WASTE MANAGEMENT PLAN
## WASTE MANAGEMENT PLAN INDEX

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INTRODUCTION

This waste management plan has been prepared as a tool to ensure that Orion Drilling, LLC is effectively managing its waste streams in compliance with applicable laws and regulations.

Waste handling and disposal has evolved into a complex process that involves waste identification by regulatory definitions, sampling and testing, labeling, permitting, manifesting, and detailed record keeping, etc. Regulations are ever changing and yesterday's accepted practice may be today's violation.

The goal of Orion Drilling, LLC's Waste Management Plan is to encourage employees to reduce the volumes and toxicity of any waste we generate. A few things that can be done to accomplish this are:

1. **Waste Reduction** – The best and most cost effective method of dealing with waste is not to generate it in the first place. But, if a waste must be produced, every attempt should be made to make it non-hazardous or less hazardous. Substituting non-hazardous materials for hazardous materials in our processes is one method of waste reduction.

2. **Reuse/ Recycling** – When a waste is generated we need to review both internal and external opportunities to reuse/recycle. Sometimes common trash or refuse has recycling value; such as paper products, used oil, etc.

3. **Disposal** – This is the last choice and should be used when we have exhausted all other economic possibilities. Remember that through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Orion Drilling, LLC retains some responsibility for many items we send for disposal.
REGULATORY OVERVIEW

Resource Conservation and Recovery Act (RCRA)

The Environmental Protection Agency (EPA) enacted RCRA in 1976 to establish procedures for identifying wastes as either hazardous or non-hazardous and to establish “cradle-to-grave” waste tracking. A waste is identified as hazardous by characteristic or by checking a regulatory list. Hazardous wastes are regulated under RCRA Subtitle C. Environmental Protection Agency (EPA) has authority to enforce its own hazardous waste rules.

When RCRA was amended in 1980, Congress decided that wastes generated by oil and gas exploration operations required special consideration. In 1980 RCRA exempted oil industry waste from regulation under Subtitle C. these wastes are regulated under other regulations, usually at the state level.

Non hazardous wastes are regulated under RCRA Subtitle D and depend on state controls. States are required to submit to EPA Solid Waste management Plans for approval and funding.

The Order governs management of oil and gas exploration and production waste exempted from RCRA Subtitle C. the order addresses analysis, manifesting, and disposal of NOW (Non-hazardous Waste); the operations and monitoring requirements for commercial facilities; and the construction and closure of production pits and other oilfield pits.

Naturally Occurring Radioactive Material (NORM)

Naturally Occurring Radioactive material (NORM) is regulated by the Department of Environmental Quality under their Air Quality and Radiation Protection Regulations. The regulations establish standards for protection against radiation hazards, define NORM contaminated equipment and sites, address worker exposure limits, address transporting and storage requirements.
WASTE CLASSIFICATION

Orion Drilling, LLC manages exploration activities in the South Texas area. Details concerning waste management practices from these activities are discussed in Section VI on the Waste Information Sheets.

Wastes generated from Orion Drilling, LLC exploration activities include those defined as “hazardous waste”, “non-hazardous oilfield waste”, “solid waste” and “other regulated waste”; whether recycled or dispose.

A. Hazardous Waste – Waste will be classified as hazardous if any of the following conditions exist:

1. The waste is listed as a hazardous waste in 40 CFR 261 or in applicable state hazardous waste regulations.

2. The results of laboratory analysis indicate that the waste meets one of the following criteria specified in the regulations to be classified as characteristically hazardous:

   - Ignitability - D001: flashpoint less than 140º F
   - Corrosively - D002: pH < 2 or pH > 12.5
   - Reactivity - D003: releases harmful quantities of cyanide or sulfide gas
   - Toxicity - D004 through D0043: leaches certain metals, organic, chlorinated organic, pesticides, or herbicides.

3. The Company may require that the waste be treated as a hazardous waste even though it is not a regulatory requirement.

