

GUIDE

Oilfield Waste Profile Sheets May 2020

The Canadian Association of Petroleum Producers (CAPP) represents companies, large and small, that explore for, develop and produce natural gas and oil throughout Canada. CAPP's member companies produce about 80 per cent of Canada's natural gas and oil. CAPP's associate members provide a wide range of services that support the upstream oil and natural gas industry. Together CAPP's members and associate members are an important part of a national industry with revenues from oil and natural gas production of about \$109 billion a year. CAPP's mission, on behalf of the Canadian upstream oil and natural gas industry, is to advocate for and enable economic competitiveness and safe, environmentally and socially responsible performance.

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Overview

The Oilfield Waste Profile Sheets contained in this guide have been prepared to assist upstream petroleum industry operators with the classification and handling of common industry wastes.

Each Waste Profile Sheet has been divided into four sections: General Information, Hazard Information, Management Methods, and Transportation.

The waste profile sheet information is provided as general industry guidance. The waste profile sheets do not substitute for specific analysis, the approval of waste specific disposal methods and any other work required for the proper determination of health and safety protocols, transportation requirements, and suitable waste disposal methods.

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1 Introduction

Oilfield waste can been described as an unwanted substance (by the generator) or mixture of substances that results from the construction, operation or reclamation of a well site, oil and gas battery, gas plant, compressor station, crude oil terminal, pipeline, gas gathering system, heavy oil site, oil sands site, or related facility.

Oilfield waste must be characterized in order to assess the appropriate handling, treatment, and disposal of that waste. This guide has been prepared to assist upstream petroleum industry operators with the classification and handling of common industry wastes.

1.1 Disclaimer

While CAPP and its consultants believe that data contained herein is factual and the opinions expressed are those of qualified experts, the data is not to be taken as a warranty or representation for which CAPP or its consultants assume legal responsibility. Any use of this data and information must be determined by the user in accordance with the current applicable federal, provincial, and local laws and regulations.

1.2 Using Appendix A - Waste Profile Sheets

Appendix A contains over 40 waste profile sheets. A table of contents listing the sheets is provided at the front of the appendix. The appendix may be used as a resource in its own right.

2 Background

The first version of the Waste Profile Sheets was developed from studies on oilfield waste sponsored by the Canadian Association of Petroleum Producers (CAPP). The studies focused on available data from member companies and specific analytic research. Each waste's characterization and component data is based upon general, but current, industry knowledge and has evolved into the current version of the Waste Profile Sheets as attached in the Appendix.

3 Regulations

There are multiple types of regulations that apply to oilfield wastes: oil and gas regulations, occupational health and safety regulations, environmental regulations, and transportation regulations. Some of these regulations also vary by jurisdiction.

3.1 Oil and Gas Regulations

Alberta

In Alberta, the Alberta Energy Regulator (AER) is responsible for the management of oilfield wastes under the authority of the *Oil and Gas Conservation Act* and the *Oil and Gas Conservation Rules*. The details regarding the management of oilfield wastes at the generator's facility site, the transportation of oilfield wastes on Alberta's public roads, and the treatment and disposal of oilfield wastes at waste management facilities are presented in multiple AER Directives and supporting documents. Specifically, *AER Directive 058 Oilfield Waste Management Requirements for the Upstream Petroleum Industry*, is regarded as the primary reference document on oilfield waste management.

British Columbia

The *Oil and Gas Commission Act* mandates the B.C. Oil and Gas Commission (OGC) to regulate oil and gas and pipeline activities in British Columbia. The OGC administers the Drilling and Production Regulation (DPR) under the Petroleum and Natural Gas Act (PNGA) for drilling and production operations.

Authorizations under the *Oil and Gas Waste Regulation* (OGWR) are subject to the provisions of the *Hazardous Waste Regulation* (HWR). The OGWR requires that drilling waste and waste cement be managed in accordance with the B.C. Oil and Gas Activity Operations Handbook (Oil and Gas Handbook) published by the OGC. The Oil and Gas Handbook also requires that substances in the soil-water mixture comply with all relevant standards in the *Contaminated Sites Regulation*.

Saskatchewan

The Saskatchewan Ministry of Energy and Resources (MER) is responsible for any waste materials regulated under the *Oil and Gas Act and Regulation* and the *Pipelines Act and Regulation*. MER regulated wastes are generated from exploration, drilling or production activities. MER regulated wastes generally includes oily waste.

MER regulated wastes only pertain to wastes on an MER regulated site. Once the waste is removed from the site for transport and disposal, the waste reverts to the Saskatchewan Ministry of Environment (MOE) jurisdiction.

3.2 Environmental or Hazardous Waste Regulations

Alberta

Responsibility for the regulation of wastes in Alberta is divided between the Alberta Energy Regulator (AER) and Alberta Environment and Parks (AEP). The AER is responsible for the regulation of upstream oilfield wastes, while AEP is responsible for the regulation of all other wastes generated in Alberta. Regardless of the regulator, the waste classification and characterization system is consistent, such that the criteria or properties that render a waste hazardous or a dangerous oilfield waste is the same.

British Columbia

Waste that is classified/defined as hazardous waste must be managed according to the rules and standards set out by the *Environmental Management Act* (EMA) and the *Hazardous Waste Regulation (HWR)*. The HWR places controls and restrictions on handling, storing, transporting and disposing of hazardous waste. It is the operator's responsibility to characterize wastes accurately and to handle the waste in accordance with the regulations.

The OGCA gives the OGC statutory decision making authority and responsibilities under specified enactments, including the EMA. EMA prohibits the discharge of waste from prescribed industries, trades, businesses, operations, and activities unless the discharge is authorized. Acceptable forms of authorization include regulations, codes of practice, orders, or permits and approvals issued pursuant to EMA.

Saskatchewan

Once the waste is removed from a regulated MER site for transport and disposal, the waste reverts to the MOE jurisdiction (e.g. waste dangerous good or non-hazardous waste). Waste dangerous goods are regulated by MOE under the Hazardous Substances and Waste Dangerous Goods Regulations are designated as hazardous waste. Non-hazardous waste is regulated by the MOE.

3.3 Occupational Health & Safety Regulations

The Workplace Hazardous Materials Information System (WHMIS) is the system in Canada used for classifying and labelling hazardous workplace chemicals ("hazardous products"). WHMIS is enabled by both federal and provincial legislation. Federally, the *Hazardous Products Act* (HPA) and *Controlled Products Regulations* cover suppliers of hazardous chemicals in Canada.

The primary purpose of provincial Occupational Health and Safety Regulations is to protect workers against health and safety hazards on the job. The provincial regulations set rules for health & safety in workplaces and enable WHMIS.

In general, WHMIS requirements apply to hazardous products inside a workplace. The WHMIS Regulation specifically exempts hazardous wastes as they are regulated via provincial and federal regulations. In addition, hazardous products shipped to and from

workplaces are covered by Transportation of Dangerous Goods (TDG) legislation, and no overlap is intended.

3.4 Transportation Regulations

The federal *Transportation of Dangerous Goods Act and Regulations* (TDG) identifies requirements for the transportation of dangerous goods. Wastes that are not classified as dangerous goods are not subject to the TDG Regulations; these wastes are transported under the appropriate jurisdictional environmental or hazardous waste regulations.

4 Responsibilities

4.1 Waste Generator

The waste generator is the licensee and/or approval holder which generates oilfield waste. The waste generator is also known as the consignor or shipper when wastes are transported.

The waste generator is responsible for ensuring that:

- Oilfield wastes are properly characterized and classified,
- Waste carriers and receivers have been informed of the oilfield waste's properties,
- Accurate and complete waste documentation and manifesting is maintained, and
- Appropriate treatment and disposal practices are utilized.

4.2 Waste Carrier

The waste carrier is the person or party who receives or takes control of oilfield waste for the purpose of transportation. The waste carrier is also known as the transporter.

The waste carrier is responsible for ensuring that:

- The waste generator has informed them of the oilfield waste's properties,
- Wastes are transported in the appropriate containers and means of containment, and
- Accurate and complete waste documentation and manifesting is maintained.

4.3 Waste Receiver

The waste receiver is the person or party who accepts or receives oilfield waste for the purpose of storage, consolidation, transfer, treatment, or disposal. The waste receiver is also known as the consignee when wastes are transported.

The waste receiver is responsible for ensuring that:

- Waste generators are informed of the capabilities and limitations of their treatment and disposal facilities,
- Only waste which the facility is approved to handle is received, and
- Accurate and complete waste documentation and manifesting is maintained.

5 Types of Oilfield Waste

As per provincial regulatory requirements, wastes are classified as either Dangerous Oilfield Waste/Hazardous Waste (DOW/HAZ), or Non-Dangerous Oilfield Waste/Non-Hazardous Waste (non-DOW/non-HAZ).

Provincial Regulatory Requirements	Waste Classifications			
Alberta	Dangerous Oilfield Waste (DOW)	Non-Dangerous Oilfield Waste (non-DOW)		
British Columbia Saskatchewan Northwest Territories	Hazardous Waste	Non-Hazardous Waste		

5.1 Dangerous Oilfield Waste & Hazardous Waste

Handling, transportation, (temporary) storage and disposal costs can increase significantly with DOW/HAZ classification, which makes it beneficial for waste generators to periodically test their waste to confirm classification.

Some hazardous wastes may be defined as hazardous recyclables, and if they are intended to be recycled, similar handling, transportation and storage will be required. Only the management option may change with a hazardous recyclable.

5.2 Non-Dangerous Oilfield Waste & Non-Hazardous Waste

Non-DOW/non-HAZ waste types may not pose as great of an environmental, health and safety risk as a hazardous or dangerous oilfield waste. Disposal options will involve less technology, storage requirements are less stringent, and Transportation of Dangerous Goods requirements may not be applicable.

Inventory control and waste minimization techniques, however, will reduce operational costs and the intent of the waste regulations for handling and storage should still be considered.

6 Waste Characterization

The waste generator is responsible for properly characterizing each waste. The waste characterization is then used to assess the appropriate handling, treatment, and disposal of that waste. Waste characterization is the assessment of the physical, chemical, and toxicological characteristics (i.e. properties) of a waste. There are three primary reasons for characterization:

- To assess the occupational health and safety hazards and control measures needed for worker safety,
- To assess the dangers relating to transportation on public roads, and
- To assess the environmental consequences of the waste so that a disposal or management option that appropriately addresses those consequences may be used.

Waste characterization provides information to properly classify waste as per regulatory requirements.

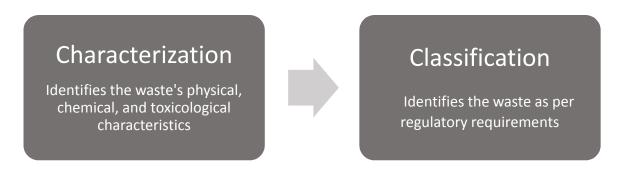


Figure 6-1 Characterization vs. Classification

When characterizing any waste, the Safety Data Sheet (SDS) and original TDG classification for the raw product should be consulted (e.g. soil contaminated with clean glycol – consult SDS for glycol).

Sufficient historical data exists for some waste streams, and waste profile sheets for those oilfield wastes have been developed to assist waste generators in characterization and informing waste carriers and waste receivers of the oilfield waste's properties.

It is highly recommended that periodic testing be conducted of all wastes to confirm characterization.

7 Waste Classification

Waste characterization provides necessary information to classify waste as per regulatory requirements as either DOW/HAZ or non-DOW/non-HAZ Waste. Classification is based upon the criteria outlined in various provincial and federal environmental regulations.

Classification criteria and test methods vary by jurisdiction. To properly classify wastes, the waste generator must consult applicable regulations and guidance documents. Guidance documents, such as AER Directive 58, the AEP Alberta User Guide for Waste Managers, and the British Columbia Hazardous Waste Legislation Guide, include a classification procedure to help determine whether a waste is DOW/HAZ or non-DOW/non-HAZ Waste.

As previously mentioned, sufficient historical data exists for some waste streams, and waste profile sheets for those oilfield wastes have been developed to assist waste generators in classification of their oilfield wastes.

It is important for waste generators to understand that waste profile sheets may not cover all cases and testing may be required before determining appropriate classification.

Periodic testing of all wastes to confirm classification is recommended.

7.1 Classification for Transportation

Wastes that are further classified as dangerous goods are subject to the Transportation of Dangerous Goods Regulations (TDGR). See section 9.

8 Hazard Information

The Workplace Hazardous Materials Information System (WHMIS) is the system in Canada used for classifying and labeling hazardous workplace chemicals ("hazardous products"). WHMIS is enabled by both federal and provincial legislation.

The main elements of WHMIS are:

- Product classification Products intended for use in the workplace are classified based on their hazardous properties.
- Labels Provide basic information that a worker needs to know to safely use a hazardous product.
- Safety data sheets (SDSs) Supplement the label with more detailed information about a product's physical and chemical characteristics, its hazardous properties and necessary handling precautions.
- Worker education Ensures workers understand the information on labels and safety data sheets and can apply this knowledge on the job.

The hazard information on the waste profile sheets follows the guidance of federal WHMIS 2015 requirements.

8.1 Worker Safety

The primary purpose of provincial Occupational Health and Safety Regulations is to protect workers against health and safety hazards on the job. The provincial regulations set rules for health & safety in workplaces and enable WHMIS.

Wastes must be properly characterized to determine the hazards and control measures needed for worker safety. If a workplace chemical is a hazardous waste generated at the worksite, the employer (waste generator) must ensure that it is stored and handled safely using a combination of:

- Proper means of identification, and
- Instruction of workers on the safe handling of the hazardous waste.

The waste profile sheets provide hazard information to workers on how to safely handle, store and dispose of different types of oilfield waste. Workers should be able to identify the oilfield waste, understand the information on the waste profile sheets, and can apply this knowledge on the job to protect themselves (i.e. what personal protective equipment to wear) and others.

9 Management Methods

Once wastes are classified, storage, disposal and tracking can be determined based upon regulatory requirements. In the event of a spill, releases must be reported.

9.1 Storage

Oilfield wastes, whether Dangerous Oilfield/Hazardous Waste or Non-dangerous/Non-hazardous Waste, are generally stored:

- At a waste storage facility (stand-alone) operated by a waste generator for collection of their own wastes, or
- At a waste transfer station operated by an independent company as a third-party waste receiver.

Specific site-storage requirements for oilfield waste are identified on the waste profile sheets for reference.

9.2 Treatment & Disposal

Waste treatment (or waste processing) means to apply any method, technique or process that is designed to change the physical, chemical or biological character or composition of a substance. Waste treatment methods reduce the hazard of the waste and alter the waste into a material which may not require further disposal.

Waste disposal means that the handling of the waste is complete and that the intentional placement of waste on or in land is in its final location.

Waste generators are responsible to ensure appropriate treatment and disposal practices are utilized. Specific oilfield waste disposal options are identified on the waste profile sheet for reference.

Waste receivers are responsible for knowing the capabilities and limitations of their treatment technologies and as such, must only accept wastes exhibiting the properties their facility is approved to handle. Generally this will require waste characterization, unless the stream is sufficiently well-known through prior testing or an in-depth knowledge of the origin of the waste. A waste profile sheet may assist in this determination.

9.3 Tracking

Waste generators are responsible to track their wastes from the time of initial generation through to final disposition (cradle to grave). The effective tracking of oilfield waste is essential to aid the waste generator in ensuring the proper handling, treatment and disposal of oilfield wastes. All waste generators must implement and maintain a waste tracking system. The waste tracking system must enable the waste generator to demonstrate compliance and provide the appropriate information required for reporting.

9.4 Spills

In the event of a spill, report any release of a substance into the environment that may cause, is causing, or has caused an adverse effect. An adverse effect is impairment of, or damage to, the environment, human health or safety, or property. Releases must be reported to the appropriate regulator(s) – refer to federal and provincial release reporting regulations.

10 Transportation

There are numerous requirements that apply to the transportation of wastes whether DOW/HAZ or non-DOW/non-HAZ Waste. These requirements include identification of dangerous goods, handling, communication of hazards, shipping documentation and training.

10.1 Wastes Classified as a Dangerous Good

Wastes which meet the characteristics of a dangerous good must comply with the TDG Regulations. The waste generator (consignor) is responsible for determining if the waste meets the classification of a dangerous good, in accordance with Part 2 of the TDG Regulations.

In addition, the consignor must also have a proof of classification. A proof of classification can be:

- A test report;
- A lab report; or
- A document that explains how the dangerous goods were classified.

A typical TDG classification is provided in the waste profile sheet as a guide to classify the wastes as per the TDG Regulations.

The waste profile sheet is an acceptable proof of classification if it is accompanied by an explanation that describes how the dangerous goods were classified.

Periodic testing of all wastes to confirm classification is recommended.

10.2 Handling

All wastes must be transported in an appropriate means of containment, which is a container or packaging, or any part of a means of transport that is or can be used to contain wastes. For the packaging of wastes which are dangerous goods, the means of containment are prescribed based on the hazards associated with the material.

10.3 Communication of Hazards and Identification of Dangerous Goods

Communication of hazards related to waste shipments is required for the purposes of protecting the health and safety of workers and emergency responders, and public safety. Hazards are communicated on container labels and the documents that must accompany all waste shipments and be made readily accessible during transportation.

Safety Marks are the labels and placards that are used to identify dangerous goods. Placards are a clear indication that a transport unit contains dangerous goods that otherwise might not immediately be identified as such.

10.4 Shipping Documents

All waste shipments must be accompanied by a shipping document which contains specific information as prescribed by the regulatory authority where the waste is generated.

When a waste is a dangerous good the shipping document must comply with the Transportation of Dangerous Goods requirements.

Non-hazardous waste shipments must be accompanied by a either a Company Waste Shipping Document (if in use) or a truck ticket.

Hazardous waste shipments must be accompanied by a federal Movement Document/Manifest.

In Alberta, Dangerous Oilfield Wastes must be accompanied by an AER Alberta Oilfield Waste Form (or equivalent).

Hazardous recyclables that are shipped within Alberta to a recycling facility use a Recycle Docket.

Hazardous waste shipments across all provincial and international borders must use the federal Movement Document/Manifest.

10.5 Training

Every person engaged in the handling, offering for transport, or transporting of wastes, including waste classified as dangerous goods, must be trained in the aspects applicable to their assigned duties. This is important in managing the shipments of these waste materials, because without adequate training, workers may not be able to select the proper packaging, labels or shipping documents.

11 Waste Profile Sheets

The Oilfield Waste Profile Sheets contained in this guide have been prepared to assist upstream petroleum industry operators with the classification and handling of common industry wastes.

Each Waste Profile Sheet has been divided into four sections: General Information, Hazard Information, Management Methods, and Transportation.

The waste profile sheet information is provided as general industry guidance. The waste profile sheets do not substitute for specific analysis, the approval of waste specific disposal methods and any other work required for the proper determination of health and safety protocols, transportation requirements, and suitable waste disposal methods.

11.1 General Information

Original Use

A description of the general use or the process from which the waste is generated in upstream operations.

Physical Description

Waste material is most often described as solid, liquid, sludge, or gas, with a description, if applicable, such as colour and odour.

To satisfy regulatory requirements, a waste must be identified as a solid, liquid, or gas to determine proper characterization, appropriate management, and means of containment selection. The "Paint Filter Test" is commonly used to classify a waste as a solid or liquid (compared to a sludge).

Contaminants

Contaminant information may be useful to determine proper laboratory analysis for waste classification and manifesting. However, as the information is very general, it may not apply to all wastes of the same type. Further waste analysis may be required to determine the classification of the waste as per the jurisdictional regulation.

Other Codes

Identifies specific provincial or federal waste codes, primarily the AER Codes as per Directive 047 & 058 and AER supplied announcements on updates to the Directive. The word "reportable" indicates that the waste type is reportable to the AER, upon request, through an annual digital data submission (DDS). Wastes that are "reportable" are either DOWs or other Reportable Oilfield Wastes as per Table 9.1 of AER Directive 058.

