

# WASTE DISPOSAL AT THE SPILL SITE

## 4.8

### Action

*Identification of wastes at the spill site.*

### Procedure

- Common wastes at a spill site could include:
  - contaminated debris and soil from crude oil and condensate spills.
  - contaminated debris and soil from produced water spills.
  - produced water.
  - oily rags.
  - contaminated fresh water from washing and flushing operations.
  - crude oil or condensate.
  - domestic garbage.
  - Glycol.
  - diesel fuel or lube oil.
  - contaminated sorbent material.

### Action

*Develop a strategy for minimizing the amount of waste at the spill site.*

### Procedure

- Utilize the “Four ‘R’s” principle:
  - reduce
  - re-use
  - recycle
  - recover



## Action

***Determine the proper waste storage requirements.***



## Procedure

- Selected storage area should be large enough to accommodate anticipated waste volumes.
- Area should be identified with appropriate signage (i.e. WHMIS, TDG, etc) and barricades.
- Secondary containment is not required for temporary storage.
- Lined, bermed areas may be constructed for temporary storage of contaminated solid materials (free fluids must be removed).
- Temporary storage is restricted to 180 days maximum duration. If storage is required for longer periods, the requirements of AER Directive 55 must be met.



## Action

***Determine the waste disposal options.***



## Procedure

- Refer to the “Waste Management Table” for a list of wastes and their required transportation, storage and disposal requirements.
- The information in the table should also be used when completing AER or TDG waste manifests.
- It is the responsibility of the waste generator to select the proper waste receiver. Once the waste has been identified, contact the nearest waste receiver to ensure that they are approved to receive the waste.
- Refer to the “Table of AER-Approved Oilfield Waste Management Facilities”.
- Consider the use of the WCSS mobile air curtain incinerator to dispose of oil-contaminated debris at the spill site (see Section 2.4 of this manual for contact information). Regulatory approval from lead government agency is required to utilize the incinerator (Alberta Energy Regulator (“AER”) in Alberta; Oil and Gas Commission (“OGC”) in British Columbia; Saskatchewan Ministry of Economy (“SME”) in Saskatchewan) — see Section 2.6 in this manual for contact information.

# WASTE MANAGEMENT TABLE

WASTE NAME [AER WASTE CODE]	WASTE CLASS	TDG:		PACKING GROUP / REQUIRED DOCUMENT	TREATMENT / STORAGE / DISPOSAL OPTION
		- SHIPPING NAME	- PIN		
		- CLASS			
Absorbents [OILABS]	N-DOW N-HAZ	S: None P: N/A C: N/A	P: N/A R: Recycle Docket	T: Drain and recovery any free liquids. S: Covered, labeled container. D: <ul style="list-style-type: none"> <li>Recycle via Waste Broker.</li> <li>Landfill – Class II (AB).</li> </ul>	
Acid Solutions (Unneutralized) [ACID]	DOW S.W. WDG	S: Corrosive Liquids, N.O.S. P: UN1760 C: 8 (9.2)	P: II R: Manifest	T: Neutralize acid, if possible. pH should be between 6.0 and 9.9. S: Store in appropriate lined container. D: <ul style="list-style-type: none"> <li>Deep Well Disposal.</li> <li>Disposal Well Class Ib if pH is (6.0 – 9.0) or Class Ia (higher than 12.5 or lower than 4.5).</li> </ul>	
Caustic Solutions (Unneutralized, Spent) [CAUS]	DOW S.W. WDG	S: Corrosive Liquids, N.O.S. P: UN1760 C: 8	P: I R: Manifest	T: Re-use, neutralize pH. S: Store in a corrosive-resistant container (fiberglass, etc.). D: <ul style="list-style-type: none"> <li>re-use, neutralize pH, surface discharge.</li> <li>Disposal Well.</li> </ul>	
Contaminated Soil (Chemicals) [SOILCH]	DOW S.W. WDG	S: Solids Containing Corrosive Liquid N.O.S. P: UN3244 C: 8	P: I R: Manifest	T: Remove any free liquids prior to disposal. S: Store on a covered, lined pad until disposal. D: <ul style="list-style-type: none"> <li>On-site bioremediation, or</li> <li>Waste Treatment Facility,</li> <li>Landfill.</li> </ul> <i>(Dependent on contaminant)</i>	
Contaminated Soil (Crude / Condensate) [SOILCO]	DOW S.W. WDG	S: Solids Containing Flammable Liquid N.O.S. P: UN3175 C: 9.1	P: II R: Manifest	T: Remove any free liquids prior to disposal. S: Store on a covered, lined pad until disposal. D: <ul style="list-style-type: none"> <li>On-site bioremediation, or</li> <li>Waste Treatment Facility,</li> <li>Landfill.</li> </ul>	
Contaminated Soil (Produced Water) [SOILPW]	N-DOW N-HAZ	S: None P: N/A C: N/A	P: N/A R: Bill of Lading	T: Remove any free liquids prior to disposal. S: Store on a covered, lined pad until disposal. D: <ul style="list-style-type: none"> <li>Waste Treatment Facility.</li> <li>Landfill at approved Class Ia, Ib or II facility.</li> </ul>	
Contaminated Soil (Refined Oils / Fuel) [SOILRO]	DOW S.W. WDG	S: Solids Containing Flammable Liquid N.O.S. P: UN3175 C: 4.1	P: II R: Manifest	T: Remove any free liquids prior to disposal. S: Store on a covered, lined pad until disposal. D: <ul style="list-style-type: none"> <li>On-site bioremediation.</li> <li>Waste Treatment Facility, or</li> <li>Industrial Landfill.</li> </ul>	
Contaminated Soil (Sulphur) [SOILPW]	N-DOW	S: None P: N/A C: N/A	P: N/A R: N/A	T: On-site treatment may include lime addition to neutralize. S: Store in a covered container prior to disposal. D: Material may be taken to an approved Class II or higher landfill.	
Crude Oil Emulsion [COEMUL]	DOW S.W. WDG	S: Flammable Liquids N.O.S. P: UN1993	P: II R: Manifest	T: Remove any free oil or water. S: Store in a covered container prior to disposal.	