B. Non-hazardous Oilfield Waste (NOW) – The Environmental Protection Agency (EPA) has very specific criteria to determine when a waste is considered a “NOW”, and whether the waste in question came from down hole.

Some waste meeting the definition of NOW, such as oil absorbent booms and pads, are tested and managed as Industrial Waste because some of the approved commercial facilities cannot properly handle them.
C. **Solid Waste** – Solid Waste has several subcategories as listed below. Sometimes this category of waste is referred to as non-hazardous waste; note this is different from Non-hazardous Oilfield Waste.

1. **Commercial Solid Waste** – This includes all types of solid waste generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities. This does not include residential solid waste or industrial solid waste.

2. **Construction / Demolition Debris** – Construction/ Demolition Debris is non-hazardous and is generally considered not water-soluble; includes metal, concrete, brick, asphalt, roofing materials, sheet rock, shingles, and lumber. This does not include asbestos-contaminated waste, white goods, furniture, trash or treated lumber.

3. **Garbage** – Solid waste that includes animal and vegetable matter from the handling, preparation, cooking, and serving of foods. This does not include industrial solid waste.

4. **Industrial Solid Waste** – Solid waste generated by a manufacturing, industrial, or mining process; or solid waste contaminated by such a process. Examples of industrial solid waste include blasting media, anthracite filter media, chemical or oil contaminated articles, contaminated soil, laboratory wastes molecular sieves, spent filters, off-spec chemicals (non-hazardous), spent calcium chloride desiccant, and spent filters. Generators must apply for a Waste Generator Identification number. Generators must submit analysis or process knowledge to confirm the waste is not hazardous waste and obtain an assigned industrial waste code prior to disposing of the waste.

5. **Residential Solid Waste** – Any solid waste derived from households. Households include family housing, hotels and motels, bunkhouses, crew quarters, campgrounds and day-use recreation areas.


D. **Other Regulated Wastes** – Wastes included in this category are asbestos, which is regulated by the Air Quality Division; NORM, which is regulated by the Radiation Protection Division; and PCB waste, which is regulated under the Toxic Substances Control Act (TSCA).

E. **Excluded Wastes** – Waste discharged through a effluent system or to a public sewage treatment unit (i.e., produced water, drilling fluids discharged onsite, sewage treatment effluent, etc.) is excluded from this Waste Management Plan.
Waste Manifests

A generator is required to provide manifests or shipping papers for all wastes leaving their facility. Hazardous waste is transported using a Uniform Hazardous Manifest. Non hazardous Oilfield Waste (NOW) is transported using a Shipping Control Ticket. Other industrial and solid waste is transported using regular shipping papers; shipping notice or, as appropriate. In the case of hazardous waste the generator is also required to maintain, for a minimum of three years, documents related to:

a. Date hazardous wastes are moved into or out of the Hazardous Waste Accumulation site.

b. Results of inspections of the hazardous Waste Accumulation Site.

c. All accidents or incidents involving hazardous wastes.

For all other wastes the generator is required to keep the manifest or shipping paper three years from the time of disposal.
WASTE INFORMATION SHEETS
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# ASBESTOS

## Regulatory Status:
Asbestos removal is regulated by the Clean Air Act (CAA), and the Occupational Safety and Health Administration (OSHA). Asbestos disposal is regulated by the Environmental Protection Agency. Material containing greater than 1% asbestos is regulated as Asbestos Containing Material.

## Recommended Management:
- Recognition of asbestos is difficult. All asbestos material or potential asbestos material should be tested for accurate determination. Because material is disposed in a landfill, we have to comply with disposal regulations. Recommend labeling material left in place after testing as ASBESTOS or NON-ASBESTOS.
- Demolition or renovation activities involving asbestos must be performed by an approved Asbestos Abatement Contractor. There are many regulations involved in the actual removal process, consult other references.
- From a waste standpoint, an Asbestos Disposal Verification Form (ADVF) must be completed and signed by ORION DRILLING COMPANY LP before relinquishing the asbestos to the transporter. A copy of the ADVF will be returned to ORION DRILLING COMPANY LP after completion by the waste disposer and after the State receives their copy.