11.2 Hazard Information

The hazard information section on the Waste Profile Sheets uses the WHMIS format for the communication of hazards. This section follows the Federal WHMIS 2015, which is expected to be fully implemented in all jurisdictions by December 2018. Refer to the relevant WHMIS regulations for specific details.

WHMIS Class

The hazard information applies to two major groups of hazards: physical, and health.

- Physical hazards: based on the physical or chemical properties of the waste such as flammability, reactivity, or corrosivity to metals.
- Health hazards: based on the ability of the waste to cause a health effect –
 such as eye irritation, respiratory sensitization (may cause allergy or asthma
 symptoms or breathing difficulties if inhaled), or carcinogenicity (may cause
 cancer).

Safety Data Sheets (SDS)

Indicates a particular SDS(s) which may identify safety information for the waste more accurately. In most cases, the SDS is reflective of the contaminant information in the first section of the waste profile sheet.

WHMIS Labels & Personal Protective Equipment

This section identifies, via WHMIS symbols, the hazard type and the personal protective equipment and precautions which workers must employ to protect themselves during the handling and storage of the waste (i.e. gloves, respiratory equipment, eye protection, footwear, and clothing).

Environmental

The impacts that the specific waste could have on the environment. The major pathways of possible environmental concern are provided. Pathways may include

surface water contamination, groundwater contamination, vegetation damage, air pollution, and fire / explosion.

First Aid Measures

Specific first aid measures which are applicable to injuries or effects on personnel that are directly related to the waste type and physical state. Other first aid measures which may be applicable to a pure component in the waste are not identified.

11.3 Management Methods

Classification by Provincial Waste Regulations

As per provincial regulatory requirements, wastes are classified as either Dangerous Oilfield Waste/Hazardous Waste, or Non-Dangerous Oilfield Waste/Non-Hazardous Waste.

Storage

Provides general information essential for the safe storage of the waste, either temporary at field locations, or for longer term storage at company facilities. This information is taken from AER Directive 055 and specific contaminant Safety Data Sheets (SDS).

Disposal

Provides suggestions for the appropriate management of the waste stream based upon industry practice.

Reportable Releases

The minimum reportable release quantities and emergency notification contacts are provided should a spill or other type of incident occur with respect to the specific waste (when applicable).

11.4 Transportation

The transportation section on the waste profile sheet provides information related to appropriate shipping names including recommended shipping names, container selection, labelling requirements and suggested shipping documents.

When a waste is a dangerous good, the shipping name is provided in the correct order to ensure regulatory compliance.

Containers

- Small Containers (with a capacity less than or equal to 450 L) Indicates the type of labels and other safety marks required on small containers.
- Large Containers (with a capacity greater than 450 L) Indicates vehicle placards and other safety marks required. For field vehicles carrying small quantities (< 500 kg in most cases), placards may not be required.

Documents

All waste shipments must be accompanied by a shipping document which contains specific information prescribed by the regulatory authority where the waste is generated.

- When a waste is a dangerous good the shipping document must comply with TDG requirements.
- Non-HAZ waste shipments must be accompanied by a either a Company Waste Shipping Document (if in use) or a truck ticket.

Comments

Provides additional information on the TDG classification, reasons for non-classification, or alternative classifications that may apply dependent on the specific waste. There may also be a minimum quantity or other TDGR exemptions which may be applicable. Other waste management information and the acceptable industry practice may also be suggested (i.e. treatment and disposal).

Appendix A. Waste Profile Sheets

A.1. List of Waste Profile Sheets

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Waste Profile Sheet: Absorbents & Rags (BTEX & Hydrocarbon)

	General Information			
Original Use: Physical Description: Contaminants: Other Codes:	Maintenance and spill clean-up operations. Oily and dirty rags and absorbents. May contain high concentrations of BTEX, hydrocarbons, solvents and heavy me Alberta AER Code: OILABS (Absorbents) – reportable OILRAG (Rags, if destined for cleaning) - reportable	tals, glycols,	amines.	
	Hazard Information			
Physical: Health:	Flammable Solids. Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Carcinogenicity, Mu	tagenicity, R	leproductive Haza	rds.
SDS: WHMIS Label:	For additional information see specific contaminant SDS (e.g.: Crude Oil). Protective Equipme	ent:		
Environmental:	Possible ignition of other wastes. Uncontrolled storage and disposal may cause without flue gas scrubber may produce toxic fumes.	groundwate	er and soil contam	ination. Incineration
First Aid Measures:	Inhalation: Generally not considered to be a hazard at normal temperatures. Hi throat and lungs; may cause dizziness and headaches; may be anaesthetic and can be contact: May cause irritation, but will not damage eye tissue. Skin Contact: May cause irritation or other skin disorders. Ingestion: Swallowing of food or materials contaminated by handling oily rags in and may cause digestive disorder and/or damage. Small amounts of oil drawn in may cause severe health effects (e.g. bronchopneumonia or pulmonary edema).	ause other of may cause in nto the lung	entral nervous systems.	stem effects. throat and stomach
	Management Methods			
Classification By Provincial Waste Regulations (typical):			BTEX or fails rope e if BTEX or fails ro	
Storage:	Store in sealed drums or containers. Keep in a well-ventilated area away from h for chemicals.	eat sources.	Do not mix with	other sorbents used
Storage: Disposal: Reportable Releases: (Check SDS re classification)		contractor.	aused an adverse (effect. An adverse
Disposal: Reportable Releases: (Check SDS re	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety.	contractor.	aused an adverse (effect. An adverse
Disposal: Reportable Releases: (Check SDS re	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety reporting regulations.	contractor.	nused an adverse o y. Refer to federal	effect. An adverse
Disposal: Reportable Releases: (Check SDS re classification) UN No.	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety reporting regulations. Transportation Shipping Name If flammable, no free liquid: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the contaminant").	contractor. ng, or has ca , or propert	nused an adverse o y. Refer to federal	effect. An adverse and regional release
Disposal: Reportable Releases: (Check SDS re classification) UN No.	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety, reporting regulations. Transportation Shipping Name If flammable, no free liquid: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the contaminant"). If flammable & free liquid: FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical	contractor. ng, or has ca , or property Class	Packing Grou	effect. An adverse and regional release D Special Provisions
Disposal: Reportable Releases: (Check SDS re classification) UN No.	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety reporting regulations. Transportation Shipping Name If flammable, no free liquid: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the contaminant"). If flammable & free liquid:	contractor. ng, or has ca , or property Class	Packing Grou	effect. An adverse and regional release Description Special Provisions 16, 56
Disposal: Reportable Releases: (Check SDS re classification) UN No. UN3175 UN1993	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causing effect is impairment of, or damage to, the environment, human health or safety reporting regulations. Transportation Shipping Name If flammable, no free liquid: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the contaminant"). If flammable & free liquid: FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the flammable contaminant"). If not flammable, but TDG: TDG information is based on the contaminant. If not TDG but Leachable (e.g. BTEX, heavy metals, glycol): AB, SK & NWT: LEACHABLE WASTE, SOLID, OR LEACHABLE WASTE LIQUID (absorbents/rags containing "insert the technical name of the contaminant") BC: LEACHABLE TOXIC WASTE SOLID OR LEACHABLE TOXIC WASTE LIQUID	contractor. ng, or has ca , or property Class 4.1 3 Various None None	Packing Group II I, II, or III Various	p Special Provisions 16, 56 16, 150
Disposal: Reportable Releases: (Check SDS re classification) UN No. UN3175 UN1993 Various	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety, reporting regulations. Transportation Shipping Name If flammable, no free liquid: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the contaminant"). If flammable & free liquid: FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the flammable contaminant"). If not flammable, but TDG: TDG information is based on the contaminant. If not TDG but Leachable (e.g. BTEX, heavy metals, glycol): AB, SK & NWT: LEACHABLE WASTE, SOLID, OR LEACHABLE WASTE LIQUID (absorbents/rags containing "insert the technical name of the contaminant") BC: LEACHABLE TOXIC WASTE SOLID OR LEACHABLE TOXIC WASTE LIQUID (absorbents/rags containing "insert the technical name of the contaminant") Class 4.1 or Class 3 label (and any subsidiary risk labels) based on specific liquid; brackets if Special Provision 16. Class 4.1 or Class 3 or other if >500 kg or in direct contact with a large means of placard if in direct contact with a large means of containment or ≥ 4000 kg. If Non-Dangerous Oilfield Waste / Non-Hazardous Waste use a Truck Ticket. If Da AER Alberta Oilfield Waste Form or Recycle Docket (AB), the federal Movement	Class Class 4.1 Various None Shipping na containmen angerous Oi	Packing Group II I, II, or III Various The and UN numb t. UN Number reconstitution of the second of the secon	effect. An adverse and regional release Description Special Provisions 16, 56 16, 150 er; Technical name in quired with the ardous Waste use the
Disposal: Reportable Releases: (Check SDS re classification) UN No. UN3175 UN1993 Various Small Container: Large Container:	for chemicals. Send or scheduled pick-up to sorbent cleaning service. If sorbents cannot be recycled, deposit in waste filter bins for removal by waste Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety, reporting regulations. Transportation Shipping Name If flammable, no free liquid: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the contaminant"). If flammable & free liquid: FLAMMABLE LIQUID N.O.S. (absorbents contaminated with "insert the technical name of the flammable contaminant"). If not flammable, but TDG: TDG information is based on the contaminant. If not TDG but Leachable (e.g. BTEX, heavy metals, glycol): AB, SK & NWT: LEACHABLE WASTE, SOLID, OR LEACHABLE WASTE LIQUID (absorbents/rags containing "insert the technical name of the contaminant") BC: LEACHABLE TOXIC WASTE SOLID OR LEACHABLE TOXIC WASTE LIQUID (absorbents/rags containing "insert the technical name of the contaminant") Class 4.1 or Class 3 label (and any subsidiary risk labels) based on specific liquid; brackets if Special Provision 16. Class 4.1 or Class 3 or other if >500 kg or in direct contact with a large means of placard if in direct contact with a large means of containment or ≥ 4000 kg. If Non-Dangerous Oilfield Waste / Non-Hazardous Waste use a Truck Ticket. If Da	Class Class 4.1 Various None None Shipping na containmen angerous Oi Document /	Packing Group II I, II, or III Various me and UN numb t. UN Number rec	effect. An adverse and regional release Pospecial Provisions 16, 56 16, 150 er; Technical name in quired with the ardous Waste use the AT or out of province

Absorbents & Rags (BTEX & Hydrocarbon) – 2020

Waste Profile Sheet: Acid (Un-neutralized)

		General Informat	tion				
Original Use:	Water treatment, de-scaling, and v	vell servicing.					
Physical Description:	Corrosive liquid.						
Contaminants:	Specific to the waste acid and use.	Various concentrations.					
Other Codes:	Alberta AER Code: ACID - report	Alberta AER Code: ACID - reportable					
		Hazard Informat	ion				
Physical:	Corrosive to Metals.						
Health:	Skin/Eye Corrosion, Acute Toxicity	– Oral, Dermal, Inhalatio	า.				
SDS:	For additional information see spe	cific contaminant SDS (e.	g.: Sulphu	ric Acid).			
WHMIS Label:		Protective Equipment:					
Environmental:	Leaching of metals if acid comes in Surface water contamination if not		le ground	water cont	amination if spilled c	or leaks at storage sites.	
First Aid Measures:	Inhalation: POISON material. If inh respiration. If breathing is difficult	-	nediately.	Remove vi	ctim to fresh air. If n	ot breathing, give artificial	
	Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately.						
	Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated						
	clothing and shoes. Get medical aid immediately. Wash clothing before reuse.						
	Ingestion: If swallowed, do NOT in	•		mediately.	If victim is fully cons	cious, give a cupful of	
	water. Never give anything by mo						
		Management Met	hods				
Classification By	BC: Hazardous Waste	TO THE PARTY OF TH	SK: Hazar	dous Waste	2		
Provincial Waste	AB: Dangerous Oilfield Waste		NWT: Haz	ardous Wa	ste		
Regulations (typical):			- I - I - C 11 - L	Ch : -	1 - 1 11 1		
Storage:	Store in a corrosion resistant (plast incompatible substances. Corrosiv materials.	·		-	•		
Disposal:	Return to supplier if possible (if pro	oduct is not contaminated	d).				
	Neutralization may be required by waste contractor.						
	Dispose in a disposal well. In AB, C	lass Ia (pH 4.5 - 12.5), or	Class Ib (p	H 6.0 - 9.0)			
Reportable Releases:	Report any release of a substance i						
(Check SDS re	effect is impairment of, or damage	to, the environment, hui	man healt	h or safety,	or property. Refer t	o federal and regional	
classification)	release reporting regulations.						
		Transportation	1				
UN No.	Shipping Name			Class	Packing Group	Special Provisions	
UN1760	CORROSIVE LIQUIDS, N.O.S. (insert	technical name of the ac	id)	8	I, II or III	16	
Small Container:	Class 8 label (and any subsidiary ribrackets if Special Provision 16.	sk labels) based on speci	fic liquid; S	Shipping na	me and UN number	; Technical name in	
Large Container:	Class 8 placard if >500 kg or in dire direct contact with a large means				. UN Number requi	red with the placard if in	
Documents:	AER Alberta Oilfield Waste Form (Ticket (SK).	AB) or the federal Moven	nent Docu	ment / Ma	nifest (BC, NWT or o	ut of province) or Truck	
Comments:	If the waste is a mixture of acid wit Must be Packing Group I if not test	• • •	use the sh	nipping nam	ne for the corrosive.		

Acid (Un-neutralized) – 2020

Waste Profile Sheet: Batteries – Wet Cell (Lead acid)

	Gener	al Information				
Original Use:	Variety of automotive, electric storage, porta	ble or emergency el	ectricity and	lighting, and instrumer	nts.	
Physical Description:	Various solid forms.					
Contaminants:	Sulphuric acid, lead and various chemicals.					
Other Codes:	Alberta AER Code: BATT - reportable					
Other codes.	·					
	Hazar	d Information				
Physical:	Corrosive to Metals.					
Health:	Skin/Eye Corrosion, Acute Toxicity – Oral, Del Carcinogenicity, Mutagenicity, Reproductive	-	Irritation, Sk	in Irritation, Skin/Resp	iratory Sensitization,	
SDS:	For additional information see specific contain	minant SDS (e.g.; Aci	id, Lead, Batte	ery Acid, Battery Fluid)	•	
WHMIS Label:		tective ipment:				
Environmental:	Lower pH in aqueous environments. Battery through landfill leachate. Do not incinerate. threat to environment if landfilled.					
Classification By Provincial Waste Regulations (typical): Storage: Disposal: Reportable Releases:	BC: Hazardous Waste AB: Dangerous Oilfield Waste Store damaged batteries in corrosion resistar on a drip pan. Keep in a cool, dry and well-ve. Send to an approved battery recycling facility Drain batteries of fluids and / or contain for t. Report any release of a substance into the er	onsult physician. of water; do not indu f water for at least 1: cleaned. If acid is spl ap and water. Lead immediately with la ement Method SK: Ha: NWT: H ort (plastic or lined) coentilated area, off the control of the control o	s s zardous Wast Hazardous Wast e ground, aw	move contaminated cles, remove and discarding not readily absorbe of water for at least 1! e e e e e e e e e e e e e e e e e e e	d compounds: Consult othing completely, d if they contain leather. d through the skin. s minutes; consult ed batteries may be stored naterials. adverse effect. An adverse	
(Check SDS re classification)	effect is impairment of, or damage to, the en release reporting regulations.	nsportation	learth or sare	ty, or property. Refer t	o rederal and regional	
UN No.	Shipping Name		Class	Packing Group	Special Provisions	
UN2794	BATTERIES, WET, FILLED WITH ACID	***************************************	8	III		
Small Container:	Class 8 label, shipping name and UN number	r.	1			
Large Container:	Class 8 placard if >500 kg or in direct contact with a large means of containment. UN Number required with the placard if in direct contact with a large means of containment or shipping >4000 kg.					
Large Container.	AER Alberta Oilfield Waste Form or Recycle Docket (AB) or the federal Movement Document / Manifest (BC, NWT or out of					
Documents:				nent Document / Mani	fest (BC, NWT or out of	

Batteries – Wet Cell (Lead Acid) – 2020

Waste Profile Sheet: Carbon - BTEX (Glycol and Amine Systems)

General Information								
Original Use:	The purification of glycol from gas			_				
Physical Description:	Absorption processes for the purification of amine from gas sweetening systems. Granular carbon. (Activated carbon).							
Physical Description:	Granular carbon. (Activated carbon).							
Contaminants:	May contain materials filtered – amine, glycol, BTEX.							
Other Codes:	Alberta AER Code: ACTCRB (Ac	tivated Carbon) - <i>reporto</i>	ıble					
		Hazard Informa	tion					
Physical:	Reactive Flammable Material							
Health:	Eye Irritation, Skin Irritation, Skin/	Respiratory Sensitizatior	, Carcinogenicity, Mu	utagenici	ty, Reproductive H	azards.		
SDS:	For additional information see SDS	Ss of filtered stream com	ponents.					
WHMIS Label:		Protective Equipment:						
Environmental:	Uncontrolled storage and disposal water may contain high levels of a			-	-	etal leaching). Wash		
First Aid Measures:	Inhalation: Use proper respiratory	•	-	-				
	Eye Contact: Flush eyes with a cor							
	Skin Contact : Remove severely co use soap if available.	ntaminated clothing and	clean before reusing	g. Flush v	with large amounts	of fresh water and		
Ingestion: DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. DO NOT attem								
	to give anything by mouth to an u							
		Management Me	thods					
Classification By	BC: Hazardous Waste if BTEX or fa	ils rope burn test.	SK : Hazardous W	/aste if B	TEX or fails rope bu	ırn test.		
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste if B	EX	NWT: Hazardous	Waste if	f BTEX or fails rope	burn test.		
Storage:	Store in a sealed container (e.g. dr (See Carbon (Self-Heating)).	rums, totes). Store outd	oors in a well-ventilat	ted area.	May also be flam	mable or self-heating		
Disposal:	Return to supplier if a pure produc	ct.						
	Regenerate on-site or through a tl	nird party service compa	ny.					
	Send to a waste contractor.							
Reportable Releases:	Report any release of a substance							
(Check SDS re classification)	effect is impairment of, or damage release reporting regulations.	e to, the environment, h	iman health or safet	y, or prop	perty. Refer to fede	eral and regional		
		Transportation	on					
UN No.	Shipping Name			Class	Packing Group	Special Provisions		
	If Not flammable (not TDG), test fo							
None	AB, SK & NWT: LEACHABLE WAST	E, SOLID (carbon contain	ing "insert technical	None				
None	name of the contaminant") BC: LEACHABLE TOXIC WASTE (car	hon containing "insert to	echnical name of the	None				
None	contaminant")	bon containing misert to	crimed name of the	None				
Small Container:	Class 4.2 label, shipping name an	d UN number.		•	<u>.</u>	•		
Large Container:	Class 4.2 placard if >500 kg or in o			ent. UN	number required v	vith the placard if in		
Documents:	AER Alberta Oilfield Waste Form province) or Truck Ticket (SK).	or Recycle Docket (AB) o	r the federal Movem	ent Docu	ıment / Manifest (I	BC, NWT or out of		
Comments:	If the carbon is contaminated with classification and manifesting. Call Heating Substances, Solid, N.O.S.*	rbon may exhibit proper	ties of self-heating ar					

Carbon – BTEX(Glycol and Amine Systems) – 2020

Waste Profile Sheet: Carbon, Activated (Flammable)