# WASTE MANAGEMENT TABLE

WASTE NAME [AER WASTE CODE]	WASTE CLASS	TDG:			PACKING GROUP / REQUIRED DOCUMENT	TREATMENT / STORAGE / DISPOSAL OPTION
		- SHIPPING NAME	- PIN	- CLASS		
		<b>C:</b> 3			<b>D:</b> Waste Treatment Facility.	
Domestic Garbage [DOMWST]	N-DOW N-HAZ	<b>S:</b> None <b>P:</b> N/A <b>C:</b> N/A	<b>P:</b> N/A <b>R:</b> N/A		<b>T:</b> Municipal landfill. <b>S:</b> Store in a designated domestic garbage container. <b>D:</b> Municipal landfill.	
Drums / Barrels (Methanol, oil, etc.) [EMTCON]	N-DOW N-HAZ	<b>S:</b> None <b>P:</b> N/A <b>C:</b> N/A	<b>P:</b> N/A <b>R:</b> Bill of Lading		<b>T:</b> Return to vendor. Recycle. Landfill. <b>S:</b> Empty. Store covered to prevent access to the elements. <b>D:</b> <ul style="list-style-type: none"> <li>• Return to vendor.</li> <li>• Recycle.</li> <li>• Approved industrial landfill.</li> </ul>	
Filters (Lube oil, DRAINED) [FILLUB]	N-DOW N-HAZ	<b>S:</b> None <b>P:</b> N/A <b>C:</b> N/A	<b>P:</b> N/A <b>R:</b> Recycle Docket		<b>T:</b> Drain and crush — capture and contain drained liquid for separate disposal. <b>S:</b> Store drained filters in a covered sealed container, away from sources of heat or spark. <b>D:</b> <ul style="list-style-type: none"> <li>• Recycle via Waste Broker.</li> <li>• Approved industrial landfill if crushed.</li> </ul>	
Filters (Lube oil, UNDRAINED) [FILLUB]	DOW S.W. WDG	<b>S:</b> Leachable Toxic Waste <b>P:</b> NA9500 <b>C:</b> 9.3	<b>P:</b> III <b>R:</b> Recycle Docket		<b>T:</b> Drain and crush. <b>S:</b> Store filters in a covered sealed container, away from sources of heat or spark. <b>D:</b> <ul style="list-style-type: none"> <li>• Recycle via Waste Broker.</li> <li>• Incinerate.</li> <li>• Approved industrial landfill.</li> </ul>	
Hydraulic Oil [HYDOIL]	N-DOW N-HAZ	<b>S:</b> Petroleum Oil <b>P:</b> UN1270 <b>C:</b> 3	<b>P:</b> II <b>R:</b> Recycle Docket		<b>T:</b> Do not mix waste with other materials (i.e. glycol, etc.). <b>S:</b> Store in a covered sealed container, away from sources of heat or spark. <b>D:</b> <ul style="list-style-type: none"> <li>• Return to supplier.</li> <li>• Recycle through Waste Broker.</li> </ul>	
Lube Oils [LUBOIL]	DOW S.W. WDG	<b>S:</b> Leachable Toxic Waste <b>P:</b> NA9500 <b>C:</b> 9.3	<b>P:</b> III <b>R:</b> Recycle Docket		<b>T:</b> Do not mix waste with other materials (i.e. glycol, etc.). <b>S:</b> Store in a covered sealed container, away from sources of heat or spark. <b>D:</b> <ul style="list-style-type: none"> <li>• Return to supplier.</li> <li>• Recycle through Waste Broker.</li> </ul>	
Oily Rags [OILRAG]	N-DOW N-HAZ	<b>S:</b> None <b>P:</b> N/A <b>C:</b> N/A	<b>P:</b> N/A <b>R:</b> Recycle Docket		<b>T:</b> Remove all free liquids prior to disposal. <b>S:</b> Store material in a covered, sealed container. <b>D:</b> <ul style="list-style-type: none"> <li>• Recycle through Waste Broker.</li> <li>• Remove free liquids and landfill.</li> </ul>	
Metal (scrap) [SMETAL]	N-DOW N-HAZ	<b>S:</b> None <b>P:</b> N/A <b>C:</b> N/A	<b>P:</b> N/A <b>R:</b> Bill of Lading		<b>T:</b> None. <b>S:</b> Store away from other wastes to prevent contamination. <b>D:</b> <ul style="list-style-type: none"> <li>• Recycle.</li> </ul>	
Methanol [METHNL]	DOW S.W. WDG	<b>S:</b> Methanol <b>P:</b> UN1230 <b>C:</b> 3.2 (6.1)	<b>P:</b> II <b>R:</b> Manifest		<b>T:</b> Re-use material in other processes. <b>S:</b> store in a covered sealed container, away from sources of heat or spark. <b>D:</b> <ul style="list-style-type: none"> <li>• Re-use.</li> <li>• Recycle.</li> <li>• Disposal Well.</li> </ul>	
Produced Water	N-DOW	<b>S:</b> None	<b>P:</b> N/A		<b>T:</b> Remove all hydrocarbons.	

