	
BCF Fish 1	15
Log Pow	3.2

Xylenes (o-, m-, p- isomers) (1330-20-7)	
BCF Fish 1	0.6 (0.6 - 15)
Log Pow	2.77 - 3.15

12.4. Mobility in Soil

Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : FLAMMABLE LIQUIDS, N.O.S., (Burner Fuel/Recycled Oil: Petroleum, Gasoline, Fuel Oil No. 2)
Hazard Class : 3
Identification Number : UN1993
Label Codes : 3

Packing Group : III
Marine Pollutant : Marine pollutant
ERG Number : 128

14.2. In Accordance with IMDG

Proper Shipping Name : FLAMMABLE LIQUIDS, N.O.S., (Burner Fuel/Recycled Oil: Petroleum, Gasoline, Fuel Oil No. 2)
Hazard Class : 3
Identification Number : UN1993
Label Codes : 3

Packing Group : III
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Marine pollutant : Marine pollutant

14.3. In Accordance with IATA

Proper Shipping Name : FLAMMABLE LIQUIDS, N.O.S., (Burner Fuel/Recycled Oil: Petroleum, Gasoline, Fuel Oil No. 2)
Identification Number : 3
Hazard Class : UN1993
Label Codes : 3

Packing Group : III
ERG Code (IATA) : 3L

14.4. In Accordance with TDG

Proper Shipping Name : FLAMMABLE LIQUIDS, N.O.S., (Burner Fuel/Recycled Oil: Petroleum, Gasoline, Fuel Oil No. 2)
Hazard Class : 3
Identification Number : UN1993
Label Codes : 3

Packing Group : III
Marine Pollutant (TDG) : Marine pollutant

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

ALTERNATE FUEL-FLAMMABLE	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

	Delayed (chronic) health hazard

Petroleum (8002-05-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Fuel oil No. 2 (68476-30-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Gasoline, natural (8006-61-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Glycerin (56-81-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Benzene (71-43-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb
SARA Section 313 - Emission Reporting	0.1 %

Toluene (108-88-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1.0 %

Ethylbenzene (100-41-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	0.1 %

Xylenes (o-, m-, p- isomers) (1330-20-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 313 - Emission Reporting	1.0 %

Lead (7439-92-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
SARA Section 313 - Emission Reporting	0.1 %

15.2. US State Regulations

Benzene (71-43-2)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.

Toluene (108-88-3)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of

	California to cause birth defects.

Ethylbenzene (100-41-4)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Lead (7439-92-1)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.

Petroleum (8002-05-9)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Gasoline, natural (8006-61-9)
U.S. - Massachusetts - Right To Know List

Glycerin (56-81-5)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Benzene (71-43-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
U.S. - Pennsylvania - RTK (Right to Know) List

Toluene (108-88-3)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Ethylbenzene (100-41-4)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Xylenes (o-, m-, p- isomers) (1330-20-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Lead (7439-92-1)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

15.3. Canadian Regulations

Petroleum (8002-05-9)
Listed on the Canadian DSL (Domestic Substances List)
Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)
Listed on the Canadian DSL (Domestic Substances List)
Fuel oil No. 2 (68476-30-2)
Listed on the Canadian DSL (Domestic Substances List)
Gasoline, natural (8006-61-9)
Listed on the Canadian DSL (Domestic Substances List)
Glycerin (56-81-5)
Listed on the Canadian DSL (Domestic Substances List)
Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)
Benzene (71-43-2)
Listed on the Canadian DSL (Domestic Substances List)
Toluene (108-88-3)
Listed on the Canadian DSL (Domestic Substances List)
Ethylbenzene (100-41-4)
Listed on the Canadian DSL (Domestic Substances List)
Xylenes (o-, m-, p- isomers) (1330-20-7)
Listed on the Canadian DSL (Domestic Substances List)
Lead (7439-92-1)
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 02/20/2017

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR).

GHS Full Text Phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 1B	Carcinogenicity Category 1B
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3

Muta. 1B	Germ cell mutagenicity Category 1B
Repr. 1A	Reproductive toxicity Category 1A
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)