		General Inf	ormation				
Original Use:	Absorption processes for the	e purification of amine	or wastewater stream	ıs.			
Physical Description:	Black pure carbon.	Black pure carbon.					
Contaminants:		May contain materials filtered from process streams such as iron sulphide, BTEX, hydrocarbons, heavy metals, calcium, sodium, amine, and its degradation processes.					
Other Codes:	Alberta AER Code: ACTCR	RB (Activated Carbon) -	reportable				
		Hazard Inf	ormation				
Physical:	Reactive Flammable Materia						
Health:	Check process unit to detern		in the filtered waste s	stream.			
SDS:	For additional information se						
WHMIS Label:	(8)	Protective Equipment:			M		
Environmental:	Contaminants (components) hydrocarbon analysis.	may be environmenta	lly toxic to plants. Air	pollution if in	cinerated. Landfil	l disposal will require	
First Aid Measures:	Inhalation: Use prespiration if breathing has see Eye Contact: Flush eyes with Skin Contact: Flush with large clean before reusing. Ingestion: DO NOT induce vote the seep at rest and get prompt	a a continuous flow of fi se amounts of fresh wat comiting since it is impor	pt medical attention. resh water for at least er and use soap if ava	t 15 min. ailable. Remo	ve severely contan	ninated clothing and	
		Managemer	t Methods				
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Wast	e	SK: Hazardous W. NWT: Hazardous				
Storage:	Store in sealed container (e. Heating) Waste Profile Sheet		ors in a well-ventilate	d area. May a	also be self-heating	(See Carbon (Self-	
Disposal:	Return to supplier if a pure p	product, regenerate thr	ough a third party ser	vice company	or send to a waste	e contractor.	
Reportable Releases: (Check SDS re classification)	Report any release of a subs effect is impairment of, or do release reporting regulations	amage to, the environn	•	_			
		Transpo	rtation				
UN No.	Shipping Name			Class	Packing Group	Special Provisions	
UN3175	SOLIDS CONTAINING FLAMN If subject to spontaneous co Heating).	• ,	,	4.1	II	16, 56	
Small Container:	Class 4.1 label, shipping nan	ne and UN number.					
Large Container:	Class 4.1 placards if >500 kg in direct contact with a larg		-		JN Number require	ed with the placard if	
Documents:	AER Alberta Oilfield Waste I (BC, NWT or out of province		(AB), Waste Manifes	t (BC) or the f	ederal Movement	Document / Manifest	
Comments:	If the carbon is contaminate	d with other materials,	analysis will be requir	red to determ	ine proper classific	ation and manifesting	

Carbon, Activated (Flammable) – 2020

Waste Profile Sheet: Carbon (Self-Heating)

		General Information	n		
Original Use:	Absorption processes for t	ne purification of amine or wastewat	er streams.		
Physical Description:	Black pure carbon.			***************************************	
Contaminants:	May contain materials filtered from process streams such as iron sulphide, hydrocarbons, heavy metals, calcium, sodium, amine, and its degradation processes.				
Other Codes:	Alberta AER Code: ACT	CRB (Activated Carbon) - reportable			
		Hazard Information	1		
Physical: Health: SDS:		ial rmine toxic components in the filtere see SDSs of filtered stream compone			
WHMIS Label:	®	Protective Equipment:		A	
Environmental:	Contaminants (component self-heating analysis.	s) may be environmentally toxic to p	lants. Air polluti	on if incinerated. Lar	ndfill disposal will require
First Aid Measures:	breathing has stopped and Eye Contact: Flush eyes wi Skin Contact: Flush with la clean before reusing.	piratory protection to immediately re seek prompt medical attention. th a continuous flow of fresh water for rge amounts of fresh water and use s vomiting since it is important that no of medical attention.	or at least 15 mir soap if available.	n. Remove severely co	ntaminated clothing and
		Management Metho	ds		
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Wa	• • • • • • • • • • • • • • • • • • •	ardous Waste azardous Waste		
Storage:	Store in sealed steel conta (Flammable) Waste Profile	ner (drums). Store outdoors in a we Sheet.	ll-ventilated area	a. May also be flamm	able. See Carbon
Disposal:	Return to supplier if a pure	product, regenerate through a third	-party service co	mpany or send to a v	vaste contractor.
Reportable Releases: (Check SDS re classification)		ostance into the environment that madamage to, the environment, humanns.	•	-	
		Transportation			
UN No.	Shipping Name		Class	Packing Group	Special Provisions
JN3190	SELF-HEATING SOLID, ORG of the contaminant").	ANIC, N.O.S. ("insert the technical na	me 4.2	II or III	16
Small Container:					
Large Container:	UN Number required with UN3190.	the placard if in direct contact with	a large means of	containment or if shi	pping > 1000 kg of
Documents:	AER Alberta Oilfield Waste (BC, NWT or out of provin	e Form or Recycle Docket (AB), Waste ce) or Truck Ticket (SK).	e Manifest (BC) o	r the federal Movem	ent Document / Manifes
Comments:	Test if contaminated with	other materials, to determine classific	cation.		

Carbon (Self-Heating) – 2020

Waste Profile Sheet: Catalyst (Metals or Flammable)

		General Info	ormation			
Original Use:	Gas processing, crude oil and hea	vy oil productions.				
Physical Description:	Solid.					
Contaminants:	May contain aluminum oxide, metal carbonyls, cobalt oxide, molybdenum trioxide, organic sulphides, silica, calcium, sodium, potassium oxide, nickel oxide and heavy metals.					
Other Codes:		alyst - non sulphur)	- reportable			
		Hazard Info	rmation			
Physical:	Reactive Flammable Material					
Health:	Eye Irritation, Skin Irritation, Skin,	Respiratory Sensiti	zation, Carcinogenicity, Mut	agenicity,	Reproductive Haz	ards.
SDS:	For additional information see SD	S of specific compo	nents (i.e. Coke, aluminum o	xide).		
WHMIS Label:		Protective Equipment:				
Environmental:	Uncontrolled storage and disposa Heating Waste Profile Sheet) or fl			n. Poten	tial self-heating (se	ee Catalyst Self-
First Aid Measures:	Inhalation: Use proper respirator respiration if breathing has stopp Eye Contact: Flush eyes, including medical attention. Skin Contact: Flush with large am thoroughly before reusing. Ingestion: If individual is conscious contents. DO NOT attempt to give attention.	ed. Keep at rest and under eyelids, with ounts of water. Use us, have him rinse hi	d call for immediate medical n a continuous flow of water e soap if available. Remove s mouth with water. Give vi	attention for at leas severely of ctim milk	n. sst 15 min. If irrita contaminated cloth or water in order	tion persists, get ning and clean to dilute stomach
	<u> </u>	Management	Methods			
Classification By	BC: Hazardous Waste if leachable	The state of the s	•	ste if leac	hable. BTEX or fail	s rope burn test.
Provincial Waste Regulations (typical):	test. AB: Dangerous Oilfield Waste if fl	·	NWT: Hazardous V			=
Storage:	Store in sealed container (e.g. dru May also be self-heating (See Cat			revent ra	inwater from ente	ring containers.
Disposal:	Return to supplier if a pure produ Regenerate through a third party Send to a waste contractor.					
Reportable Releases: (Check SDS re classification)	Report any release of a substance effect is impairment of, or damag release reporting regulations.					
		Transport	tation			
UN No.	Shipping Name			Class	Packing Group	Special Provisio
UN3175	Flammable: SOLIDS CONTAINING FLAMMABLI the contaminant")	E LIQUID, N.O.S. ("ir	nsert the technical name of	4.1	II	16, 56
None	If containing metals: AB, SK & NWT: LEACHABLE WAST technical name of the contaminal		ontaining "insert the	None	None	
None	BC: LEACHABLE TOXIC WASTE (ca the contaminant")	•	sert the technical name of	None	None	
Small Container:	Class 4.1 label, shipping name (w required if not TDG regulated.	rith technical name	of contaminant in brackets)	and UN n	umber. No TDG sa	fety marks
Large Container:	Class 4.1 placard if >500 kg or in direct contact with a large mean	s of containment or	if shipping >4000 kg.			
Documents:	AER Alberta Oilfield Waste Form Ticket (SK).	(AB) or the federal	Movement Document / Mar	nifest (BC	, NWT or out of pro	ovince) or Truck
Comments:	May not be TDG regulated, dependently nickel). This waste may require s	•		te leacha	te code in shipping	name (e.g. LA43

Catalyst (Metals or Flammable) – 2020

Waste Profile Sheet: Catalyst (Self-Heating)

		General Info	ormation					
Original Use:	Used to remove low levels of H ₂ S in gas processing plants.							
Physical Description:	Granular powder.							
Contaminants:	May contain iron oxide, iron sul	May contain iron oxide, iron sulphide, hydrogen sulphide, pyrite, triolite, sulphur.						
Other Codes:	:	atalyst - sulphur) – <i>re</i> Iron Sponge) – <i>report</i> o						
		Hazard Info	rmation					
Physical:	Reactive Flammable Material							
Health:	Eye Irritation, Skin Irritation, Ski	in/Respiratory Sensiti	zation, Carcinoge	nicity, Muta	genicity, Reproductive	e Hazards.		
SDS:	For additional information see s	specific contaminant S	SDS (i.e. Iron Sulp	hide, Hydrog	gen Sulphide).			
WHMIS Label:	Protective Equipment:							
Environmental:	Uncontrolled storage and disposal may cause groundwater and soil contamination (through acidic leaching of soil metals). Potential for dust problems and SO₂ releases.							
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove victim from exposure. Eye Contact: Follow first aid instructions for drum contents. Get medical attention. Skin Contact: First aid not normally required. Ingestion: First aid not normally required. If gastric irritation or other symptoms develop, get medical attention.							
	- Bear of the second se	Management		37pt01113 ta	everop) germeurear a			
		ivialiageillelli	1					
Classification By Provincial Waste	BC: Hazardous Waste AB: Dangerous Oilfield Waste		SK: Hazardo NWT: Hazar					
Regulations (typical):	AB. Dangerous Onneid Waste		INVVI. Hazai	uous waste				
Storage:	Store in sealed steel containers. Keep dampened during storage.							
Disposal:	Regenerate through a third par	ty service company.						
•	·	Send to a waste contractor (Class I landfill).						
Reportable Releases: (Check SDS re classification)	Report any release of a substan effect is impairment of, or dam release reporting regulations.							
		Transpor	tation					
UN No.	Shipping Name			Class	Packing Group	Special Provisions		
UN3190	SELF-HEATING SOLID, INORGAN of the contaminant")	IIC, N.O.S. ("insert the	C, N.O.S. ("insert the technical name		II or III	16		
UN1376	If Iron Sponge: IRON SPONGE, SPENT			4.2	III			
Small Container:	Class 4.2 label, shipping name (with technical name in brackets if Spe			-				
Large Container:	Class 4.2 if >500 kg or in direct contact with a large means of containment. UN Number required with the placard if in direct contact with a large means of containment or shipping >1,000 kg of UN3190 or shipping >4000 kg.							
	AER Alberta Oilfield Waste Form or Recycle Docket (AB), the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Documents:	<u> </u>	mor necycle booker	,,					

Catalyst (Self-Heating) – 2020

Waste Profile Sheet: Caustic (Un-neutralized)

		General Information						
Original Use:	Water treatment plants, de-scaling operations, turnaround washings, and neutralization of acidic water.							
Physical Description:	Solid, slurry, liquid. High solubility	Solid, slurry, liquid. High solubility in water, beige to white in colour.						
Contaminants:	Sodium hydroxide and / or potassiun apthenates.	Sodium hydroxide and / or potassium hydroxide. May contain hydrogen sulphide, hydrocarbons, phenols, cresols, and						
Other Codes:	Alberta AER Code: CAUS - repor	table	***************************************					
	·	Hazard Information						
Physical:	Corrosive to Metals.							
Health:	Skin/Eye Corrosion, Acute Toxicity -	- Oral, Dermal, Inhalation.			***************************************			
SDS:		ific contaminant SDS (e.g.: Sodium h	nydroxide).					
WHMIS Label:	Protective Equipment:							
Environmental:	High pH effluent may result in organics leaching from wastewater pond sludges. Surface / groundwater contamination through highly soluble components. Sodium content in the effluent could be a problem if released to surface water.							
First Aid Measures:	Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately. Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse. Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.							
	ſ	Management Methods						
Classification By	BC: Hazardous Waste	SK : Hazardous	Waste					
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste	NWT: Hazardo	us Waste					
Storage:	Store in a corrosion resistant (plastic or lined) container. Store in a cool, dry, well-ventilated area away from incompatible substances, strong acids, metals, flammable liquids and organic halogens.							
Disposal:	Return to supplier if possible (if product is not contaminated). Neutralization may be required by waste contractor. Dispose in a disposal well. In AB, Class Ia (pH 4.5 - 12.5), or Class Ib (pH 6.0 - 9.0).							
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that may cause, is causing, or has caused an adverse effect. An adverse effect is impairment of, or damage to, the environment, human health or safety, or property. Refer to federal and regional release reporting regulations.							
		Transportation						
UN No.	Shipping Name		Class	Packing Group	Special Provisions			
UN1760	CORROSIVE LIQUIDS, N.O.S. ("inser	t the technical name of the caustic")	8	I, II or III	16			
Small Container:		ping name (with technical name in b	rackets).	i	<u>i</u>			
Large Container:	Class 8 placard if >500 kg or in dire	ct contact with a large means of con of containment or shipping >4000 kg		UN Number require	d with the placard if in			
	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Documents:	•	RB) of the rederal Movement Docum						

Caustic (Un-neutralized) – 2020

Waste Profile Sheet: Contaminated Debris / Soil (BTEX)

	General Information							
Original Use:	Generated by the accidental spillage of glycol at dehydration and/or compression facilities or amine spills with gas sweetening. Includes contaminated soils, vegetation, and absorbent materials.							
Physical Description:	Solid (glycol and contaminated solids).							
Contaminants:	May contain BTEX, glycol, amines, possibly heavy metals (unlikely).							
Other Codes:	Alberta AER Code: Various codes may apply - all reportable							
	Hazard Information							
Physical:	Flammable Solids.							
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Carcinogenicity, Mu	utagenicity	, Reproductive Ha	zards.				
SDS:	For additional information see specific contaminant SDS.							
WHMIS Label:	Protective Equipment:							
Environmental:	Uncontrolled storage and disposal may cause groundwater and soil contaminat	ion.						
Health:	Inhalation of fumes may cause throat irritation and headaches. Toxic when ing irritation to skin, eyes and mucous tissues upon contact. Potential carcinogen.	ested; cou	ld result in kidney	damage. Moderate				
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped and call for medical attention. Eye Contact: First aid normally not required. Skin Contact: First aid not normally required. Ingestion: If individual is conscious, have him rinse his mouth with clean water. Give conscious victim milk or water to drink in order to dilute stomach contents. DO NOT attempt to give anything by mouth to an unconscious person. Keep at rest and get prompt medical attention.							
	Management Methods							
Classification By	BC: Hazardous Waste SK: Hazardous Waste							
Provincial Waste Regulations (typical):	AB: Testing Required NWT: Hazardous Waste							
Storage:	If saturated – store in steel drums. Temporary storage on drying pads or lined areas.							
Disposal:	Send to a waste contractor (Oilfield Waste Processing Facility).							
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that may cause, is causeffect is impairment of, or damage to, the environment, human health or safet release reporting regulations.							
	Transportation							
UN No.	Shipping Name	Class	Packing Group	Special Provisions				
	If flammable: See Contaminated Debris / Soil (Hydrocarbon)							
	If tainted (Not TDG), BTEX, heavy metals, glycol:							
None	AB, SK & NWT: LEACHABLE WASTE, SOLID, debris / soil containing ("insert the	None	None					
None	technical name of the contaminant") BC: LEACHABLE TOXIC WASTE, debris / soil containing ("insert the technical name of the contaminant").	None	None					
Small Container:	No TDG safety marks if no dangerous goods.							
Large Container:	No TDG safety marks if no dangerous goods.							
	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck							
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Ma Ticket (SK).	ınifest (BC,	NWT or out of pro	ovince) or Truck				

Contaminated Debris / Soil (BTEX) – 2020

Waste Profile Sheet: Contaminated Debris / Soil (Hydrocarbon)

		General Info	ormation					
Original Use:	Generated by the accidental spillage of crude oil, condensate, diesel oils, or refined fuels. Includes contaminated soils, vegetation, and absorbent materials.							
Physical Description:	Solid (oil/condensate and contaminated solids).							
Contaminants:	May contain oil, cond	ensate, BTEX, heavy metals, sa	lts, spill deb	ris, and absorbent	material	S.		
Other Codes:	Alberta AER Code: SOILCO (Contaminated Debris & Soil - crude oil/condensate) - reportable SOILRO (Contaminated Debris & Soil - refined fuels/oils) - reportable SOILEM (Contaminated Debris & Soil - emulsion) - reportable							
		Hazard Info	rmation					
Physical:	Flammable Solid.							
Health:	Eye Irritation, Skin Irri	tation, Skin/Respiratory Sensit	ization					
SDS:	Crude oil							
WHMIS Label:	Protective Equipment:							
Environmental:	Uncontrolled storage and disposal may cause groundwater and soil contamination. Migration of hydrocarbons also possible with land treatment. Light ends may be extremely mobile (water soluble).							
First Aid Measures:	respiration if breathin Eye Contact: Flush eye Skin Contact: Flush wi thoroughly before reu Ingestion: DO NOT inc	er respiratory protection to imrig has stopped and call for prories with a continuous flow of freith large amounts of water. Ususing. duce vomiting. If conscious, given unconscious person. Keep	mpt medical esh water fo se soap if ava ve milk or wa	attention. r at least 15 min. u uilable. Remove se ater to dilute stom	intil irrita everely co ach cont	ntion subsides. Ontaminated clothents. DO NOT att	ning and clean	
		Managemen	t Method	ls				
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste if > 3% refined hydrocarbon AB: Dangerous Oilfield Waste if low flash point or contains BTEX SK: Hazardous Waste NWT: Hazardous Waste							
Storage:	If saturated – store in	If saturated – store in steel drums. Temporary storage on drying pads or lined areas.						
Disposal:	Send to a waste contr	actor (Oilfield Waste Processin	g Facility or	Class I Landfill).				
Reportable Releases: (Check SDS re classification)		a substance into the environm of, or damage to, the environm plations.						
		Transpor	tation					
UN No.	Shipping Name				Class	Packing Group	Special Provisions	
UN3175	If no free liquid at time of packaging but contains hydrocarbons: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. ("insert the technical name of the contaminant").			4.1	II	16, 56		
None	If no free liquid and no crude, condensate or fuel: Not regulated if no other contaminants. *If no hydrocarbon but contains BTEX see Contaminated Soil and Debris – BTEX.			None	None			
Small Container:	No TDG safety marks if no dangerous goods. If dangerous goods: Class 3 or Class 4.1 label, Shipping name and UN number (technical name in brackets if Special Provision 16).							
Large Container:	No TDG safety marks if not a dangerous good. If dangerous goods: Class 3 or Class 4.1 placard if >500 kg or in direct contact with a large means of containment. UN Number required with the placard if in direct contact with a large means of containment or >4000 kg.							
D	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Documents:	i - i	<u> </u>						

Contaminated Debris / Soil (Hydrocarbon) – 2020

Waste Profile Sheet: Contaminated Debris / Soil (Mercury)

	General Information							
Original Use:	This waste is generated from the spillage of mercury from instruments.							
Physical Description:	Solid (mercury and contaminated soils).							
Contaminants:	May contain mercury, sorbent and other spill debris.							
Other Codes:	Alberta AER Code: SOILHM (Contaminated Debris & Soil - mercury/metals) –	reportab	le					
	Hazard Information							
	•							
Physical:	Not Applicable.							
Health:	Acute Toxicity – Oral, Dermal, Inhalation, Aspiration, Specific Target Organ Toxic	city (sing	le exposure, repeat	ed exposure).				
SDS:	For additional information see specific contaminant SDS (e.g. Mercury).							
WHMIS Label:	Protective Equipment:							
Environmental:	Spilled mercury will contaminate pond and drainage ditch sludge and can accumulate in drains/gutters within process buildings. Leachate may contain soluble mercury salts.							
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove the affects respiration if breathing has stopped. Keep at rest and call for immediate medical	ıl attentio	on.					
	Eye Contact: Flush eyes, including under eyelids, with a continuous flow of water for at least 15 min. Get immediate medical attention.							
	Skin Contact: Flush with large amounts of water. Use soap if available. Remove severely contaminated clothing and dispose. Ingestion: If individual is conscious, give milk or beaten egg whites in order to dilute stomach contents. Induce vomiting. DO							
	NOT attempt to give anything by mouth or to induce vomiting if individual is unc			•				
	Management Methods							
Classification By	BC: Hazardous Waste SK: Hazardous Waste							
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste NWT: Hazardous Waste							
Storage:	Store in a closed container at field facility. Keep in a cool, well-ventilated area.							
Disposal:	Send to a reclaimer or waste contractor for reclamation or disposal.							
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that may cause, is causing, or has caused an adverse effect. An adverse effect is impairment of, or damage to, the environment, human health or safety, or property. Refer to federal and regional release reporting regulations.							
	Transportation							
UN No.	Shipping Name	Class	Packing Group	Special Provisions				
	Waste elemental mercury:							
UN2809	MERCURY	8	Ш	126				
UN3244	Contaminated Debris / Soil: SOLIDS CONTAINING CORROSIVE LIQUID N.O.S. (mercury).	8	II	16, 58				
None	If leachable contamination: AB, SK & NWT: LEACHABLE WASTE, SOLID, debris / soil containing ("insert the	None	None					
None	technical name of the contaminant"). BC: leachable toxic waste, debris / soil containing ("insert the technical name of	None	None					
Small Container:	the contaminant"). Class 8 label, shipping name (with technical name of contaminant in brackets) if Special Provision 16 and UN Number.							
Large Container:	Class 8 placard if >500 kg or in direct contact with a large means of containment. UN Number required with the placard if in							
Documents:	direct contact with a large means of containment or shipping >4000 kg. AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Comments								
Comments:	Replace any remaining mercury manometers with electronic instruments.							