# WASTE MANAGEMENT TABLE

WASTE NAME [AER WASTE CODE]	WASTE CLASS	TDG:		PACKING GROUP / REQUIRED DOCUMENT	TREATMENT / STORAGE / DISPOSAL OPTION
		- SHIPPING NAME	- PIN		
		- CLASS			
	N-HAZ	P: N/A C: N/A		R: Truck Ticket	S: D:
Sludge ( <i>Crude Oil, Tank Bottoms</i> ) [SLGHYD]	DOW S.W. WDG	S: Solids Containing Flammable Liquids N.O.S. P: UN3175  C: 4.1		P: II R: Manifest	T: Remove and collect all free fluids prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: Waste Treatment Facility should recover oil, and solids should be landfilled.
Sludge ( <i>Glycol</i> ) [SLGGLY]	DOW S.W. WDG	S: Solids Containing Flammable Liquids N.O.S. P: UN3175  C: 4.1		P: II R: Manifest	T: Remove and collect all free fluids prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Solids should be treated and then landfilled.</li> </ul>
Sludge ( <i>Flare Pit</i> ) [SLGPIT]	DOW S.W. WDG	S: Solids Containing Flammable Liquids N.O.S. P: UN3175  C: 4.1		P: II R: Manifest	T: Remove and collect all free fluids prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Solids should be treated and then landfilled.</li> </ul>
Spill Material ( <i>Hydrocarbon</i> ) [SOILCO]	DOW S.W. WDG	S: Solids Containing Flammable Liquids N.O.S. P: UN3175  C: 4.1		P: II R: Manifest	T: Remove and collect all free fluids prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Solids should be treated and then landfilled.</li> </ul>
Spill Material ( <i>Produced Water</i> ) [SOILPW]	N-DOW N-HAZ	S: None  P: N/A  C: N/A		P: N/A R: Bill of Lading	T: Remove and collect all free fluids prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Solids should be treated and then landfilled.</li> </ul>
Spill Material ( <i>Refined Oil / Fuel</i> ) [SOILRO]	DOW S.W. WDG	S: Solids Containing Flammable Liquids N.O.S. P: UN3175  C: 4.1		P: II R: Manifest	T: Remove and collect all free fluids prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Waste Treatment Facility should recover oil.</li> <li>• Solids should be landfilled.</li> </ul>
Waste Water ( <i>Wash Water</i> )	N-DOW N-HAZ	S: None P: N/A		P: N/A R: Bill of Lading	T: Recover all hydrocarbons if possible. S: Store material in an appropriate container.

# WASTE MANAGEMENT TABLE

WASTE NAME [AER WASTE CODE]	WASTE CLASS	TDG:		PACKING GROUP / REQUIRED DOCUMENT	TREATMENT / STORAGE / DISPOSAL OPTION
		- SHIPPING NAME	- PIN		
[WSHWTR]		C: N/A			D: Water may be released if it meets the Surface Water Discharge Criteria or send to a disposal well.
Wash Fluids (Hydrocarbon) [WSHWTR]	DOW S.W. WDG	S: Flammable Liquids N.O.S.  P: UN1993  C: 3		P: II  R: Manifest	T: Recover all hydrocarbons prior to disposal. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Waste Treatment Facility should recover oil.</li> </ul>
Wash Fluids (ACID) [WSHWTR]	DOW S.W. WDG	S: Corrosive Liquids N.O.S.  P: UN1760  C: 8		P: II  R: Manifest	T: Remove all hydrocarbons prior to disposal. Neutralize acids. S: Store material in a covered container to prevent access to the elements. Store away from sources of spark or flame. D: <ul style="list-style-type: none"> <li>• Free fluids should be deep well disposed.</li> <li>• Waste Treatment Facility should recover oil.</li> </ul>

## NOTE

Produced water containing H<sub>2</sub>S / iron sulphide and any other non-DOW material is a Non-Listed waste and does not have to be manifested or tracked as a waste. If produced water has products in them such as heavy metals, etc. from glycol or xylene from a completion job then it would become a DOW because of products in the water, not because it is produced water.