Contaminated Debris / Soil (Mercury) – 2020

Waste Profile Sheet: Contaminated Debris / Soil (Leachable Metals)

		General Informa	tion					
Original Use:	Generated from the spillage of lubricants, solvents and other chemicals which have heavy metal components.							
Physical Description:	Solid (Soils contaminated with traces of spill chemicals but no liquids).							
Contaminants:	May contain heavy metals, sorbe							
Other Codes:	Alberta AER Code: SOILHM (C	Contaminated Debris & Soil	- mercury/me	tals) – repor	table			
		Hazard Informat	ion					
Physical:	Not Applicable.							
Health:	Eye Irritation, Skin Irritation, Skin	/Respiratory Sensitization,	Carcinogenici	ty, Mutagen	icity, Reproductive H	azards.		
SDS:	For additional information see sp	ecific contaminant SDS (e	g. Arsenic, Lea	ad)				
WHMIS Label:	Protective Equipment:							
Environmental:	Uncontrolled storage and disposand unidentified compounds.	al may cause groundwater	and soil conta	mination. Le	eachate may contain	high levels of lead		
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest and call for immediate medical attention. Eye Contact: Flush eyes, including under eyelids, with a continuous flow of water for at least 15 min. If irritation persists, get medical attention. Skin Contact: Flush with large amounts of water. Use soap if available. Remove severely contaminated clothing and clean thoroughly before reusing. Ingestion: If individual is conscious, have him rinse his mouth with water. Give victim milk or water to dilute stomach contents. DO NOT attempt to give anything by mouth to an unconscious person. Keep warm & quiet. Get prompt medical attention.							
		Management Met						
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste if leachables or > 3% refined hydrocarbon AB: Dangerous Oilfield Waste if leachables SK: Hazardous Waste if leachables NWT: Hazardous Waste if leachables							
Storage:	Store in a closed container at field facility. Keep in a cool, well-ventilated area away from incompatible materials.							
Disposal:	Physical/chemical treatment. Landfill at approved landfill (Class I or II, based on characteristics, in AB).							
Reportable Releases: (Check SDS re classification)	Report any release of a substance ffect is impairment of, or damagrelease reporting regulations.		•	_				
Transportation								
UN No.	Shipping Name			Class	Packing Group	Special Provisions		
None	AB, SK & NWT: LEACHABLE WAS		taining	None	None			
None	· ['	ebris / soil containing ("insert the		None	None			
Small Container:	No TDG safety marks required.				•	•		
Large Container:	No TDG safety marks required.							
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Comments:	All handling, transportation, storage and treatment options for waste must be in accordance with provincial and federal regulation and with approval of the regulatory body.							

Contaminated Debris / Soil (Leachable Metals) – 2020

Waste Profile Sheet: Contaminated Debris / Soil (NORMs)

	General Informat	tion			
Original Use:	Soils, debris, and other materials (PPE, filters, etc.) that become flowlines, water treatment facilities and other process vesse produced water (radium) and radon in natural gas.			_	_
Physical Description:	Solids, sludges, other materials (PPE, filters, etc.)				
Contaminants:	Various contaminants may be present. If material has been your HSE department.	screened and	is greate	er than twice the bac	kground levels, contact
Other Codes:	Alberta AER Code: NORM (Naturally Occurring Radioactive	ve Materials)	- reporta	ble	
	Hazard Informati	ion			
Physical:	Not Applicable.				
Health:	A low level radioactive material. Avoid prolonged exposure can accumulate and remain in the body for a long time and o	-		s. Alpha, beta and ga	amma emitters. NORM
SDS:	Not Applicable.				
WHMIS Label:	Not Applicable. Protective Equipment:				
Environmental:	Radioactive contamination of soils, exposure to humans, wil	Idlife and live	stock.		
First Aid Measures:	Inhalation: Use proper respiratory protection to immediatel respiration if breathing has stopped. Keep at rest in a well-very Eye Contact: Check for and remove contact lenses. Flush eye	ly remove the ventilated are	affected a and cal	ll for immediate med	ical attention.
	least 15 min. If irritation persists, get medical attention. Skin Contact: Flush with large amounts of water. Use disinf anti-bacterial cream. Remove severely contaminated clothi	ing and clean	thorough		aminated skin with an
	Ingestion: If a large amount is swallowed, get immediate me	edical attention	on.		
	Management Met	hods			
Classification By		RM Waste			
Provincial Waste Regulations:	AB: NORM Waste NWT: N	NORM Waste			
Storage:	A dedicated, well-marked, sealed container should be availa located in a designated covered area with restricted access.		orage of	NORM materials. Th	e container should be
Disposal:	Dispose at a cavern or landfill licensed for NORMs. Consult w	with receiving	facilities	for regulated radiat	ion limits.
Reportable Releases:	Any quantity in all jurisdictions if over 70 Bq/g. Releases into	o the environ	ment are	regulated by Health	Canada.
	Transportation	า			
UN No.	Shipping Name		Class	Packing Group	Special Provisions
N/A	Not TDG regulated if < 70 Bq/g. See also other Contaminated Debris / Soil waste profile shee Heating, flammable or contaminated with leachables) for the description.	ets (if Self-	N/A	N/A	N/A
If > 70Bq/g	Consult the Packaging and T	ransport of N	uclear Su	bstances Regulations	5
Small Container:	No TDG safety marks required if less than <70 Bq/g.				
Large Container:	No TDG safety marks required if less than <70Bq/g.				
Documents:	AER Alberta Oilfield Waste Form (AB) or Truck Ticket. If >70	Bq/g, Shippin	g Docum	ent must contain TD	G information.
Comments:	Waste transported should be reviewed with provincial TDG waste contractors offering NORM disposal.	authority. Ch	eck with	you HSE departmen	t for information on

Contaminated Debris / Soil (Norms) – 2020

Waste Profile Sheet: Contaminated Debris / Soil (Sulphur)

		General Info	rmation			
Original Use:	Contaminated Debris and Soi	l – Sulphur.				
Physical Description:	Solid (sulphur and contamina	ted soils).				
Contaminants:	May contain elemental sulph					
Other Codes:	Alberta AER Code: SOILSU	(Contaminated Debris &	Soil - sulphur) - <i>reportal</i>	ole		
		Hazard Infor	mation			
Physical:	Flammable Solid.					
Health:	Eye Irritation, Skin Irritation,	Skin/Respiratory Sensitiz	ation.			
SDS:	Sulphur					
WHMIS Label:	® (!)	Protective Equipment:				
First Aid Measures:	adversely affected by concen Surface water and groundwar land treatment operations (p Inhalation: Use proper respir respiration if breathing has st Eye Contact: Flush eyes, incluattention. Skin Contact: Flush with large thoroughly before reusing. Ingestion: If individual is cons NOT attempt to give anything	ter contamination if buri- roduction of low pH leac atory protection to imme copped. Keep at rest and iding under eyelids, with a amounts of water. Use scious, give milk or beate	al pit is not lined with lime hate). ediately remove the affer call for immediate mediate continuous flow of was soap if available. Remove the gg whites in order to	cted victim cal attenti ter for at l ve severely	is not used in suffici in from exposure. Ac on. east 15 min. Get in y contaminated clot mach contents. Ind	dminister artificial namediate medical thing and clean uce vomiting. DO
		Management	Methods			
Classification By Provincial Waste Regulations (typical):	BC: Non-Hazardous Waste (u AB: Non-Dangerous Oilfield V				ste (unless not prill Waste (unless not p	•
Storage:	Temporary storage on drying possible.	pads or in/on lined pits	or ground. Will corrode	steel conta	ainers. Avoid groun	id storage if
Disposal:	Landfill at an approved landfi Landfill Disposal of Sulphur W				t be in accordance	with "Guidelines for
Reportable Releases: (Check SDS re classification)	Report any release of a subst effect is impairment of, or da release reporting regulations	mage to, the environme	•	_		
		Transport	ation			
UN No.	Shipping Name			Class	Packing Group	Special Provisions
UN1350	Not regulated if sulphur is pri If regulated: SULPHUR	lled or shipped ≤ 400 kg	(sulphur) per container.	4.1	III	33
Small Container:	If TDG regulated: Class 4.1 lab	pel, shipping name and U	N Number	1	į	<u>i</u>
Large Container: Documents:	If TDG regulated: Class 4.1 plate the placard if in direct contact Company Shipping Document	t with a large means of c	ontainment or shipping	>4000 kg.		•
	Document / Manifest (BC, NV		•		(AD) or the leut	J. W. MOVEINGIIL
Comments:	Transport trucks must be tark wet. In AB, sulphur is specific	. •			•	

Contaminated Debris / Soil (Sulphur) – 2020

Waste Profile Sheet: Desiccant Materials (BTEX)

	General Information			
Original Use:	Generated predominantly from natural gas processing plant dehydration processing	esses, air o	drying systems.	
Physical Description:	Solid.		188818888888888888888888888888888	
Contaminants:	May contain H₂S, glycol, heavy hydrocarbons, aluminum, calcium, iron, sodium	, silicon.	***************************************	
Other Codes:	Alberta AER Code: DESICT (Desiccant) - reportable			
	11			
Discourse de la constant de la const	Hazard Information			
Physical:	Flammable Solids.		December 11	
Health: SDS:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Carcinogenicity, M For additional information see specific contaminant SDS.	utagenicit	ty, Reproductive Ha	zards.
WHMIS Label:	Protective Equipment:	1	M	
Environmental:	Dusting may be a problem. Possible toxic components may pose groundwater Material will sink in water.	contamin	ation if stored on s	urface or in landfill.
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove the affect respiration if breathing has stopped. Keep at rest and call for immediate mediate mediate Eye Contact: Flush eyes, including under eyelids, with a continuous flow of war medical attention. Skin Contact: Flush with large amounts of water. Use soap if available. Remove thoroughly before reusing. Ingestion: If individual is conscious, have him rinse his mouth with water. Give contents. DO NOT attempt to give anything by mouth to an unconscious personattention.	cal attenti ter for at l ve severel	ion. east 15 min. If irrit y contaminated clo ilk or water in orde	ation persists, get thing and clean r to dilute stomach
	Management Methods			
Classification By Provincial Waste Regulations (typical):	· · · · · · · · · · · · · · · · · · ·		eachable or fails ro if leachable or fails	
Storage:	Store in sealed containers. The supplier delivers virgin desiccant and changes entering containers.	out spent	desiccant. Prevent	rainwater from
Disposal:	Reuse/regenerate when possible. Send to cement manufacturer for use in cer Send to landfill if applicable regulations are met.	nent mixti	ures	
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that may cause, is cau effect is impairment of, or damage to, the environment, human health or safe release reporting regulations.			
	Transportation			
UN No.	Shipping Name	Class	Packing Group	Special Provisions
UN3175	If no free liquid at time of packaging & high hydrocarbon present: SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant").	f 4.1	II	16, 56
None	If not flammable: AB, SK & NWT: LEACHABLE WASTE, SOLID, desiccant containing ("insert the	None	None	
None	technical name of the contaminant"). BC: LEACHABLE TOXIC WASTE, desiccant containing ("insert the technical name of the contaminant").	None	None	
Small Container:	No TDG safety marks if no dangerous goods. Class 4.1 label, shipping name (instructed if Special Provision 16) and UN Number.	ert the te	i chnical name of the	: contaminant in
Large Container:	No TDG safety marks if not a dangerous good. Class 4.1 placard if >500 kg or in containment, or none. UN Number required with the placard if in direct conta >4000 kg.		_	
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / M Ticket (SK).	anifest (Bo	C, NWT or out of pr	ovince) or Truck
Comments:				

Desiccant Materials (BTEX) – 2020

Waste Profile Sheet: **Drilling Waste Materials (Hydrocarbon)**

	General Information					
Original Use:	Hydrocarbon based drilling waste materials (solids, fluids, slurries) from hydrocarbon-b	oased drilli	ng.			
Physical Description:	Sludge, fluids, or semi-dried solid.					
Contaminants:	May contain hydrocarbons, mud additives, BTEX.					
Other Codes:	Alberta AER Code: DRWSHC (Drilling Waste - hydrocarbon) - reportable					
Other codes.						
	Hazard Information					
Physical: Health:	Flammable Solid. Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization					
SDS:	For additional information see specific contaminant SDS (e.g. Diesel and additives).					
WHMIS Label:	Protective Equipment:					
Environmental:	Uncontrolled storage and disposal may cause groundwater and soil contamination. Mi with land treatment. Light ends may be extremely mobile (water soluble).	igration of	hydrocarbons	also possible		
	Inhalation: Use proper respiratory protection and immediately remove victim from exp breathing has stopped and get medical attention.	posure. A	dminister artifi	cial respiration		
	Eye Contact: Flush eyes with large amounts of water until irritation subsides (at least 1 attention.	.5 min.). If	irritation pers	ists, get medica		
	Skin Contact: Flush with large amounts of water and use soap if available. Remove sev	erely cont	aminated clot	ning/shoes and		
	clean thoroughly before reusing. Ingestion: DO NOT induce vomiting. If individual is conscious, give milk or water to diluquiet and get medical attention.	ute stoma	ch contents. K	eep warm and		
	Management Methods					
Classification By Provincial Waste	BC: Hazardous Waste if leachable, > 3% refined hydrocarbon or SK: Hazardous Waste fails rope burn test NWT: Hazardous Waste		•			
			able of falls to	pe buill test		
	AB: Dangerous Oilfield Waste if flammable or leachable					
Storage:		incompati	ble materials.	Liquid-based		
Storage: Disposal: Reportable Releases: (Check SDS re	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050.	incompati wastes m	ble materials. ust be stored i	Liquid-based n a manner tha fect. An advers		
Storage: Disposal: Reportable Releases: (Check SDS re	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or pro	incompati wastes m	ble materials. ust be stored i	Liquid-based n a manner tha fect. An advers		
Disposal: Reportable Releases: (Check SDS re classification)	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or prove release reporting regulations. Transportation Shipping Name	incompati wastes m	ble materials. ust be stored i	Liquid-based n a manner tha fect. An advers		
Disposal: Reportable Releases: (Check SDS re classification) UN No.	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or provide release reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant").	incompati wastes m has caused operty. Ref	ble materials. ust be stored in d an adverse ef fer to federal a	fect. An advers		
Disposal: Reportable Releases: (Check SDS re classification) UN No.	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or heffect is impairment of, or damage to, the environment, human health or safety, or proved as reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquid and low flashpoint (<60°C): SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant").	has caused operty. Ref	ble materials. ust be stored in d an adverse effer to federal a Packing Group	fect. An advers		
Disposal: Reportable Releases: (Check SDS re classification) UN No. UN1993 UN3175	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or proved as reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquid and low flashpoint (<60°C): SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the	incompati wastes mi	ble materials. ust be stored in d an adverse effer to federal a Packing Group I, II, or III	fect. An advers nd regional Special Provisions		
Disposal: Reportable Releases: (Check SDS re classification) UN No. UN1993 UN3175 None	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or proved as reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquid and low flashpoint (<60°C): SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquids: AB, SK & NWT: LEACHABLE WASTE (SPECIFY SOLID OR LIQUID), drilling waste containing ("insert the technical name of the contaminant"). BC: LEACHABLE TOXIC WASTE, drilling waste containing ("insert the technical name of the contaminant").	class None None	ble materials. ust be stored in d an adverse effer to federal a Packing Group I, II, or III II None None	special Provisions 16, 150 16, 56		
Regulations (typical): Storage: Disposal: Reportable Releases: (Check SDS re classification) UN No. UN1993 UN3175 None None Small Container:	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or proceeds reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquid and low flashpoint (<60°C): SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquids: AB, SK & NWT: LEACHABLE WASTE (SPECIFY SOLID OR LIQUID), drilling waste containing ("insert the technical name of the contaminant"). BC: LEACHABLE TOXIC WASTE, drilling waste containing ("insert the technical name of	class None None	ble materials. ust be stored in d an adverse effer to federal a Packing Group I, II, or III II None None	Special Provisions 16, 150 16, 56		
Disposal: Reportable Releases: (Check SDS re classification) UN No. UN1993 UN3175 None	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or heffect is impairment of, or damage to, the environment, human health or safety, or progrelease reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquid and low flashpoint (<60°C): SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquids: AB, SK & NWT: LEACHABLE WASTE (SPECIFY SOLID OR LIQUID), drilling waste containing ("insert the technical name of the contaminant"). BC: LEACHABLE TOXIC WASTE, drilling waste containing ("insert the technical name of the contaminant"). Class 3 or 4.1 label, shipping name (with technical name in brackets if Special Provision	class None None None None None None None Non	Packing Group I, II, or III II None None UN Number. N	special Provisions 16, 150 16, 56 o TDG safety with the placar		
Storage: Disposal: Reportable Releases: (Check SDS re classification) UN No. UN1993 UN3175 None None Small Container:	AB: Dangerous Oilfield Waste if flammable or leachable Store in a cool, well-ventilated area which is secure and separate from work areas and drilling wastes must be stored in tanks, and the solids from hydrocarbon-based drilling prevents contact with the ground (tanks or shale bins) as per D-050. Send to waste disposal facility (Oilfield Waste Processing Facility). Report any release of a substance into the environment that may cause, is causing, or leffect is impairment of, or damage to, the environment, human health or safety, or prorelease reporting regulations. Transportation Shipping Name If free liquids and low flashpoint (<60°C): FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquid and low flashpoint (<60°C): SOLIDS CONTAINING FLAMMABLE LIQUID N.O.S. ("insert the technical name of the contaminant"). If no free liquids: AB, SK & NWT: LEACHABLE WASTE (SPECIFY SOLID OR LIQUID), drilling waste containing ("insert the technical name of the contaminant"). BC: LEACHABLE TOXIC WASTE, drilling waste containing ("insert the technical name of the contaminant"). Class 3 or 4.1 label, shipping name (with technical name in brackets if Special Provision marks if not regulated. Class 3 or 4.1 placard if >500 kg or in direct contact with a large means of containment (when required) if in direct contact with a large means of containment or shipping >40.	class None None None None None None None Non	Packing Group I, II, or III II None None UN Number. Number required to TDG safety mines.	special Provisions 16, 150 16, 56 o TDG safety with the placar arks if not		