## NOTE

- It is the responsibility of the waste generator to select the proper waste receiver. Once the waste has been identified, contact the nearest waste receiver to ensure that they are approved to receive the waste.
- Below is a list of the AER Approved Waste Receivers

# AER Approved Third Party Oilfield Waste Management Facilities

Updated: August 22, 2019

Company Name	WM Approval Number	Facility Name	Amendment Letter	Facility Description	Surface Location
1367290 Alberta Ltd. Box 1805 Whitecourt AB T7S 1P5 780-778-5455	WM 145	Rig Rentals Transfer		TR	/03-34-059-12W5
1977715 Alberta Ltd. Box 1887 Whitecourt AB T7S 1P6 780-778-6045 1-877-778-6045	WM 114	Viro Whitecourt	B	TR	/01-25-059-12W5
538080 Alberta Corporation PO Box 1788 Fairview, AB T0H 1L0	WM 081	538080 Alberta Fairview	B	TR	/-36-081-04W6
AltaGas Ltd. 1700 - 355 4 Ave SW Calgary, AB T2P 0J1	WM 201	AltaGas Harmattan		SF(1b)	/15-27-031-04W5
Anterra Energy Inc. 1420, 1122 – 4th Street SW Calgary AB T2R 1M1 403-215-3282	WM 099	Anterra Midstream Suffield	B	SF(1b)	/08-12-015-10W4
Aqua Terra Water Management Inc. 105, 10136 - 128 Avenue Grande Prairie AB T8V 1E9	WM 133	Aqua Terra Gordondale	E	SF(1b)\WPF	/16-12-079-11W6
Canadian Energy Services & Technology Corp. 1400 - 400 4 Avenue SW Calgary AB T2P 3J4	WM 161	Canadian Energy Edson DFF	B	DFE\ST\WPF	/-12-053-18W5
Canadian Natural Resources Limited 2500, 855-2 Street SW Calgary, AB T2P 4J8 403-517-6700	WM 034	CNRL Elkpoint	I	SF(1b)\ST\WPF	/14-28-055-06W4
	WM 058	CNRL Frog Lake	E	TR\WPF	/02-32-055-03W4
	WM 129	CNRL Wild River	C	SF(1b)	/03-03-057-23W5
Cancen Oil Processors Inc. 11464 - 149 Street Edmonton, AB T5M 1W7 780-452-7205	WM 023	Cancen Sarepta	G	CT\WPF	/06-11-050-22W4
	WM 115	Cancen New Serepta	A	SF(1b)	/14-10-050-22W4
	WM 198	Morinville		FD\SF(1b)	/14-27-055-24W4
Catapult Environmental Inc. 1620, 700 - 9 Ave SW	WM 184	Catapult Fox Creek		FD\WPF	/07-07-062-18W5
	WM 207	Catapult Fox Creek 2		FD\WPF	/07-07-062-18W5