Drilling Waste Materials (Hydrocarbon) – 2020

Waste Profile Sheet: Drilling Waste Materials (Gel Chem)

		General Info	rmation		
Original Use:	Gelchem, polymer, potassium si water drill systems.	ilicate, or potassium	chloride based	drilling waste materials	(solids, fluids, slurries) from fres
Physical Description:	Sludge or semi-dried solids.				
Contaminants:	May contain potassium chloride	, fresh water gel.			
Other Codes:	•	(Drilling Waste Mate (Drilling Waste Mate		ed gel chem KCL) - <i>repo</i> n) - <i>reportable</i>	ortable
		Hazard Info	mation		
Physical:	Not Applicable.				
Health:	Eye Irritation, Skin Irritation, Ski	n/Respiratory Sensit	ization.		
SDS:	For additional information see s	pecific contaminant	SDS (e.g. Potas	ssium Chloride, gel chem).
WHMIS Label:	(! >	Protective Equipment:			
Environmental:	Prevent entry into water course	S.			
First Aid Measures:	Eye Contact: Wash with plenty of Skin Contact: Remove contamin		ush affected ar	ea thoroughly with wate	r.
		Management	Methods		
Classification By	BC: Non-Hazardous Waste		SK: No	n-Hazardous Waste	
Provincial Waste Regulations (typical):	AB: Non-Dangerous Oilfield Wa	ste	:TWN	Non-Hazardous Waste	
Storage:	Store in a cool, dry, well-ventilate berms in accordance with D-050	· · · · · · · · · · · · · · · · · · ·	carbon based o	drilling waste may be sto	red on-site in sumps or earthen
Disposal:	On-site treatment / disposal in a landspray). Send to waste disposal facility (3COGC O&G Handbook, (sump, mix/bury/cover,
Reportable Releases:	Not normally a reportable relea reported. Report any release of a substan- adverse effect is impairment of, regional release reporting regul	ce into the environm or damage to, the e	ent that may o	cause, is causing, or has c	caused an adverse effect. An
		Transport	ation		
UN No.	Shipping Name		Class	Packing Group	Special Provisions
N/A	Not Regulated.		N/A	N/A	N/A
Small Container:	No TDG safety marks required.				
Large Container:	No TDG safety marks required.				
Documents:	Company Shipping Document o	r Truck Ticket.			
Comments:	Not TDG regulated unless conta Alberta AER Directive 050, Saska				

Drilling Waste Materials (Gel Chem) – 2020

Waste Profile Sheet: Filters – Amine (BTEX)

	General Information						
Original Use:	Filters used for the removal of corrosion products, amine decomposition proprocess.	ducts and hy	drocarbons in the	amine regeneration			
Physical Description:	Light brown with hydrocarbon particles. May include pre-cast filter materials and cartridge elements.						
Contaminants:	May contain residual amines, BTEX, trace metals, hydrocarbons, carbon.						
Other Codes:	Alberta AER Code: FILSWT (Gas Sweetening Filters) - reportable						
	Hazard Information						
Physical:	Reactive Flammable Material						
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Carcinogenicity,	Mutagenicity	, Reproductive Ha	zards.			
SDS:	For additional information see specific contaminant SDS.						
WHMIS Label:	Protective Equipment:						
Environmental:	Uncontrolled storage and disposal may cause groundwater and soil contami water may contain high levels of amine. Incineration may produce toxic fun		-	tal leaching). Wash			
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove victim Eye Contact: Flush eyes with a continuous flow of fresh water for at least 15 Skin Contact: Remove severely contaminated clothing and clean before reus use soap if available. Ingestion DO NOT induce vomiting. If individual is conscious, give milk or with to give anything: by mouth to an unconscious person. Keep warm & quiet.	min. sing. Flush wi	ith large amounts of stomach contents.	. DO NOT attempt			
	Management Methods						
Classification By Provincial Waste Regulations (typical):	If self-heating or leachable: BC: Hazardous Waste AB: Dangerous Oilfield Waste SK: Hazardous Wate NWT: Hazardous	Waste					
Storage:	Store temporarily in drain barrels to allow for the drainage of any free liquid container.	s. Transfer to	o designated filter	bin or other air tight			
Disposal:	Disposal to a hazardous waste disposal facility or ship filter bin to a waste re recycled if possible or sent to a waste contractor for incineration / downhole		er station. Drained	l liquids should be			
Comments:	Use filters with removable cores to reduce waste volumes.						
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that may cause, is c effect is impairment of, or damage to, the environment, human health or sa release reporting regulations.	_					
	Transportation						
UN No.	Shipping Name	Class	Packing Group	Special Provisions			
UN3190	If self-heating: SELF-HEATING SOLID, INORGANIC, N.O.S. (iron sulphide) If not self-heating:	4.2	ll or III	16			
None	AB, SK & NWT: LEACHABLE WASTE, SOLID, filters containing amines and BTE		None				
None Small Container:	BC: LEACHABLE TOXIC WASTE, filters containing amines and BTEX. If self-heating: Class 4.2 label, shipping name (with technical name in bracke	None ts) and UN N	None umber. None if no	t self-heating			
Large Container:	If self-heating: Class 4.2 placard if over 500 kg or in direct contact with a larg	e means of c	ontainment. UN N	lumber required			
Documents:	with the placard if in direct contact with a large means of containment or sh AER Alberta Oilfield Waste Form (AB) or the federal Movement Document /						
Comments:	Ticket (SK). Some amines are regulated and others are not. Some non-regulated amine.	aroducts may	he regulated due	to other			
Comments:	Some amines are regulated and others are not. Some non-regulated amine contaminants.	oroducts may	be regulated due	to other			

Filters – Amine (BTEX) – 2020

Waste Profile Sheet: Filters – Glycol (BTEX)

		General Info	rmation				
Original Use:	Gas processing facilities where is used as a heat trace. Filters uregenerated in a closed system.	sed for the removal of	f corrosion p	roducts, and o	ther impu		
Physical Description:	Cartridge or paper filters.	T56) diada la sa al sa	1/DEC) - H		C \ I		
Contaminants:	May contain triethylene glycol (nickel, lead, zinc, iron sulphide		ol (DEG), eth	ylene glycol (E.	G.), hydro	carbons, bord	on, chromium, copper,
Other Codes:	Alberta AER Code: FILGLY (G	lycol Filters) - reportal	ble				
		Hazard Info	mation				
Physical:	Reactive Flammable Material						
Health:	Eye Irritation, Skin Irritation, Ski	n/Respiratory Sensitiz	ation, Carcir	nogenicity, Mut	agenicity	, Reproductive	e Hazards.
SDS:	For additional information see s	specific contaminant S	DS (e.g. TEG	, DEG, E.G.).			
WHMIS Label:		Protective Equipment:	Q				
Environmental:	Uncontrolled storage and dispo Wash water may contain high k						
First Aid Measures:	Inhalation: Use proper respiration if breathing has stop Eye Contact: Flush eyes with a contact: Flush with large a clean thoroughly before reusing Ingestion: If individual is conscited contents. DO NOT attempt to gattention.	oped. Keep at rest. Ca continuous flow of fres mounts of fresh water g. ous, have him rinse his	Ill for promp sh water unt . Use soap is s mouth with	t medical atter il irritation sub f available. Re n water. Give v	ntion. sides but move sev ictim milk	at least 15 mi erely contami c or water in o	nutes. nated clothing and rder to dilute stomach
		Management	Method	s			
Classification By	If self-heating or leachable:	Management	Wiethou.	·			
Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste			SK: Hazardous		2	
Storage:	Store temporarily in drain barre sour service may be self-heating					waste filter b	in. Glycol filters used i
Disposal:	Disposal to a hazardous waste or recycled if possible or sent to a					station. Drain	ed liquids should be
Reportable Releases: (Check SDS re classification)	Report any release of a substan effect is impairment of, or dam release reporting regulations.		•	•	•		
		Transport	ation				
UN No.	Shipping Name				Class	Packing Gr	oup Special Provision
UN3190	If self-heating: SELF-HEATING SOLID, INORGAN If not self-heating:	IIC, N.O.S. (iron sulphic	de)		4.2	II or III	16
None None	AB, SK & NWT: LEACHABLE WA: BC: LEACHABLE TOXIC WASTE (the contaminant")				None None	None None	
Small Container:	If self-heating: Class 4.2 label, s	nipping name (with te	chnical name	e in brackets) a	nd UN Nu	mber. None i	f not self-heating.
Large Container:	If self-heating: Class 4.2 placard with the placard if in direct con-	U					•
Documents:	AER Alberta Oilfield Waste Forn province) or Truck Ticket (SK).	n or Recycle Docket (A	B) or the fed	leral Movemen	it Docume	ent / Manifest	(BC, NWT or out of
Comments:	EG, DEG and TEG filters are not	TDG regulated. Howe	ver, after us	e in gas dehydi	ration pro	cesses, glycol	filters may be

Filters – Glycol (BTEX) – 2020

Waste Profile Sheet: Filters – Lube Oil

		General Info	rmation			
Original Use:	Filters from engines, rotati degradation sludges and of		ing oil clean-up sy	stems used for	the removal of cor	rosion products,
Physical Description:	Cloth or paper cartridges o	f various sizes, metal cartr	idges.	***************************************		
Contaminants:	May contain hydrocarbons phosphates, anti-rust and a		other trace heavy	metals, N-hex	ane, naptha. May a	lso contain triphenyl
Other Codes:	Alberta AER Code: FILLU	JB (Lube Oil Filters) - <i>repor</i>	table			
		Hazard Info	rmation			
Physical:	Not Applicable.					
Health:	Eye Irritation, Skin Irritation	n, Skin/Respiratory Sensiti	zation.			
SDS:	Lubricating Oil.			***************************************		
WHMIS Label:	<u>(1)</u>	Protective Equipment:				
Environmental:	Uncontrolled storage and ounder acidic conditions. H					
First Aid Measures:	Inhalation: Use proper res respiration if breathing has Eye Contact: Flush eyes, in	stopped. Keep at rest and	d call for immediat	te medical atte	ention.	
	medical attention. Skin Contact: Flush with la thoroughly before reusing. Ingestion: DO NOT induce Keep at rest and get promp	vomiting since it is importa			•	_
		Management	Methods			
Classification By	BC: Hazardous Waste (unle	ess crushed, drained and <	Ē	azardous Wast		
Provincial Waste Regulations (typical):	refined hydrocarbon) AB: Dangerous Oilfield Wa	sto	NWT:	Hazardous Wa	aste	
Storage:	Store temporarily in drain storage area.		inage of any free I	iquids. Transf	er to separate bin. I	Keep in well-ventilated
Disposal:	Disposal to a hazardous warecycled.	aste disposal facility or ship	o filter bin to a was	te receiver tra	nsfer station. Draii	ned liquids should be
Reportable Releases: (Check SDS re classification)	Report any release of a sub effect is impairment of, or release reporting regulatio	damage to, the environme	•			
		Transport	tation			
UN No.	Shipping Name			Class	Packing Group	Special Provisions
None	AB, SK & NWT: LEACHABLE	WASTE, SOLID, filters con	taining lube oil.	None	None	
None	BC: Waste Oil			None	None	
Small Container:	Not regulated if drained No TDG safety marks requ	ired.				<u> </u>
Large Container:	No TDG safety marks requ	iii eu.				
Documents:	i i	e Form or Recycle Docket (SK). If in BC and < 3% refir	•		•	• •

Filters – Lube Oil – 2020

Waste Profile Sheet: Filters – Produced Water

		General Inf	ormation			
Original Use:	Filters used for the filtration of w	ater injected for di	sposal or formation pressure	maintena	nce purposes.	
Physical Description:	Cloth or paper cartridges of vario	ous sizes, metal cart	ridges.			
Contaminants:	May contain hydrocarbons, BTEX	(, biocides and scale	e and corrosion inhibitors.			
Other Codes:	Alberta AER Code: FILPWT (Fi	lters – Produced/Pr	ocess Water) - reportable			
	,		, .	_		
		Hazard Info	ormation			
Physical:	Flammable Solids.					
Health:	Eye Irritation, Skin Irritation, Skin	/Respiratory Sensit	ization, Carcinogenicity, Mu	tagenicity,	Reproductive Haz	ards.
SDS:	For additional information see sp	ecific contaminant	SDS.			
WHMIS Label:		Protective Equipment:				
Environmental:	Uncontrolled storage and dispose	al may cause groun	dwater and soil contaminati	on.		
First Aid Measures:	Inhalation: First aid is normally n Eye Contact: First aid is normally Skin Contact: First aid is normally Ingestion: First aid is normally no	ot required. If indinot required. If irr not required. If irr	vidual feels ill move to fresh itation or other symptoms d ritation or other symptoms (air and allo evelop, get develop, ge	medical attention	on.
		Managemen	t Methods			
Classification By	If self-heating or leachable:					
Provincial Waste	BC: Hazardous Waste		SK: Hazardous Waste			
Regulations (typical):	AB: Dangerous Oilfield Waste		NWT: Hazardous Was	te		
Storage:	Store temporarily in drain barrels in designated filter bin or other a		ainage of any free liquids. T	ransfer to	waste filter bin. If	self-heating; store
Disposal:	Disposal to a hazardous waste di Drained liquids should be recycle	-				sal.
Reportable Releases:	Report any release of a substance effect is impairment of, or damage release reporting regulations.			-		
		Transpoi	rtation			
UN No.	Shipping Name			Class	Packing Group	Special Provision
UN3190	If self-heating: SELF-HEATING SOLID, INORGANI contaminant").	C, N.O.S. ("insert th	e technical name of the	4.2	II or III	16
None	AB, SK & NWT: LEACHABLE WAS	ΓΕ, SOLID, filters co	ntaining hydrocarbons	None	None	
None	BC: LEACHABLE TOXIC WASTE, fil	ters containing hyd	rocarbons	None	None	
Small Container:	If self-heating: Class 4.2 label, shi	ipping name (with t	echnical name in brackets) a	ınd UN Nur	nber. None if not	self-heating.
Large Container:	If self-heating: Class 4.2 placard i with the placard if in direct conta					
Documents:	AER Alberta Oilfield Waste Form	(AB) or the federal	Movement Document / Mai	nifest (BC, I	NWT or out of pro	vince) or Truck
	Ticket (SK).					

Filters – Produced Water – 2020

Waste Profile Sheet: Filters - Raw Gas

		General Infor	mation				
Original Use:	Filters used in gas processing.						
Physical Description:	Cloth or paper cartridges of vario	us sizes, metal cartrid	ges.				
Contaminants:	May contain hydrocarbons, BTEX						
Other Codes:	Alberta AER Code: FILOTH (Fil	ters – Other (raw/fuel	gas, NGLs)	- reportable		100001000000000000000000000000000000000	
	·	Hazard Inforr	nation				
Physical:	Flammable Solids.						
Health:	Eye Irritation, Skin Irritation, Skin	/Respiratory Sensitiza	tion, Carcin	ogenicity, Muta	genicity,	Reproductive Haz	ards.
SDS:	For additional information see sp	ecific contaminant SD	S.				
WHMIS Label:		Protective Equipment:					
Environmental:	Uncontrolled storage and disposa	al may cause groundw	ater and so	I contamination	١.		
First Aid Measures:	Inhalation: First aid is normally n					ow to rest.	
	Eye Contact: First aid is normally	not required. If irritat	ion or othe	r symptoms dev	elop, ge	t medical attentio	n.
	Skin Contact: First aid is normally	not required. If irrita	tion or othe	er symptoms de	velop, ge	et medical attentio	on.
	Ingestion: First aid is normally no	t required. If gastric in	rritation or	other symptom	s develo	p, get medical atte	ention.
		Management N	/lethods				
Classification By	If leachables:						
Provincial Waste	BC: Hazardous Waste			SK: Hazardous			
Regulations(typical)	AB: Dangerous Oilfield Waste			NWT: Hazardou			
Storage:	Store temporarily in drain barrels gas service may be self-heating; s			ree liquids. Kee	ep in wel	l-ventilated area.	Filters used in sour
D'						_	
Disposal:	Send to hazardous waste disposa	i facility or snip fliter b	oin to waste	receiver transf	er statioi	n.	
Reportable Releases:	Report any release of a substance	e into the environmen	t that may	cause. is causing	. or has	caused an adverse	effect. An adverse
(Check SDS re	effect is impairment of, or damag		-	_			
classification)	release reporting regulations.						
		Transporta	tion				
UN No.	Shipping Name				Class	Packing Group	Special Provision
None	AB, SK & NWT: LEACHABLE WAST	E, SOLID, filters contain	ining <i>("inse</i>	rt the technical	None	None	
	name of the contaminant").						
None	BC: LEACHABLE TOXIC WASTE, filting the contaminant").	ters containing ("inser	t the techni	cal name of	None	None	
Small Container:	No TDG safety marks required.				<u> </u>	:	i
Large Container:	No TDG safety marks required.						
Documents:	AER Alberta Oilfield Waste Form	(AB) or the federal Mo	vement Do	cument / Manit	est (BC,	NWT or out of pro	vince) or Truck
	Ticket (SK).						