Calgary, AB T2P 3V4 587-393-6329	WM 213	Catapult Bigstone		SF(1b)\WPF	/01-19-059-23W5
Delphi Energy Corp. 300 -500 4 Ave SW Calgary, AB T2P 2V6 403-265-6171	WM 190	Delphi Energy Fir		SF(1b)	/16-34-059-21W5
Dragos Energy Corp.	WM 204	Dragos Energy Giroux Lake		FD\WPF	/02-17-066-21W5
Eco-Industrial Business Park Inc. 1250 Hayter Rd. NW Edmonton AB T6S 1A2 780-477-3598	WM 154	Eco - Edmonton	B	SF(1a)\TR	/11-17-053-23W4
Energetic Logistics Services Inc. 13701 -99 St Grande Prairie, AB T8V 7N9 780-833-8037	WM 173 WM 174	G.P. Drilling Fluid Facility Edson Drilling Fluid Facility	A A	DFF\ST\WPF DFF\ST\WPF	/-11-073-06W6 /-15-053-17W5
Formula Powell Trucking 2006 Ltd. 9716 - 38 Ave Grande Prairie, AB T8V 4Z1 780-814-6045	WM 176 WM 177	Formula Powell Edson Formula Powell GP North	B A	DFF DFF	/-24-053-17W5 /-12-072-06W6
GFL Environmental Inc. 8409 - 15 Street Edmonton, AB T6P 0B8 780-444-8805	WM 080	Northwest Sanitation	C	TR	/-25-059-12W5
Gibson Energy ULC 1700, 440 - 2 Avenue SW Calgary AB T2P 5E9 403-206-4000	WM 060 WM 074 WM 113 WM 116 WM 123 WM 151 WM 165 WM 166	Deepwell Paddle River Deepwell Minnow Deepwell Claresholm Deepwell Rycroft Gibson Edson Gibson Cynthia Gibson Rimbey DFF Gibson Sexsmith DFF	J P F E D B A A	CT\FD\WPF CT\SF(1b)\TW\WPF CT\FD\WPF CT\SF(1b)\TM\WPF CT\DFF\WPF CT\SF(1b)\TM\WPF DFF\ST\WPF DFF\ST\WPF	/16-31-056-08W5 /01-19-057-05W6 /11-30-012-25W4 /08-18-078-05W6 /08-23-053-17W5 /01-03-049-10W5 /08-28-042-02W5 /-24-073-06W6
Halliburton Partners Canada ULC 1600, 645 - 7 Ave SW Calgary, AB T2P 4G8 403-231-9415	WM 167	Halliburton Onoway DFF	A	DFF\ST\WPF	/-36-054-02W5
Hammerhead Resources Inc. Suite 2700, 525 - 8 Ave SW Calgary, AB T2P 1G1	WM 199	Karr		CT\FD\WPF	/03-22-066-03W6
Medicine River Oil Recyclers Ltd.	WM 020	Med River Oil Eckville	I	CT\FD\TW\WPF	/01-29-039-03W5



P.O. Box 58 Eckville, AB T0M 0X0 403-746-3130	WM 085 WM 135 WM 195	Med River Oil Eckville CDI Eckville Eckville	B A	SF(1b) SF(1b) SF(1b)	/14-28-039-03W5 /02-29-039-03W5 /08-34-039-03W5
Newpark Canada Inc. 300, 635 - 6 Ave SW Calgary, AB T2P 0T5 403-266-7383	WM 164	Newpark Drayton Valley	A	DFF\ST\WPF	/-06-049-07W5
NuVista Energy Ltd. 3500 - 700 2 St SW Calgary, AB T2P 2W2 403-538-8500	WM 191	NuVista Bilbo OWMF		FD	/12-22-066-06W6
Oculus Transport Ltd. 650, 444 - 5 Ave SW Calgary, AB T2P 2T8 780-538-0820	WM 186	Oculus Grande Prairie DFF		DFF	/-11-073-06W6
Pembina Marketing Ltd. 3800-525 8 Ave SW Calgary AB T2P 1G1 403-231-7500	WM 153	Cynthia Full Service Terminal		CT\FD\TM	/15-20-049-10W5
Pure Environmental Waste Management Ltd. 2000 - 440 2 Ave SW Calgary AB T2P 5E9 403-234-8590	WM 211 WM 212	Hangingstone Fort Kent		FD\SF(1a)\WPF FD\SF(1a)\WPF	/10-25-085-10W4 /09-14-063-04W4
Q'Max Solutions Inc. 1210, 585 - 8 Ave SW Calgary, AB T0H 0W0 780-830-2516	WM 169 WM 170	Q'Max Clairmont DFF Q'Max Drayton Valley DFF	A C	DFF\ST\WPF DFF\ST\WPF	/04-23-072-06W6 /15-17-049-07W5
Recover Energy Services Inc. 405, 1000 - 8 Ave SW Calgary, AB T2P 3M7 403-471-7787	WM 189	Lodgepole	B	WPF	/15-28-047-09W5
Remedx Remediation Services Inc. 305, 1550 - 5 Street SW Calgary, AB T2R 1K3 (403) 209-0004	WM 051	Remedx Breton	D	BD	/-12-048-04W5
RJ Enterprises Inc. 15304 Rio Terrace Drive Edmonton, AB T5R 5M5 780-914-6572	WM 180	RJ Oil Inc. Doris	D	SF(1b)	/07-02-063-05W5
Schlumberger Canada Limited 200, 125 - 9 Ave SE Calgary, AB T2G 0P6	WM 172	Spruce Grove DFF	A	DFF\ST\WPF	/10-33-052-27W4