Filters – Raw Gas – 2020

Waste Profile Sheet: Frac Fluids

		General Infor	mation			
Original Use:	Well servicing, drilling / complet	ion operations, format	ion fracturing.			
Physical Description:	Liquid.		***************************************			
Contaminants:	May contain hydrocarbons, BTEX	K, lead, trace metals (i.	e. Ba, Cr, V).			
Other Codes:	Alberta AER Code: FRFLDW F	rac Fluid (water based) - reportable			
		ac Fluid (hydrocarbon				
	FRFLDR Fr	ac Fluid (radioactive) -	<u>, </u>			
		Hazard Infor	mation			
Physical:	Flammable Liquids.	/5	1.			
Health:	Eye Irritation, Skin Irritation, Skir					
SDS:	For additional information see sp	Protective	05.			
WHMIS Label:		Equipment:		A		
Environmental:	Uncontrolled storage and dispos	al may cause groundw	ater and soil conta	mination.		
First Aid Measures:	Inhalation: Use proper respirato breathing has stopped. Keep at	• •	•	•	sure. Administer art	ificial respiration if
	Eye Contact: Flush eyes, including get medical attention.	ng under eyelids, with	a continuous flow o	f fresh water	for at least 15 min.	If irritation persists,
	Skin Contact: Remove severely o	contaminated clothing	and clean before re	eusing. Flush	with large amounts of	of fresh water and
	use soap if available. Ingestion: DO NOT induce vomit	ing. If individual is cor	nscious, give milk or	water to dilu	te stomach contents	s. DO NOT attempt
	to give anything by mouth to an	•	. •			•
	·	Management I	Methods			
Regulated Under	BC: Hazardous Waste		SK: Haza	rdous Waste		
Provincial Waste	AB: Dangerous Oilfield Waste		NWT : Ha	azardous Was	te	
Regulations (typical):						
Storage:	Store in sealed drums or tanks.					
Disposal:	Well injection (with approval). Re	ecover hydrocarbon p	rior to disposal.			
Reportable Releases:	Report any release of a substance	e into the environmer	nt that may cause, is	s causing, or h	as caused an advers	e effect. An adverse
(Check SDS re	effect is impairment of, or dama					
classification)	release reporting regulations.					
		Transporta	ation	:		Ŧ.
UN No.	Shipping Name			Class	Packing Group	Special Provisions
	If transported by vacuum truck,	use CAPP TDG Permit	see comments			
UN2924	below): MIXED OILFIELD PRODUCTION FI CORROSIVE N.O.S.	LUIDS, TREAT AS FLAM	IMABLE LIQUID,	3(8)	II	16
example: UN1268	If without permit: Check SDS for example: PETROLEUM DISTILLAT			example:	3 example: II	example: 92, 150
Small Container:	Based on example above: Class 3	B label, shipping name	and UN Number.	•		
Large Container:	Based on example above: Class 3					ent. UN Number
Documents:	AER Alberta Oilfield Waste Form Ticket (SK).					ovince) or Truck
Comments:	Check SDS of the frac fluid for cla MIXED OILFIELD PRODUCTION FI jurisdictions) or AB permit 2019-	LUIDS (classification no	ot required). Use Fe	ederal Equival	ency Certificate SH5	

Frac Fluids - 2020

Waste Profile Sheet: Glycol (Heavy Metals)

	General Information						
Original Use:	Engine and compressor coolant. Dehydration for natural gas proboilers).	ocessing. Heat		m (line heaters, utility			
Physical Description:	Liquid usually mixed 1:1 with water (depending on particular use).						
Contaminants:	Glycol may contain iron oxide (trace), iron sulphide, heavy meta	Glycol may contain iron oxide (trace), iron sulphide, heavy metals. May also contain corrosion inhibitors for antifreeze.					
Other Codes:	Alberta AER Code: GLYCHM (Glycol Solutions – w/lead or hea GLYC (Glycol Solutions – no heavy metals)	vy metals) – <i>re</i>	portable				
	Hazard Information						
Physical:	Not Applicable.						
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Card	inogenicity, M	utagenicity, Reproduct	ive Hazards.			
SDS:	For additional information see specific contaminant SDS (e.g. TE	G, DE, E.G., Ant	tifreeze)				
WHMIS Label:	Protective Equipment:						
Environmental:	Uncontrolled storage and disposal may cause groundwater and Fatal to wildlife.	soil contaminat	tion.				
	respiration if breathing has stopped. Keep at rest and call for im Eye Contact: Flush eyes, including under eyelids, with a continuous medical attention. Skin Contact: Flush with large amounts of water. Use soap if avoid thoroughly before reusing. Ingestion: DO NOT induce vomiting since it is important that no Keep at rest and get prompt medical attention.	ous flow of wat	er for at least 15 min. re severely contaminat	ed clothing and clean			
	Management Method	ds					
Classification By	Not regulated unless contaminated with heavy metals, inhibitor	s for antifreeze	, or iron sulphide.				
Provincial Waste	If regulated:						
Regulations (typical):		Hazardous Wa					
Storage:	AB: Dangerous Oilfield Waste Store material in steel drums at field facility away from sources of spill / leak containment.	/T: Hazardous \ of heat or spark		ventilated place. Provi			
Disposal:	Recycle. Disposal well (with approval).						
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that ma effect is impairment of, or damage to, the environment, human release reporting regulations.	-	_				
	Transportation						
UN No.	Shipping Name	Class	Packing Group	Special Provisions			
None	AB, SK & NWT: LEACHABLE WASTE, LIQUID, glycol containing lea	ad None	None				
None	BC: LEACHABLE TOXIC WASTE, glycol containing lead	None	None				
Small Container:	No TDG safety marks required.	<u> </u>					
Large Container:	No TDG safety marks required.	***************************************					
Documents:	AER Alberta Oilfield Waste Form or Recycle Docket (AB) or the for province) or Truck Ticket (SK).	ederal Moveme	ent Document / Manife	est (BC, NWT or out of			
Comments:	Pure glycol is not TDG regulated. However, through use, it may	become a dang	gerous good.				

Glycol (Heavy Metals) – 2020

Waste Profile Sheet: Hydrotest Fluids - Methanol

	General Information	า		
Original Use:	Methanol is used as a hydrotest fluid for pipelines and for dehyd	dration in gas pro	cessing. Also used fo	r hydrate removal.
Physical Description:	Low viscosity clear liquid, alcohol-like odour.			
Contaminants:	Methanol.			
Other Codes:	Alberta AER Code: METHNL - reportable			
	Hazard Information			
Physical:	Flammable Liquids.			
Health:	Acute Toxicity – Oral, Dermal, Inhalation. Eye Irritation, Skin Irri Mutagenicity, Reproductive Hazards.	tation, Skin/Respi	ratory Sensitization, (Carcinogenicity,
SDS:	For additional information see specific contaminant SDS (e.g.: N	⁄lethanol).		
WHMIS Label:	Protective Equipment:			
Environmental:	Potential groundwater contamination if spilled. Very toxic to ac	uatic life.		
First Aid Measures:	Inhalation: If inhaled, remove to fresh air. If not breathing, give medical aid. Eyes: In case of contact, immediately flush eyes with plenty of v Skin: In case of contact, immediately flush skin with plenty of w clothing and shoes. Get medical aid immediately. Wash clothin Ingestion: Potential for aspiration if swallowed. Get medical aid by medical personnel. Never give anything by mouth to an uncoforward.	vater for at least 1 ater for at least 1 g before reuse. immediately. Do	L5 minutes. Get medi 5 minutes while remo	cal aid. oving contaminated unless directed to do so
	Management Metho	ds		
Classification By	BC: Hazardous Waste SK: Haza	rdous Waste		
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste NWT: H	azardous Waste		
Storage:	Store in steel drums or tanks. Keep away from heat, sparks, and ventilated area away from incompatible substances. Flammable			
Disposal:	Reuse fluids for subsequent hydro-testing operations.			
	Send to waste contractor for recovery of product or incineration Disposal well (Class Ia or Ib. in AB).	n.		
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that ma effect is impairment of, or damage to, the environment, human release reporting regulations.	•	-	
	Transportation			
UN No.	Shipping Name	Class	Packing Group	Special Provisions
UN1230	Methanol with non-dangerous goods: METHANOL	3 (6.1)	II	43
UN1993	Methanol with other flammables: FLAMMABLE LIQUIDS N.O.S. ("insert the technical name of the contaminant").	3	I, II, or III	16, 150
Small Container:	Class 3 and 6.1 labels for Methanol or Class 3 label for Flammab if Special Provision 16) and UN Number.	le liquid, shipping	name (with hazardo	us ingredient in bracket
Large Container:	Class 3 placard if over 500 kg or in direct contact with a large medirect contact with a large means of containment or shipping > 4		ent. UN Number requ	ired with the placard if
Documents:	AER Alberta Oilfield Waste Form or Recycle Docket (AB) or the f province) or Truck Ticket (SK).	ederal Movemen	t Document / Manifes	st (BC, NWT or out of
Comments:		euerai iviovemen	t Document / Manifes	or out (

Hydrotest Fluids - Methanol – 2020

Waste Profile Sheet: Incinerator Ash (Heavy Metals)

		General Information	n		
Original Use:	Ash residue from solid waste Used for burning camp and o	incinerators which have received a lomestic garbage.	government appro	oval.	
Physical Description:	Black/Grey ash powder.				
Contaminants:	May contain heavy metals: a	arsenic, lead and other.			
Other Codes:	Alberta AER Code: INCAS	H - reportable		***************************************	
		Hazard Information	1		
Physical:	Not Applicable.				
Health:		Skin/Respiratory Sensitization, Car	cinogenicity, Mut	agenicity, Reproductive	Hazards.
SDS:	For additional information se	ee specific contaminant SDS (e.g. A	rsenic, Lead).		
WHMIS Label:	(1)	Protective Equipment:			
Environmental:		posal may cause groundwater and evels of lead and unidentified comp		n.	111111111111111111111111111111111111111
First Aid Measures:	respiration if breathing has s Keep at rest and call for imm Eye Contact: Flush eyes, incl medical attention. Skin Contact: Flush with larg thoroughly before reusing. Ingestion: If individual is con	• •	ous flow of water railable. Remove ith water. Give vi person. Keep war	for at least 15 min. If i severely contaminated ctim milk or water to d	rritation persists, get clothing and clean illute stomach contents
Classification By	BC: Hazardous Waste		K: Hazardous Wa	rto.	
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Wast		IWT : Hazardous V		
Storage:	Contain in steel drums or sin incinerator regularly.	nilar containers. Keep containers cl	osed and store in	a cool, well-ventilated	place. Clean
Disposal:	If regulated, send to an appr If not regulated, recycle (con	oved landfill. struction) or send to an approved l	andfill.		
Reportable Releases: (Check SDS re classification)		cance into the environment that manage to, the environment, human is.			
		Transportation			
UN No.	Shipping Name		Class	Packing Group	Special Provisions
None	AB, SK & NWT: LEACHABLE V	VASTE, SOLID, incinerator ash conta f the contaminant").	aining None	None	
None	• ·	E, incinerator ash containing ("inse	rt the None	None	
Small Container:	No TDG safety marks require	d.			
Large Container:	No TDG safety marks require	d.		***************************************	
Documents:	AER Alberta Oilfield Waste Fo Ticket (SK).	orm (AB) or the federal Movement	Document / Man	fest (BC, NWT or out o	f province) or Truck
Comments:	This waste may require spec	fic analysis to determine leachable	constituents.		

Incinerator Ash (Heavy Metals) – 2020

Waste Profile Sheet: Lubricating Oils (Used)

		General Informat	ion		
Original Use:	Lubrication of oilfield machiner	y, engines, compressors, and	vehicles.		
Physical Description:	Hydrocarbon liquids and grease).			
Contaminants:	May contain lead, trace metals additives.	(i.e. Ba, Cr, V), triphenyl pho	sphate, butylated t	riphenyl phosphate,	anti-rust and anti-oxidant
Other Codes:	Alberta AER Code: LUBOIL (L	ubricating Oil) - reportable			
		Hazard Informat	ion		
Physical:	Not Applicable.				
Health:	Eye Irritation, Skin Irritation, Ski	in/Respiratory Sensitization.			
SDS:	Lubricating Oil.				
WHMIS Label:	(1)	Protective Equipment:			
Environmental:	Potential groundwater and surf	ace water contamination (hy	drocarbons and mo	etals) if applied to roa	ads or other ground
First Aid Mc	surfaces.		h, romovo the office		auro Administes sutificiel
First Aid Measures:	Inhalation: Use proper respirate respiration if breathing has stop	, ,	,	•	sure. Administer artificial
	Eye Contact: Flush eyes, includi	ng under eyelids, with a cont	inuous flow of wat	er for at least 15 min	. If irritation persists, get
	medical attention. Skin Contact: Flush with large a	mounts of water like soon i	favailable Dome	ro coverely contemin	atad slothing and sloan
	thoroughly before reusing.	inounts of water. Ose soap i	i avaliable. Kelliov	e severely containing	ated clothing and clean
	Ingestion: DO NOT induce vomi	iting since it is important tha	t no amount of the	material should ente	er the lungs (aspiration).
	Keep at rest and get prompt me	edical attention.			
		Management Met	hods		
Classification By Provincial Waste	BC: Hazardous Waste (if contain refined hydrocarbons)	ning heavy metals and/or 23	1		containing heavy metals) ss containing heavy metals)
Regulations (typical):	AB: Non-Dangerous Oilfield Wa metals)	ste (unless containing heavy	:	zardous waste (umes	ss containing neavy metals,
Storage:	Store in sealed drums at field fa measures. Used lubricating oil				with spill containment
Disposal:	Return to supplier for recycling. Send to a lube oil recycling facil				
Reportable Releases: (Check SDS re classification)	Report any release of a substan effect is impairment of, or dam- release reporting regulations.		•	_	
		Transportation	1		
UN No.	Shipping Name		Class	Packing Group	Special Provisions
	AB: WASTE LUBE OIL.				
	BC, SK, NWT: WASTE OIL.				
None	If leachable contaminant (i.e. le lube oil containing ("insert the t	, , ,		None	
Small Container:	No TDG safety marks required.			<u> </u>	<u> </u>
Large Container:	No TDG safety marks required.				
Documents:	AER Alberta Oilfield Waste Forn province) or Truck Ticket (SK). If	, , ,		•	, ,
	province, or reach money (only)				

Lubricating Oils (Used) – 2020

Waste Profile Sheet: PCBs (Liquids / Solids)

		General Inforn	nation					
Original Use:	Electrical non-conducting fluic capacitors and older electrica			fluids to prev	ent overheating in tr	ansformers,		
Physical Description:	Metal equipment or other solids contaminated with PCB liquids. PCB liquids are clear to yellow, are not soluble in water and have a bitter smell. May be cloudy after used.							
Contaminants:	Polychlorinated biphenyls. Fl	uorescent ballast contains	25 grams PCB. (Capacitors ar	nd transformers cont	ain larger volumes.		
Other Codes:	PCBLIQ PCBSLF PCBSLI	L (fluorescent light ballasts) (askarel liquids) - reportab (contaminated solids <50 p (contaminated solids 250 & (contaminated solids 2100	le ppm) - reportab . <1000 ppm) - i	reportable				
		Hazard Inform	ation					
Physical:	Not Applicable.							
Health:	Eye Irritation, Skin Irritation, S absorbed through the skin.	Skin/Respiratory Sensitizati	on, Carcinogeni	city, Mutage	nicity, Reproductive I	Hazards. Can be		
SDS:	PCB							
WHMIS Label:	③ (!)	Protective Equipment:						
Environmental:	Non-biodegradable and can boor incineration can produce d	• • • • • • • • • • • • • • • • • • • •	f life forms thro	ough the foo	d chain and eventual	ly to humans. Heating		
First Aid Measures:	Inhalation: Use proper respir respiration if breathing has st Eye Contact: Flush eyes, inclumedical attention. Skin Contact: Flush with large thoroughly before reusing. Ingestion: DO NOT induce volkeep at rest and get prompt in	copped. Keep at rest and carding under eyelids, with a cardinary amounts of water. Use so	Il for immediate continuous flow ap if available.	e medical att of water for Remove sevo	ention. at least 15 min. If in	ritation persists, get		
		Management M	ethods					
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste	,	SK: Hazardou NWT: Hazard	-	Sppm concentration)			
Storage:	Refer to federal storage guide	elines.						
Disposal:	If PCB concentration is > 50 p options are available.	pm send to an approved de	struction facilit	y for both liq	uids and solids. If < 5	0 ppm alternate		
Reportable Releases: (Check SDS re classification)	Report any release of a substa effect is impairment of, or da release reporting regulations.	mage to, the environment,		•				
		Transportat	ion					
UN No.	Shipping Name			Class	Packing Group	Special Provisions		
UN2315	POLYCHLORINATED BIPHENYI	LS, LIQUID, regulated only v	hen the	9	II	.i		
ı	concentration is more than 5	0 ppm, by mass						
UN3432	POLYCHLORINATED BIPHENYI concentration is more than 50	LS, SOLID, regulated only w	nen the	9	II			
UN3432 N/A	POLYCHLORINATED BIPHENY	LS, SOLID, regulated only w 0 ppm, by mass	nen the	9 N/A	II N/A			
	POLYCHLORINATED BIPHENYI concentration is more than 50	LS, SOLID, regulated only w 0 ppm, by mass ning PCB <50 ppm)	nen the					
N/A	POLYCHLORINATED BIPHENYI concentration is more than 50 Non-Hazardous Solid (Contai	LS, SOLID, regulated only w 0 ppm, by mass ning PCB <50 ppm) ining PCB <50 ppm)	nen the	N/A	N/A			
N/A N/A	POLYCHLORINATED BIPHENYI concentration is more than 50 Non-Hazardous Solid (Contai Non-Hazardous Liquid (Conta	LS, SOLID, regulated only w 0 ppm, by mass ning PCB <50 ppm) ining PCB <50 ppm) and UN Number. or in direct contact with a I	arge means of c	N/A N/A	N/A N/A	d with the placard if in		
N/A N/A Small Container:	POLYCHLORINATED BIPHENYI concentration is more than 50 Non-Hazardous Solid (Contai Non-Hazardous Liquid (Conta Class 9 label, shipping name a Class 9 placard if over 500 kg	LS, SOLID, regulated only w 0 ppm, by mass ning PCB <50 ppm) ining PCB <50 ppm) and UN Number. or in direct contact with a leans of containment or ship	arge means of c ping >4000 kg.	N/A N/A ontainment.	N/A N/A UN Number require			

PCBs (Liquids/Solids) – 2020

Waste Profile Sheet: Pigging Wax

		General Inform	nation				
Original Use:	Crude oil production, pipeline have pig receiving facilities.	transmission, and heavy	oil produc	ction. Ge	nerated fro	om pipeline cleaning	operations that
Physical Description:	Liquid or wax.						
Contaminants:	Hydrocarbon, paraffin, demul	sifiers. May contain NOR	Ms.				
Other Codes:	Alberta AER Code: PIGWST	「(Pigging Waste) - report	able		***************************************	***************************************	
		Hazard Inforn	nation				
Physical: Health:	Flammable Liquids, Combustil Skin Irritation, Skin/Respirator	ry Sensitization.					
SDS:	For additional information, se	e hydrocarbon related S	DSs.				
WHMIS Label:	(8)	Protective Equipment:					
Environmental:	Uncontrolled storage and disp	oosal may cause groundy	vater and s	oil contar	mination.		
First Aid Measures:	respiration if breathing has sto Eye Contact: Flush eyes, inclu- medical attention. Skin Contact: Flush with large thoroughly before reusing. Ingestion: DO NOT induce vor Keep at rest and get prompt n	ding under eyelids, with amounts of water. Use miting since it is importal	a continuo soap if ava	us flow o	f water for emove seve	at least 15 min. If i	clothing and clean
		Management N	1ethods				
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste. AB: Dangerous Oilfield Waste	(assumed).			dous Wast ardous W		
Storage:	Store in sealed drums at field	facility. Keep away from	ignition a	nd heat so	ources.		
Disposal:	Send to a waste contractor (O	ilfield Waste Processing	Facility).				
Reportable Releases: (Check SDS re classification)	Report any release of a substa adverse effect is impairment or regional release reporting reg	of, or damage to, the env			•		
		Transporta	tion				
					Class	Packing Group	Special Provisions
UN No.	Shipping Name				Ciass		÷
UN No. UN3175 UN1993	If no free liquids at time of pa SOLIDS CONTAINING FLAMMA If any free liquids: FLAMMABLE LIQUID N.O.S., (p	ABLE LIQUIDS N.O.S. (cru Digging waste contamina		,	4.1		16, 56 16, 150
UN3175 UN1993	If no free liquids at time of particles of solids containing Flamma If any free liquids: FLAMMABLE LIQUID N.O.S., (particle) the technical name of the flam	ABLE LIQUIDS N.O.S. (cru Digging waste contamina Contaminant")).	ted with ("	insert	4.1	 1, , or	16, 150
UN3175	If no free liquids at time of particles of solids containing flamme if any free liquids: FLAMMABLE LIQUID N.O.S., (particle) the technical name of the flam Class 3 label or 4.1 label, shipping the solid s	ABLE LIQUIDS N.O.S. (cru Digging waste contamina Inmable contaminant")). Ding name with technica	ted with <i>("</i>	insert contamina	4.1 3 nt in brack	II I, II, or III sets and UN Numbe	16, 150
UN3175 UN1993	If no free liquids at time of particles of solids containing Flamma If any free liquids: FLAMMABLE LIQUID N.O.S., (particle) the technical name of the flam	ABLE LIQUIDS N.O.S. (cru pigging waste contamina nmable contaminant")). ping name with technica if over 500 kg or in direc intact with a large means	name of contact w	insert contamina vith a larg	4.1 3 Int in bracker means of shipping >4	II I, II, or III exets and UN Numbe f containment. UN I 4000 kg.	16, 150 r. Number required