403-509-4000					
Secure Energy Services Inc. Bow Valley Square 2 1900, 205 - 5 Avenue SW Calgary, AB T2P 2V7 403-984-6100	WM 117 WM 122 WM 126 WM 128 WM 130 WM 131 WM 132 WM 138 WM 143 WM 146 WM 147 WM 149 WM 152 WM 159 WM 160 WM 162 WM 163 WM 168 WM 175 WM 181 WM 183 WM 188 WM 193 WM 206 WM 209	Secure La Glace Secure South Grande Prairie Secure Fox Creek Secure Obed Secure Nosehill Secure Emerson Secure Brazeau Secure Drayton Valley Secure Wild River Secure Rocky Mountain House Secure Judy Creek Secure Kaybob Edson Full Service Terminal Secure Strathcona Secure Athabasca Secure Fox Creek DFF Secure Grande Prairie DFF Secure Gordondale Secure Rycroft Secure Tulliby Big Mountain Creek Secure Kaybob Kakwa Secure Gold Creek Secure Tony Creek	J J I I D E G F C G D A D B B B D B B B B B B A A	CT\SF(1b)\TM\TR\TW\WPF CT\RC\SF(1b)\WPF CT\FD\TM\TW\WPF CT\SF(1b)\TM\TR\WPF CT\SF(1b)\WPF SF(1b)\WPF CT\SF(1b)\WPF CT\FD\TM\TW\WPF FD CT\FD\TM\TR\WPF CT\FD\TM\WPF SF(1b) CT\FD\TM\WPF CT\SF(1b)\WPF SF(1b) DFF\ST\WPF DFF\ST\WPF FD\WPF CT\FD\TM\WPF FD\WPF FD\WPF FD\WPF CT\TM\WPF FD\SF(1b)\WPF SF(1b)\WPF	/09-07-073-08W6 /06-36-068-06W6 /12-36-062-20W5 /-26-052-23W5 /11-21-055-20W5 /05-09-073-07W6 /-12-047-11W5 /-05-049-06W5 /10-03-057-23W5 /03-04-040-08W5 /01-03-064-10W5 /11-34-061-18W5 /08-01-055-18W5 /02-31-052-23W4 /07-28-068-20W4 /11-36-062-20W5 /04-07-072-05W6 /04-25-079-10W6 /06-07-078-04W6 /07-36-055-03W4 /03-28-067-05W6 /06-35-060-18W5 /08-05-064-05W6 /11-26-067-06W6 /11-21-062-22W5
Seller's Oilfield Service Ltd. Box 5330 Devon, AB T9G 1Y1 780-985-2243	WM 077	Sellers Leduc-Woodbend	B	SF(1a)	/12-28-049-26W4
Tero Oilfield Services Ltd. Box 28 Wardlow, AB T0J 3M0 403-566-3985	WM 079	Tero Oilfield	C	SF(1b)	/11-32-024-12W4
Tervita Corporation 1800, 140 - 10 Avenue SE Calgary, AB T2G 0R1 403-233-7565	WM 001 WM 002 WM 003 WM 004 WM 005 WM 006 WM 007 WM 009 WM 010 WM 011 WM 012 WM 013 WM 014 WM 017	Tervita Hughenden Tervita Red Earth Tervita Eckville Tervita Coronation Tervita Big Valley Tervita Valleyview Tervita Mitsue Tervita Judy Creek Tervita Drayton Valley Tervita Zama Tervita Stauffer Tervita Brooks Tervita Kitscoty Tervita Grande Prairie	L I G J N G K J J K O O J L	FD\TR\WPF FD\TR\WPF CT\FD\TM\TR\WPF CT\FD\TM\WPF CT\SF(1b)\TM\WPF CT\FD\TM\TW\WPF CT\FD\TM\WPF CT\FD\TM\WPF CT\FD\TM\WPF CT\TM\TR\TW\WPF CT\FD\TR\WPF CT\FD\TR\WPF CT\FD\TR\TW\WPF FD\TR\WPF FD\RC\TR\TW\WPF	/16-33-040-07W4 /12-13-087-09W5 /11-21-039-03W5 /12-30-034-09W4 /10-36-035-20W4 /09-16-069-22W5 /04-29-072-04W5 /04-05-063-11W5 /12-28-048-07W5 /12-18-116-05W6 /16-11-037-05W5 /01-25-018-14W4 /14-31-051-02W4 /06-02-071-06W6

	WM 018	Tervita Stettler	N	CT\FD\TM\TR\WPF	/16-18-038-20W4
	WM 021	Tervita Gordondale	N	CT\FD\TM\TR\WPF	/09-10-079-10W6
	WM 022	Tervita Taber	J	CT\FD\TM\TR\WPF	/03-04-009-16W4
	WM 024	Tervita Niton Junction	L	CT\SF(1b)\TM\TR\WPF	/06-33-053-12W5
	WM 025	Tervita Hays	L	CT\FD\TM\TR\WPF	/05-19-013-14W4
	WM 027	Tervita La Glace	S	CT\FD\TM\TW\WPF	/12-08-073-08W6
	WM 040	Tervita Fox Creek	M	CT\FD\TM\WPF	/03-29-062-20W5
	WM 042	Tervita Elk Point	T	FD\TR\WPF	/03-15-055-06W4
	WM 043	Tervita Drayton Valley	F	SF(1a)	/08-23-048-08W5
	WM 047	Tervita Valleyview	J	CT\FD\TR\WPF	/04-21-069-22W5
	WM 048	Tervita West Drayton/Brazeau	J	CT\FD\TM\WPF	/11-03-047-11W5
	WM 052	Tervita Standard	N	TR\WPF	/-03-025-22W4
	WM 056	Tervita Wolf Lake	J	SF(1b)\WPF	/09-01-048-14W5
	WM 057	Tervita Rainbow lake	K	CT\FD\TM\TW\WPF	/16-32-110-05W6
	WM 061	Tervita Lindbergh	O	FD\WPF	/05-26-056-05W4
	WM 063	Tervita Zama	E	SF(1b)	/08-21-116-06W6
	WM 064	Tervita Redwater	C	SF(1a)	/07-04-057-21W4
	WM 065	Tervita Clairmont	E	SF(1b)	/16-35-072-06W6
	WM 069	Tervita Eckville	C	SF(1b)	/01-30-039-03W5
	WM 078	Tervita West Edson	H	CT\FD\TM\TW\WPF	/07-18-053-18W5
	WM 088	Tervita Drumheller	E	SF(1b)\TR\WPF	/13-09-027-20W4
	WM 097	Tervita Brooks	G	CT\FD\ST\TM\TW\WPF	/12-16-018-13W4
	WM 098	Tervita Spirit River	J	CT\FD\TM\TW\WPF	/-31-077-05W6
	WM 102	Tervita South Grande Prairie	K	CT\SF(1b)\TM\TW\WPF	/15-13-069-06W6
	WM 104	Tervita Peace River	H	CT\FD\TM\TW\WPF	/-24-085-19W5
	WM 106	Tervita Green Court	D	CT\FD\WPF	/12-29-058-09W5
	WM 107	Tervita Stanmore	C	SF(1b)	/05-23-030-11W4
	WM 112	Tervita High Prairie	F	CT\FD\TM\WPF	/-14-073-17W5
	WM 119	Tervita Seal	G	FD\WPF	/11-07-082-15W5
	WM 127	Tervita Buck Creek	H	CT\FD\TM\WPF	/12-05-047-06W5
	WM 134	Tervita Drayton Valley	E	ST\WPF	/09-29-048-07W5
	WM 141	Moose Creek	E	SF(1b)	/15-08-053-16W5
	WM 155	Tervita Ft. McMurray	C	CT\FD\WPF	/02-05-084-06W4
	WM 156	Tervita Fox Creek	D	CT\WPF	/-36-062-20W5
	WM 157	Tervita Gold Creek	B	CT\WPF	/10-09-067-05W6
	WM 158	Fox Creek Hwy Terminal	D	CT\FD\TM\WPF	/13-36-062-20W5
Trace Water Solutions Ltd. 2115, 500 - 4 Avenue SW Calgary, AB T2P 2V6 587-319-2937	WM 214	Trace Kaybob		WPF	/--062-20W5
White Swan Environmental Ltd. 1270 - 73 Ave SE Calgary, AB T2H 2V5 403-245-6697	WM 182 WM 197 WM 202	White Swan Atmore White Swan Conklin White Swan Atmore	E B	FD\WPF CT\FD\TW\WPF SF(1b)	/11-23-067-18W4 /15-12-077-09W4 /11-21-067-17W4

\* The above facilities can accept upstream oilfield waste from various sites and various generators

BF = Biodegradation Facility: Enables the removal of hydrocarbon contamination from soil by optimizing environmental conditions for microbial activity.

SFW = Surface Facilities associated with a disposal well (class 1b or 1a): Receiving system for oilfield waste prior to deep well injection.

SFC = Surface Facilities associated with a cavern: Receiving system that enables slurring of oilfield waste into a cavern.

FD= fluid disposal: surface facilities associated with a disposal well (class 1b or 1a) integrated with waste WPF

WPF = Waste Processing Facility: Normally tanks used for purposes such as neutralization of materials, solids processing and hydrocarbon extraction. Facility may also include deep well injection of fluids and cavern disposal.

TS = Transfer Station: Provides short term storage for 3rd party oilfield waste and, if approved, non-oilfield waste which is later

ST = Transfer Station: Provides short term storage for 1st party oilfield waste and, if approved, non-oilfield waste which is later transferred to an appropriate facility for processing.

CT = Custom Treater: Separates oil/water emulsions received directly from well licensees, and treats the oil to meet pipeline specifications. Facility may also include deep well injection of fluids.

WT = Waste Transfer Area: Provides short term storage for 3rd party oilfield waste and, if approved, non-oilfield waste which is later transferred to an appropriate

DFF = Drilling Fluid Facility:

is approved to accept, store, and process drilling fluids (hydrocarbon-based and/or water-based) for the purpose of blending, storage, recycling and re-use by third parties

TW = Truck Wash:

Consists of a wash bay where fresh or produced water (or both) is used in combination with high-pressure washing equipment

TM = Clean Oil Terminal:

The receipt of crude oil and subsequent transfer either by truck or pipeline to a third party for sales

TTF = Thermal Treatment: Remove organic components in oilfield waste by incineration, thermal oxidation, thermal desorption,

**SFW** = Surface Facilities associated with a disposal well (class 1b or 1a): Receiving system for oilfield waste prior to deep well injection.