Pigging Wax – 2020

Waste Profile Sheet: Sludge - Gas Sweetening (Liquid)

	Gener	al Information			
Original Use:	Sludges are generated in acid gas removal products.	rocess and contain amine degrad	ation products	and accumulated	d corrosion
Physical Description:	Liquid sludge.				***************************************
Contaminants:	Dependent on operation: May contain DEA,	amine degradation products, tra	ce metals, iror	n sulphide.	
Other Codes:	Alberta AER Code: SLGSWT (Sludge - gas	sweetening systems) - reportable	•		
	Hazar	d Information			
Physical:	Not Applicable.				
Health:	Eye Irritation, Skin Irritation, Skin/Respirator	y Sensitization, Carcinogenicity, N	Mutagenicity, I	Reproductive Haz	ards.
SDS:	For additional information see specific conta	nminant SDS (e.g. Diethanolamine	e).		
WHMIS Label:	Protective Equipment			A	
Environmental:	Uncontrolled storage and disposal may cause pollution if burned illegally.	e groundwater and soil contamin	ation (from an	nines and metals)	. Potential air
First Aid Measures:	Inhalation: Use proper respiratory protection respiration if breathing has stopped. Keep a Eye Contact: Flush eyes with a continuous flushing Contact: Flush with large amounts of freclean thoroughly before reusing. Ingestion: DO NOT induce vomiting. If indiviting give anything to an unconscious person.	t rest. Call for prompt medical at ow of fresh water until irritation s esh water. Use soap if available. idual is conscious, give milk or wa	tention. subsides but a Remove seven	t least 15 minutes rely contaminated	s. I clothing and
		ement Methods			
Classification By	BC: Hazardous Waste	SK: Hazardous V	Vaste		
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste	NWT : Hazardou:	s Waste		
Storage:	Store in tanks/barrels at field facility. Segreg	gate from other waste sludges.			
Disposal:	Disposal based on specific characteristics. Op treatment.	ptions include: Physical/chemical	treatment, lar	ndfill, biodegrada	tion or thermal
Reportable Releases:	Report any release of a substance into the e		-		
(Check SDS re	effect is impairment of, or damage to, the er	nvironment, human health or safe	ety, or propert	y. Refer to federa	l and regional
classification)	release reporting regulations.	nonortation			
UN No.	•	Insportation	Class	Darling Cours	Consist Dunisia
UN NO.	Shipping Name		Class	Packing Group	Special Provision
	Check SDS. To determine if a dangerous goo	d.	Check SDS		
None	If not a dangerous good: AB, SK & NWT: LEACHABLE WASTE, LIQUID, §		None	None	
None	("insert the technical name of the contamina BC: LEACHABLE TOXIC WASTE, gas sweetenin technical name of the contaminant").	•	None	None	
Small Container:	If a dangerous good, label, shipping name ar	nd UN Number based on class.		<u> </u>	
Large Container:	If a dangerous good, placard based on class; containment. UN Number required with the kg.	placard is required and over 500	-		•
Documents:	AER Alberta Oilfield Waste Form (AB) or the Ticket (SK).	federal Movement Document / N	Лanifest (ВС, N	IWT or out of pro	vince) or Truck
	Ticket (3K).				

Sludge - Gas Sweetening (Liquid) – 2020

Waste Profile Sheet: Sludge - Gas Sweetening (Solid)

	General Information					
Original Use:	Sludges are generated in acid gas removal process and contain amine degradation products.	products and	l accumulated cori	rosion		
Physical Description:	Solid sludge (semi-solid).					
Contaminants:	Dependent on operation: May contain DEA, amine degradation products, trace m	etals, iron sul	phide.			
Other Codes:	Alberta AER Code: SLGSWT (Sludge –gas sweetening systems) - reportable					
	Hazard Information					
Physical:	Flammable Solids.					
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Carcinogenicity, Muta	genicity, Repr	oductive Hazards.			
SDS:	For additional information see specific contaminant SDS (e.g. Diethanolamine).					
WHMIS Label:	Protective Equipment:					
Environmental: First Aid Measures:	Uncontrolled storage and disposal may cause groundwater and soil contamination pollution if burned illegally. Inhalation: Use proper respiratory protection to immediately remove the affected respiration if breathing has stopped. Keep at rest. Call for prompt medical attent Eye Contact: Flush eyes with a continuous flow of fresh water until irritation subs Skin Contact: Flush with large amounts of fresh water. Use soap if available. Ren clean thoroughly before reusing. Ingestion: DO NOT induce vomiting. If individual is conscious, give milk or water to give anything to an unconscious person. Keep warm and quiet and seek medic	I victim from e ion. des but at leadove severely o	exposure. Adminis st 15 minutes. contaminated clot	ster artificial		
	Management Methods					
Classification By	BC: Hazardous Waste SK: Hazardous Waste					
Provincial Waste	AB: Dangerous Oilfield Waste NWT: Hazardous Waste					
Regulations (typical):						
Storage:	Store in tanks/barrels at field facility. Segregate from other waste sludges.					
Disposal: Reportable Releases: (Check SDS re classification)	Disposal based on specific characteristics. Options include: physical/chemical treatment, landfill, biodegradation and therms Send to an approved facility. Report any release of a substance into the environment that may cause, is causing effect is impairment of, or damage to, the environment, human health or safety, release reporting regulations.	g, or has cause				
	Transportation					
UN No.	Shipping Name	Class	Packing Group	Special Provisions		
	If DEA, check SDS to determine if a dangerous good. See "Comments" below.	Check SDS				
UN3190	If self-heating: SELF HEATING, SOLID, INORGANIC, N.O.S. ("insert the technical name of the contaminant"). If not a dangerous good:	4.2	II or III	16		
None	AB, SK & NWT: LEACHABLE WASTE, SOLID, gas sweetening sludge containing ("insert the technical name of the contaminant").	None	None			
None	BC: LEACHABLE TOXIC WASTE, gas sweetening sludge containing ("insert the technical name of the contaminant").	None	None			
Small Container:	If self-heating: Class 4.2 label, shipping name (with technical name in brackets) an	d UN Number	. None if not self-	heating.		
Large Container:	If self-heating: Class 4.2 placard if over 500 kg or in direct contact with a large me with the placard if in direct contact with a large means of containment or shipping			•		
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Mani Ticket (SK).	fest (BC, NWT	or out of province	e) or Truck		
Comments:	DEA itself is not Classified as a TDG; however, some products commonly referred make this a leachable waste or self-heating.	to as DEA are	regulated. Proces	ses may also		

Sludge - Gas Sweetening (Solid) – 2020

Waste Profile Sheet: Sludge - Gas Sweetening (Iron Sponge)

		General Info	rmation			
Original Use:	Gas sweetening operations that	use iron sponge.				
Physical Description:	Solid sludge (semi-solid).	***************************************	***************************************			
Contaminants:	May contain hydrocarbons, asph	naltenes, corrosion i	inhibitors, iron oxides,	iron sulph	ides.	
Other Codes:	Alberta AER Code: SLGSWT (Sludge – gas sweete	ening) - <i>reportable</i>			
		Hazard Info	rmation			
Physical:	Flammable Solid.					
Health:	Eye Irritation, Skin Irritation, Skir	n/Respiratory Sensi	tization			
SDS:	For additional information see s	pecific contaminant	SDS (e.g. Crude oil, ir	on sulphide	9)	
WHMIS Label:	(1)	Protective Equipment:				
Environmental:	Waste characterization required and soil contamination.	l to identify pollutio	n concerns. Uncontrol	led storage	e and disposal may o	ause groundwater
First Aid Measures:	respiration if breathing has stop Eye Contact: Flush eyes, includir medical attention. Skin Contact: Flush with large ar thoroughly before reusing. Ingestion: DO NOT induce vomit Keep at rest and get prompt me	ng under eyelids, wi mounts of water. U	th a continuous flow c	of water for emove sev	r at least 15 min. If i	clothing and clean
		Management	Methods			
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste		SK: Hazardous NWT: Hazardou			
Storage:	Store in steel drums.					
Disposal:	Disposal based on specific chara Options include: physical/chemic		fill, biodegradation and	d thermal t	reatment.	
Reportable Releases: (Check SDS re classification)	Report any release of a substance adverse effect is impairment of, regional release reporting regula	or damage to, the	•	•		
		Transport	tation			
UN No.	Shipping Name			Class	Packing Group	Special Provisions
UN3190	If self-heating: SELF-HEATING SOLID, INORGANI the contaminant"). If not self-heating:	IC, N.O.S. ("insert th	ne technical name of	4.2	II or III	16
UN1376	IRON SPONGE, SPENT			4.2	Ш	
Small Container:	Class 4.2 label, shipping name (v	with technical name	in brackets if Special I	Provision 1	6) and UN Number.	
Large Container:	Class 4.2 placard if more than 50 placard if in direct contact with a					
Documents:	AER Alberta Oilfield Waste Form Ticket (SK).	ı (AB) or the federal	Movement Documen	t / Manifes	it (BC, NWT or out o	province) or Truck

Sludge - Gas Sweetening (Iron Sponge) – 2020

Waste Profile Sheet: Sludge - Glycol (Liquid)

Original Use: Physical Description:	Gas processing plants. Waste sludges associated with gas				
Physical Description:	· ·	drying and glycol sy	stems.		
	Liquids sludge.				
Contaminants:	May contain glycols, boron compounds.				
Contaminants.					
Other Codes:	Alberta AER Code: SLGGLY (Sludge – glycol/gas drying s	systems) - <i>reportable</i>	?		
	Hazard Informa	ition			
Physical:	Combustible Liquids				
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization	n, Carcinogenicity.			********************************
SDS:	For additional information see specific contaminant SDS.				
WHMIS Label:	Protective Equipment:				
Environmental:	Additional characterization required to identify pollution of that use boron compounds for stabilization.	concerns. Possible so	oil and ve	getation contamina	ition from glycols
First Aid Measures:	Inhalation: Generally not considered to be a hazard at nor irritate the nose, throat and lungs; may inhibit cholinester Eye Contact: Not expected to be a hazard. Skin Contact: Not expected to be a hazard. Ingestion: May irritate mouth, throat or stomach.		•	, .	•
	Management Me	ethods			
Classification By	BC: Hazardous Waste	SK : Hazardous Wast	e		
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste	NWT: Hazardous W	aste (by c	lefinition)	
Storage:	Store in sealed containers. Keep in well-ventilated areas.				
Disposal:	Send to a waste contractor for potential treatment and dis	sposal.			
	Send to a hazardous waste disposal facility for high tempe				
	Inject via salt water or waste disposal well (Alberta: glycol	******************************			***************************************
Reportable Releases: (Check SDS re	Report any release of a substance into the environment the effect is impairment of, or damage to, the environment, h	nat may cause, is cau	sing, or h	as caused an adver	se effect. An advers
classification)	release reporting regulations.	aman nearth or sare	ty, or pro	perty. Neier to read	rarana regionar
	Transportatio	on			
UN No.	Shipping Name		Class	Packing Group	Special Provisions
	If flammable:		_		
UN1993	FLAMMABLE LIQUID N.O.S. ("insert the technical name of	the contaminant").	3	I, II, or III	16, 150
None	If not flammable and high leachable BTEX: AB, SK & NWT: LEACHABLE WASTE, LIQUID, drying system ("insert the technical name of the contaminant").	sludge containing	None	None	
None	BC: LEACHABLE TOXIC WASTE, drying system sludge conta technical name of the contaminant").	ining ("insert the	None	None	
Small Container:	Class 3 label for Flammable liquid, shipping name (with ha Number.	zardous ingredient i	n bracket	s if Special Provisio	n 16) and UN
Large Container:	Class 3 placard if over 500 kg or in direct contact with a lar direct contact with a large means of containment or shipp	ge means of contair	ment. U	N Number required	with the placard if
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movel Ticket (SK).		anifest (E	BC, NWT or out of p	rovince) or Truck
Comments:	E.G., DEG and TEG sludges are not TDG regulated.				

Sludge - Glycol (Liquid) – 2020

Waste Profile Sheet: Sludge - Glycol (Solid)

		General Information				
Original Use:	Gas processing plants. Waste sl	udges associated with gas drying	and glycol sy	ystems.		
Physical Description:	Liquid sludge (semi-solid).					
Contaminants:	May contain glycols, boron com	pounds.				
Other Codes:	Alberta AER Code: SLGGLY (S	iludge – glycol/gas drying systems	s) - reportabl	le		
	`	Hazard Information	, ,			
Physical:	Flammable Solids.	mazara imormacion				
Health:		n/Respiratory Sensitization, Carci	inogenicity. N	Mutage	nicity. Reproductive	Hazards.
SDS:	For additional information see s					
WHMIS Label:		Protective Equipment:				
Environmental:	Additional characterization requ	iired to identify pollution concern tabilization.	ns. Possible s	soil and	vegetation contam	ination from glycols
First Aid Measures:	:	e a hazard.				•
		Management Methods				
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste		SK: Hazardou NWT: Hazard			
Storage:	- I	ls to allow for the drainage of any ;; store in steel drums). Keep in w				col filters used in
Disposal:	Disposal based on specific chara Options include: oilfield waste p treatment.	cteristics. rocessing facility, physical/chemi	ical treatmer	nt, landf	fill, biodegradation a	and thermal
Reportable Releases: (Check SDS re classification		ce into the environment that may or damage to, the environment, ations.		_		
		Transportation				
UN No.	Shipping Name		c	Class	Packing Group	Special Provision
UN3190	If self-heating: SELF-HEATING SOLID, INORGAN the contaminant").	IC, N.O.S. ("insert the technical na		1.2	II or III	16
UN3175	name of the contaminant").	LE LIQUID N.O.S. ("insert the tech	nnical 4	1.1	Ш	16, 56
None None		and high leachable BTEX: TE, SOLID, sludge containing glyc ludge containing glycol and lead		None None	None None	
Small Container:	Class 4.1 or 4.2 label, shipping n	ame and UN Number. No TDG lab	bel if not TD0	G regula	ated.	
Large Container:		g or in direct contact with a large a large means of containment or				
Documents:	AER Alberta Oilfield Waste Form Ticket (SK).	n (AB) or the federal Movement D	ocument / N	√lanifes [°]	t (BC, NWT or out o	f province) or Truck
Comments:						

Sludge - Glycol (Solid) – 2020

Waste Profile Sheet: Sludge – Hydrocarbon (Liquid)

		General Info	rmation			
Original Use:	Oil and heavy oil production o	perations. Waste liquid	I sludge from crude	oil separato	rs.	
Physical Description:	Black viscous liquid sludge (se	mi-solid). Strong hydro	carbon odour.		***************************************	
Contaminants:	May contain hydrocarbons, as	sphaltenes, corrosion inl	nibitors, iron oxides	, iron sulphi	des.	
Other Codes:	Alberta AER Code: SLGEMI	L (Sludge – emulsion) - r	enortable	-		
other codesi		(Sludge – flare pit) - repo	•			
	SLGHYD	(Sludge – hydrocarbon) - reportable			
		Hazard Info	rmation			
Physical:	Combustible Liquid					
Health:	Eye Irritation, Skin Irritation, S					
SDS:	For additional information see	•••••••••	DS (e.g. Crude oil, i	ron sulphide)	
WHMIS Label:	(4)	Protective Equipment:				
Environmental:	Waste characterization requir	ed to identify pollution	concerns. Uncontro	lled storage	and disposal may ca	ause groundwater and
First Aid Measures:	soil contamination. Inhalation: Use proper respira	atory protection to imm	adiately remove the	a affected vis	ctim from exposure	Administer artificial
FIRST AIG IVIEASURES:	respiration if breathing has st	* *	•		•	Auminister artificial
	Eye Contact: Flush eyes, inclu	ding under eyelids, with	a continuous flow	of water for	at least 15 min. If ir	ritation persists, get
	medical attention. Skin Contact: Flush with large	amounts of water. Use	soan if available. I	Remove seve	erely contaminated o	lothing and clean
	thoroughly before reusing.	umounts of Materia	. Joap II aranabici I			ore criming arrial erear.
	Ingestion: DO NOT induce vor Keep at rest and get prompt n		nt that no amount	of the mater	ial should enter the	lungs (aspiration).
	Reep at rest and get prompt i	Management	Mathada			
Classification Dv	PC: Hazardaus Wasta if > 20/	•	1	lous Masta		
Classification By Provincial Waste	BC: Hazardous Waste if > 3% I AB: Dangerous Oilfield Waste	· · · · · · · · · · · · · · · · · · ·	:	lous Waste ardous Wast	e	
Regulations (typical):			<u> </u>			
Storage:	Store in tanks or barrels. Store		sludges.			
Disposal:	Send to a licensed reclaimer for		•	0.10. 1111		
	Send to a waste contractor fo Spread and treat waste on-sit	•	id disposal (Cavern	or Oilfield W	aste Processing Fac	ility).
Reportable Releases:	Report any release of a substa		nt that may cause,	is causing, o	r has caused an adv	erse effect. An adverse
(Check SDS re	effect is impairment of, or dar	_	nt, human health o	r safety, or p	roperty. Refer to fe	deral and regional
classification)	release reporting regulations.					
	:	Transport	ation	:	*	
UN No.	Shipping Name			Class	Packing Group	Special Provisions
	If transported by vacuum truc	k, use CAPP TDG Permit	(see comments			
UN2924	below): MIXED OILFIELD PRODUCTION	N FLUIDS, TREAT AS FLAN	MMABLE LIQUID,	3(8)	II	16
	CORROSIVE N.O.S.					
UN1993	If without permit: FLAMMABLE LIQUID, N.O.S. (I	nvdrocarbon sludge)		3	l, ll, or lll	16, 150
Small Container:	Class 3 label, shipping name a					
Large Container:	Class 3 placard if more than 5 placard if in direct contact wit	J	J		ment. UN Number i	equired with the
Documents:	AER Alberta Oilfield Waste Fo Ticket (SK).	rm (AB) or the federal N	lovement Documer	nt / Manifest	(BC, NWT or out of	province) or Truck
Comments:	This waste may have to be test required). Use Federal Equiva	•	•			•

Sludge – Hydrocarbon (Liquid) – 2020

Waste Profile Sheet: Sludge - Hydrocarbon (Solid)

Original Use: Physical Description:	Oil and heavy oil production operations. Waste sludge from both				
Physical Description:	knockouts, etc.		•		slop tanks, flare
	Black viscous sludge (semi-solid). Strong hydrocarbon odour.				
Contaminants:	May contain hydrocarbons, asphaltenes, corrosion inhibitors, iro	n oxides, iron sı	ılphides.		
Other Codes:	Alberta AER Code: SLGEML (Sludge – emulsion) - reportable SLGPIT (Sludge – flare pit) - reportable SLGHYD (Sludge – hydrocarbon) - reportab				
	Hazard Information				
Physical:	Flammable Solid.				
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization				
SDS:	For additional information see specific contaminant SDS (e.g. Cru	ıde oil, iron sulp	hide)		
WHMIS Label:	Protective Equipment:				
Environmental:	Waste characterization required to identify pollution concerns. Usoil contamination.	Incontrolled sto	rage and d	isposal may cause	groundwater and
	respiration if breathing has stopped. Keep at rest and call for im Eye Contact: Flush eyes, including under eyelids, with a continuous medical attention. Skin Contact: Flush with large amounts of water. Use soap if avaithoroughly before reusing. Ingestion: DO NOT induce vomiting since it is important that no a Keep at rest and get prompt medical attention.	ous flow of water	r for at leas	st 15 min. If irritat	ning and clean
	Management Method	ds			
Classification By	· · · · · · · · · · · · · · · · · · ·	SK: Hazardous W	/aste		
Provincial Waste Regulations (typical):	AB: Dangerous Oilfield Waste	NWT : Hazardous	Waste		
Storage:	Store in tanks or barrels. Store separately from other sludges.				
Disposal:	Disposal based on specific characteristics. Options include: oilfield waste processing facility, physical/chem	ical treatment, l	andfill, bio	degradation and t	hermal treatment.
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that mareffect is impairment of, or damage to, the environment, human release reporting regulations.	, ,	O,		
	Transportation				
UN No.	Shipping Name		Class	Packing Group	Special Provisions
UN3175	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. ("insert the tec the contaminant").	chnical name of	4.1	II	16, 56
Small Container:	Class 4.1 label, shipping name (with technical name of contamina	ant in brackets if	f Special Pr	ovision 16) and U	N Number.
Large Container: Documents:	Class 4.1 placard if more than 500 kg or in direct contact with lar placard if in direct contact with a large means of containment or AER Alberta Oilfield Waste Form (AB) or the federal Movement I	shipping >4000	kg.		
Comments:	Ticket (SK). This waste may have to be tested to determine if it meets any of	the TDG classifi	cation crite	eria and, if require	d. a leachate test