**SFC** = Surface Facilities associated with a cavern: Receiving system that enables slurring of oilfield waste into a cavern.

**LF** = Landfill (class 1a, 1b, II or III): Final disposal location for solid oilfield waste that involves the disposition of waste material into a cell and then capping the cell upon closure

**WPF** = Waste Processing Facility: Normally tanks used for purposes such as neutralization of materials, solids processing and hydrocarbon extraction. Facility may also include deep well injection of fluids and cavern disposal.

**BF** = Biodegradation Facility: Enables the removal of hydrocarbon contamination from soil by optimizing environmental conditions for microbial activity.

**TS** = Transfer Station: Provides short term storage for 3rd party oilfield waste and, if approved, non-oilfield waste which is later transferred to an appropriate facility for processing.

**CT** = Custom Treater: Separates oil/water emulsions received directly from well licensees, and treats the oil to meet pipeline specifications. Facility may also include deep well injection of fluids.

**WT** = Waste Transfer Area: Provides short term storage for 3rd party oilfield waste and, if approved, non-oilfield waste which is later transferred to an appropriate facility for processing located on an oilfield waste management facility.

**NOTE**

- Information provided above reflects that found in the most recent approvals and approval amendments. Some services may no longer be available, and construction of certain facilities may not be complete. Oilfield waste generators are encouraged to contact the waste company to confirm the services offered by a facility of interest.

**Action**

***Consider the use of the mobile air curtain incinerator to dispose of oil contaminated debris at the spill site.***

**Procedure**

- WCSS "Mobile Air Curtain Incinerator" is in Acheson, AB and available through:
  - DWC Oilfield Construction & Maintenance
  - Phone: (780) 962-1503
  - Mobile: (780) 235-0839

- Regulatory approval from the lead government agency is required to utilize the incinerator (i.e. AER in Alberta; OGC in British Columbia; and SME in Saskatchewan).
- This unit is diesel driven.
- Water is required to cool the tank. The unit is capable of generating approximately 16 m<sup>3</sup> of hot water per hour at an average temperature of 82 °C (180 °F).

### Action

- Ensure waste manifesting requirements are met.***

### Procedure

- The requirements for waste manifesting are dependent on the TDGR classifications of the waste material. The TDGR classifications are included in the "Waste Management Table". If a waste is TDG regulated, the TDG shipping name must be used on the TDGR or AER manifest, the common AER is not sufficient.
- If a waste is TDG regulated, it must be manifested. When the waste volume is less than 500 kg or 500 L, the company may use the CAPP Equivalency to Safety Permit.
- If a waste is TDG regulated, it must be classified as the following:
  - Dangerous Oilfield Waste ("DOW") in Alberta,
  - Special Waste ("S.W.") in British Columbia, or
  - Waste Dangerous Goods ("WDG") in Saskatchewan.
- Each province has agreed to maintain equivalency between the federal TDG regulations and those enforced at the provincial level; therefore, a hazardous waste by federal standards is a DOW in Alberta, a S.W. in British Columbia, and a WDG in Saskatchewan.
- TDGR-regulated wastes that are to cross provincial or federal borders for treatment and disposal must be shipped using a federal TDG Manifest.
- All copies of the manifests for wastes leaving the location should be stored in one file to ensure that all waste disposal data is collected.

## Action

***Ensure waste tracking requirements are met.***

## Procedure

- In Alberta, the AER requires that all DOW and certain non-DOW be tracked from “cradle-to-the-grave”. This requirement applies to wastes created as a result of a spill, leak or accident.
- At present, the other provinces do not require a waste tracking system; however, a tracking system will provide a record of due diligence for all regulatory agencies.
- At the spill site, all shipments of waste that leave the site should be accompanied by the waste manifest, a recycle docket or some form of truck ticket, indicating at least the following information:
  - the generator location (point of disposition).
  - transporter name.
  - an estimate of the waste volume, and
  - a record of receipt from the waste receiver.
- The manifest system provides a complete record of waste movement, from the site to its point of disposal.
- Alternatively, a Waste Tracking Worksheet may be completed for all waste shipments. This worksheet provides spaces for recording the particulars of waste transport and disposal.
- All records of waste disposal must be given to the operator (generator of the waste). This includes all records of waste disposal. The operator is responsible for tracking these waste details and reporting them to the government.
- In Alberta, all waste disposal of DOW must be tracked. This is typically recorded using a manifest. Wastes that are non-DOW (i.e. not TDG regulated) should be transported and disposed using a manifest as well, although this is not a requirement. An entry into the Waste Tracking Worksheet would provide a record of waste disposal.
- The AER, in Directive 58, provides a list of wastes that may or may not be DOW that are required to be tracked.