Sludge - Hydrocarbon (Solid) - 2020

Waste Profile Sheet: Sludge - Process

		General Informat	ion					
Original Use:	Wastewater digester, filter back	kwash pond, process pond a	and utility boi	ler sludge.				
Physical Description:	Liquid sludge (semi-solid).							
Contaminants:	Water, solids, hydrocarbons, PAH's, aluminum, sulphides, chlorides and trace metals.							
Other Codes:	Alberta AER Code: SLGPRO (Sludge – process) - reportal	ole					
	:	Hazard Informati	on					
Physical:	Not Applicable.							
Health:	Eye Irritation, Skin Irritation, Ski	n/Respiratory Sensitization	, Carcinogenio	city, Mutagenicity, Reproducti	ve Hazards.			
SDS:	For additional information see s							
WHMIS Label:	Protective Equipment:							
Environmental:	Potential groundwater contamination with leaching of hydrocarbons, metals, and PAH's if improperly stored. Metals concern if waste stream is combined with low pH water. Further analysis may be required to determine pollution concerns from individual sludges.							
First Aid Measures:	Inhalation: Use proper respirator respiration if breathing has stop Eye Contact: Flush eyes, including medical attention. Skin Contact: Flush with large atthoroughly before reusing. Ingestion: DO NOT induce vomit Keep at rest and get prompt medical respiration.	oped. Keep at rest and call to ng under eyelids, with a cor mounts of water. Use soap ting since it is important the	or immediate of intinuous flow if available.	e medical attention. of water for at least 15 min. Remove severely contaminate	f irritation persists, get			
		Management Meth	nods					
Classification By Provincial Waste Regulations (typical):	BC: Testing Required AB: Testing Required NWT: Testing Required							
Storage:	Store in tanks or barrels. Segreg	gate from other sludges.						
Disposal:		Disposal based on specific characteristics. Options include: physical/chemical treatment, landfill, biodegradation and thermal treatment.						
Reportable Releases: (Check SDS re classification)	Report any release of a substan adverse effect is impairment of, regional release reporting regul	or damage to, the environ	-	_				
		Transportation						
UN No.	Shipping Name See "Comments" below.		Class	Packing Group	Special Provisions			
Small Container:	If TDG regulated: appropriate cl 16) and UN Number	ass label, shipping name (w	ith technical :	name of contaminant in brack	ets if Special Provision			
Large Container:		If TDG regulated: appropriate TDG placard if more than 500 kg or in direct contact with large means of containment. UN Number required with the placard if in direct contact with a large means of containment or shipping >4000 kg.						
Documents:	If Non-Dangerous Oilfield Waste / Non-Hazardous Waste use a Truck Ticket. If Dangerous Oilfield Waste / Hazardous Waste use the AER Alberta Oilfield Waste Form, federal Movement Document (BC, NWT) or TDG document (SK). Use the federal Movement Document when transporting across provincial borders.							
Comments:	This waste has to be tested to determine if it meets the criteria as a dangerous good. Potential classes include 3, 4.1, and 4.2. CAPP Permit required if shipping as MIXED OILFIELD PRODUCTION FLUIDS (classification not required). Use Federal Equivalency Certificate SH5561 (Ren. 11) (all jurisdictions) or AB permit 2019-2057 (only in Alberta) and ensure all terms and conditions are met.							

Sludge - Process – 2020

Waste Profile Sheet: Solvent Residues

		General Ir	nformation					
Original Use:	Well servicing, drilling / completion operations.							
Physical Description:	Liquid, Semi-solid sludge.							
	Liquid, Serii-Solid staage.							
Contaminants:	Contains solvent. May contain lead.							
Other Codes:	Alberta AER Code: SOLALP (non-halogenated aliphatic) - reportable SOLARO (non-halogenated aromatic)- reportable							
		Hazard In	formation					
Physical:	Combustible Liquid.	Combustible Liquid.						
Health:	Eye Irritation, Skin Irritation, Skir	n/Respiratory Sen	sitization.					
SDS:	See solvent and specific contami	nant SDS.						
WHMIS Label:	&	Protective Equipment:	THE STATE OF THE S					
Environmental:	Uncontrolled storage and dispos	al may cause grou	undwater and so	il contamination.				
First Aid Measures:	breathing has stopped. Keep at	Inhalation: Use proper respiratory protection to immediately remove victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest and seek immediate medical attention. Eye Contact: Flush eyes, including under eyelids, with a continuous flow of fresh water for at least 15 min. If irritation persists,						
	Skin Contact: Remove severely of use soap if available. Ingestion: DO NOT induce vomit to give anything by mouth to an	ing. If individual	s conscious, give	e milk or water to dilut	e stomach conte	nts. DO NOT attempt		
		Manageme	nt Methods	;				
Regulated Under	BC: Hazardous Waste		SK:	Hazardous Waste				
Provincial Waste	AB: Dangerous Oilfield Waste		NW	T: Hazardous Waste				
Regulations (typical):	Store in social containers. Koon	in wall wantilate	doroos Drovido	coill and lack contains	~~~+			
Storage:	Store in sealed containers. Keep	in wen-venthater	a areas. Provide	spiii ано теак соптанні	nent.			
Disposal:	Recycle. Thermal treatment. Send to an approved oilfield was	Recycle. Thermal treatment. Send to an approved oilfield waste receiver (Oilfield Waste Processing Facility).						
Reportable Releases: (Check SDS re classification)	,	Report any release of a substance into the environment that may cause, is causing, or has caused an adverse effect. An adverse effect is impairment of, or damage to, the environment, human health or safety, or property. Refer to federal and regional release reporting regulations.						
		Transp	ortation					
UN No.	Shipping Name		Class	Packing Group	Special Pr	ovisions		
	See "Comments" below.							
Small Container:		If TDG regulated: appropriate class label, shipping name (with technical name of contaminant in brackets if Special Provision						
Large Container:	Number required with the placa	If TDG regulated: appropriate TDG placard if more than 500 kg or in direct contact with large means of containment. UN Number required with the placard if in direct contact with a large means of containment or shipping >4000 kg.						
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Comments:	Solvents can be classified as Flammable Liquids (Class 3), Toxic Substances (Class 6), Leachable (BTEX), or Corrosives (Class 8). Refer to supplier for classification information.							

Solvent Residues – 2020

Waste Profile Sheet: Water - Process (Trace Organics)

		General Infor	mation					
Original Use:	Process wastewaters are a comb waters, drainage from process b central process wastewater stor	ouildings, and may inc	lude runoff water.	-		_		
Physical Description:	Liquid.							
Contaminants:	May contain iron oxides, calcium carbonate, BTEX, hydrocarbons, oil and grease, trace metals (lead, chromium, thallium)							
Other Codes:	Alberta AER Code: PWTROR	(Water – process witl	n organic chemicals	s) - reportab	le			
	:	Hazard Infor	mation					
Physical:	Combustible Liquid.							
Health:	Eye Irritation, Skin Irritation, Ski	n/Respiratory Sensiti	zation.		***************************************			
SDS:	For additional information see s	pecific contaminant S	DS.					
WHMIS Label:		Protective Equipment:						
Environmental:	Waste may contain volatiles and components which will generate toxic fumes during decomposition of the waste. May also contain trace metals and sulfides. Uncontrolled storage and disposal may cause groundwater and soil contamination (metals, hydrocarbons).							
First Aid Measures:	Inhalation: Use proper respirator respiration if breathing has stop Eye Contact: Flush eyes, includir medical attention. Skin Contact: Flush with large at thoroughly before reusing. Ingestion: DO NOT induce vomit Keep at rest and get prompt me	ped. Keep at rest and ong under eyelids, with mounts of water. Use ting since it is importa	d call for immediate a a continuous flow e soap if available.	e medical at of water fo Remove sev	tention. r at least 15 min. If i verely contaminated	rritation persists, get		
		Management l	Methods					
Classification By Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste if leachables SK: Hazardous Waste NWT: Hazardous Waste							
Storage:	Store on-site in a tank or lined wastewater retention pond.							
Disposal:	Well injection.							
Reportable Releases: (Check SDS re classification)	Report any release of a substance adverse effect is impairment of, regional release reporting regula	or damage to, the er	•	_				
		Transporta	ntion					
UN No.	Shipping Name			Class	Packing Group	Special Provisions		
None None	See "Comments" below. AB, SK & NWT: LEACHABLE WAS ("insert the technical name of the BC: LEACHABLE TOXIC WASTE, p	ne contaminant").	J	None None	None None			
	technical name of the contamin							
Small Container:	No TDG safety marks required. (See "Comments" bel	ow.)		***************************************			
Large Container:	No TDG safety marks required. (See "Comments" below.)							
Documents:	Truck ticket if not regulated. AER Alberta Oilfield Waste Form or Recycle Docket (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Comments:	Testing is required if contamination with TDG regulated substance(s) is suspected. High hydrocarbon content may result in a flammable liquid (Class 3).							

Water - Process (Trace Organics) – 2020

Waste Profile Sheet: Well Workover Fluids (Acid)

	General Information								
Original Use:	Well servicing, drilling / completion operations. Acid wastes from well stimulations can be either residual acids not used, found in storage tanks or drums at the well site. Corrosive liquid.								
Physical Description:	Corrosive liquia.								
Contaminants:	Hydrochloric acid, hydrofluoric acid								
Other Codes:	Alberta AER Code: WWOFLD (well workover fluids) – reportable								
	Hazard Information								
Physical:	Corrosive to Metals.								
Health:	Acute Toxicity – Oral, Dermal, Inhalation. Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Carcinogenicity, Mutagenicity, Reproductive Hazards, Skin/Eye Corrosion.								
SDS:	Use SDS of specific acid.								
WHMIS Label:	Protective Equipment:	①							
Environmental:	Uncontrolled storage and disposal may cause groundwater and soil contamination	on.							
First Aid Measures:	Inhalation: Use proper respiratory protection to immediately remove victim from breathing has stopped. Keep at rest and seek immediate medical attention. Eye Contact: Flush eyes, including under eyelids, with a continuous flow of fresh get medical attention. Skin Contact: Remove severely contaminated clothing and clean before reusing, use soap if available. Ingestion: DO NOT induce vomiting. If individual is conscious, give milk or water to give anything by mouth to an unconscious person. Keep warm & quiet. Seek	water for a	at least 15 min. If in large amounts of tomach contents.	rritation persists, fresh water and DO NOT attempt					
	Management Methods								
Regulated Under Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste if corrosive and/or flammable NWT: Hazardous Waste								
Storage:	Store in corrosion resistant (plastic or lined) containers. Keep closed. Store in a cool, well-ventilated place away from caustics.								
Disposal:	Well injection (with approval). Recover hydrocarbon prior to disposal.								
Reportable Releases: (Check SDS re classification)	Report any release of a substance into the environment that may cause, is causi effect is impairment of, or damage to, the environment, human health or safety release reporting regulations.								
	Transportation								
UN No.	Shipping Name	Class	Packing Group	Special Provisions					
UN2924	If transported by vacuum truck, use CAPP TDG Permit (see comments below): MIXED OILFIELD PRODUCTION FLUIDS, TREAT AS FLAMMABLE LIQUID, CORROSIVE N.O.S. Without permit: test to determine if flammable and/or corrosive or not regulated.	3(8)	Ш	16					
Small Container:	If TDG regulated: appropriate class label, shipping name (with technical name of 16) and UN Number	contamina	nt in brackets if Sp	ecial Provision					
Large Container:	If TDG regulated: appropriate TDG placard if more than 500 kg or in direct conta Number required with the placard if in direct contact with a large means of cont	_							
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Mar Ticket (SK).								
Comments:	Corrosives that have not been tested must be included in Packing Group I as per regulated as they are dependent upon pH. Waste should be tested. If mixture contains hydrocarbons, refer to Drilling Waste - Hydrocarbon / Acid / CAPP Permit required if shipping as MIXED OILFIELD PRODUCTION FLUIDS (classic Certificate SH5561 (Ren. 11) (all jurisdictions) or AB permit 2019-2057 (only in Almet.	Water Mixt fication not	ture Waste Profile t t required). Use Fe	Sheet. ederal Equivalency					

Well Workover Fluids (Acid) – 2020

Waste Profile Sheet: Well Workover Fluids (Caustic)

		General Infor	matio	n				
Original Use:	Well servicing, drilling / comple	etion operations.						
Physical Description:	Solid, slurry, liquid. High solubility in water, beige to white in colour.							
Contaminants:	Sodium hydroxide and / or potassium hydroxide. May contain hydrogen sulphide and / or hydrocarbons.							
Other Codes:	Alberta AER Code: WWOFLD (well workover fluids) – reportable							
		Hazard Infor	matior	1				
Physical:	Flammable Liquid, Combustible	E Liquid, Corrosive to N	∕letals.					
Health:	Eye Irritation, Skin Irritation, Sk	in/Respiratory Sensiti	zation, Sk	in/Eye Corrosion.				
SDS:	For additional information see	specific caustic SDS (i.	e. sodiun	n hydroxide, potas	sium hydr	oxide).		
WHMIS Label:		Protective Equipment:	4					
Environmental:	Uncontrolled storage and dispo	osal may cause ground	water an	d soil contaminat	ion.			
First Aid Measures:	if breathing has stopped. Keep Eye Contact: Flush eyes, includ persists, get medical attention. Skin Contact: Remove severely use soap if available. Ingestion: DO NOT induce vom attempt to give anything by mo	ing under eyelids, with contaminated clothin iting. If individual is c	a conting and cle	an before reusing	. Flush wit	th large amounts of stomach contents.	fresh water ar DO NOT	
		Management	Metho	ds				
Regulated Under Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste if corrosive and/or flammable SK: Hazardous Waste NWT Hazardous Waste							
Storage:	Store in corrosion resistant (plastic or lined) container. Store in a separate area from acids.							
Disposal:	Well injection (with approval).	Recover hydrocarbon	prior to	disposal.				
Reportable Releases: (Check SDS re classification)	Report any release of a substar adverse effect is impairment of regional release reporting regu	f, or damage to, the er						
		Transporta	ition					
UN No.	Shipping Name				Class	Packing Group	Special Provisions	
UN2924	If transported by vacuum truck, use CAPP TDG Permit (see comments below): MIXED OILFIELD PRODUCTION FLUIDS, TREAT AS FLAMMABLE LIQUID, CORROSIVE N.O.S. If without permit: test to determine if flammable and/or corrosive or not regulated.				3(8)	II	16	
Small Container:	If corrosive and regulated: Class 8 label, shipping name (with technical name of contaminant in brackets) and UN Number							
Large Container:	If corrosive and regulated: Clas Number required with the plac	•	_			-		
Documents:	AER Alberta Oilfield Waste Fori Ticket (SK).	m (AB) or the federal I	/lovemer	nt Document / Ma	nifest (BC,	NWT or out of prov	ince) or Truck	
Comments:	Corrosives that have not been tested must be included in Packing Group I as per TDGR Section 2.42 (1). Waste should be tested. Waste may not be regulated dependent upon pH. CAPP Permit required if shipping as MIXED OILFIELD PRODUCTION FLUIDS (classification not required). Use Federal Equivalency Certificate SH5561 (Ren. 11) (all jurisdictions) or AB permit 2019-2057 (only in Alberta) and ensure all terms and conditions are met.							

Well Workover Fluids (Caustic) – 2020

Waste Profile Sheet: Well Workover Fluids (Hydrocarbon / Acid / Water Mixture)

	Gei	neral Information						
Original Use:	Well servicing, drilling / completion operations. Produced during fracturing and solvent squeezing well stimulation programs Wastes from well stimulations can be either residual acids not used, found in storage tanks or drums at the well site; or acids produced in conjunction with hydrocarbons during the first stages of production following the workover.							
Physical Description:	Liquid.							
Contaminants:	Hydrochloric acid, acetic acid, formic acid, diesel fuel, kerosene, crude oil, toluene, distillate, xylene, methanol, gelling agents, surfactants, clay stabilizers, and other fluid control agents.							
Other Codes:	Alberta AER Code: WWOFLD (well w	vorkover fluids) - <i>reportable</i>						
	Ha	zard Information						
Physical:	Flammable Liquid, Combustible Liquid,	Corrosive to Metals.						
Health:	Eye Irritation, Skin Irritation, Skin/Respiratory Sensitization, Skin/Eye Corrosion.							
SDS:	For additional information see specific	contaminant SDS.						
WHMIS Label:		Protective Equipment:						
Environmental:	Uncontrolled storage and disposal may	cause groundwater and soil contaminati	on.					
First Aid Measures:	persists, get medical attention. Skin Contact: Remove severely contamuse soap if available. Ingestion: DO NOT induce vomiting. If	er eyelids, with a continuous flow of fresh inated clothing and clean before reusing individual is conscious, give milk or wate an unconscious person. Keep warm & qu	Flush with	n large amounts of fr	esh water an O NOT			
	Man	agement Methods						
Regulated Under Provincial Waste Regulations (typical):	BC: Hazardous Waste AB: Dangerous Oilfield Waste SK: Hazardous Waste NWT Hazardous Waste							
Storage:	Store in tanks or sealed drums. Store in	n a cool, well-ventilated area away from i	gnition and	l heat sources.				
Disposal:	Well injection (with approval). Recover	r hydrocarbon prior to disposal.						
Reportable Releases: (Check SDS re classification)		the environment that may cause, is causi nage to, the environment, human health	-					
	1	Fransportation						
UN No.	Shipping Name		Class	Packing Group	Special Provisions			
UN2924	If transported by vacuum truck, use CAPP TDG Permit (see comments below):				16			
UN1993	If without permit: FLAMMABLE LIQUID, N.O.S. ("insert the	e technical name of the contaminant")	3	I, II or III	16, 150			
UN1760	CORROSIVE LIQUID, N.O.S. ("insert the	•	8	I, II or III	16			
UN2924	FLAMMABLE LIQUID, CORROSIVE, N.O. contaminant").	S. ("insert the technical name of the	3(8)	I, II or III	16			
Small Container:	Class 3 label for UN1993, Class 8 label f brackets); and UN Number.	or UN1760 or Class 3 and 8 labels for UN	2924; shipp	ping name (with tech	nical name ir			
Large Container:		direct contact with a large means of cont means of containment or shipping > 1,00						
Documents:	AER Alberta Oilfield Waste Form (AB) or the federal Movement Document / Manifest (BC, NWT or out of province) or Truck Ticket (SK).							
Comments:	2.42 (1). CAPP Permit required if shipp	at have not been tested should be include ing as MIXED OILFIELD PRODUCTION FLU 1) (all jurisdictions) or AB permit 2019-20	IDS (classif	ication not required)	. Use Federa			

Well Workover Fluids (Hydrocarbon / Acid / Water Mixture) – 2020