## Recommended Storage:
- Storage is not recommended. Asbestos should be disposed of as soon as practical.
- If it has to be stored ensure it is properly packaged in a labeled, secured area away from the public where it will not be subject to disturbance or tampering.
- Label should read DANGER, ASBESTOS, CANCER AND LUNG DISEASE HAZARD, AUTHORIZED PERSONNEL ONLY, RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA.

## Pre-Transport Requirements:
- Asbestos containers must be labeled with ORION DRILLING COMPANY LP, the location where generated and proper DOT shipping information.
- Asbestos must be taken to a landfill approved to accept asbestos containing material.

## Transportation Documents:
- Asbestos requires an ADVF and a Shipping notice.
- Waste shipment records for asbestos must be maintained for at least two years.
- Transporters must post a sign stating “DANGER, ASBESTOS DUST HAZARD, CANCER AND LUNG DISEASE HAZARD, AUTHORIZED PERSONNEL ONLY.” When transporting asbestos, it must be kept away from foodstuffs and clear of living quarters. It must be transported in private closed motor vehicles, or closed freight containers. If transporting by boat, it must be stored on or under deck.

## Package Suggestions:
- The asbestos must be adequately wetted (to prevent particulate emissions) and contained in leak-tight, clear, transparent containers or wrapping that is dust and sifts proof.
- Each package may not exceed 66 pounds.
- The leak-tight, clear, transparent containers or wrapping may be put in strong outside fiberboard or wooden boxes; metal, fiber or plastic drums if the loading and unloading is of concern.
- Labels should include: ORION DRILLING COMPANY LP LOCATION GENERATED; CLASS 9; and DANGER, CONTAINS ASBESTOS FIBERS, AVOID CREATING DUST, CANCER AND LUNG DISEASE HAZARD.

## Analytical Test:
- Suspected asbestos material should be analyzed by a third party laboratory experienced in polarized light microscopy. X-ray Power Diffraction is only acceptable when asbestos concentrations exceed 10%.

## Spill Handling:
- Asbestos is a hazardous substance with a reportable quantity of 1 pound. Follow Hazardous Substance spill reporting requirements as detailed in Orion Drilling, LLC’s SPCC Manual.

## For Additional Information:
- Consult MSDS or your Safety Representative.
CARBONAIRE BATTERIES
(Synonyms – Wet Alkaline Primary, Air Depolarized, Zinc Air)

REGULATORY STATUS:
Regulations recognize these batteries as HAZARDOUS WASTE. They ARE NOT recyclable because of the mercury.

RECOMMENDED MANAGEMENT:
- These batteries are HAZARDOUS due to the characteristic of pH and EP toxicity for mercury.
- Brand Names: Edison Carbonaire ST-33/ST-22Y-CELLS (The new batteries are ST-33NT/ST-22 NT and do not fall in this same category.) SAFT’s ANRD/VI 33/3 ANS/2 ANS. Union Carbide’s Type UC Primary Battery.

RECOMMENDED STORAGE:
: As batteries are removed from service they should be shipped using a Uniform Hazardous Waste Manifest, identify yourself as an EXEMPT SQG. If unable to identify battery, ship for evaluation using a shipping notice.
: The 90-day accumulation period does apply. Extensions must be requested in writing, and are only good for 30 days at a time. For proper waste management, enter stored batteries in the HWAS Logbook with a storage date.
- PALLETs: Used batteries returned for manufacturer regeneration may be stored on pallets within the HWAS, provided such storage is protective of human health and the environment.
- DRUMs: Drums can be used for batteries not suitable for pallet transport. Each cell cap should be tightly secured. If leaking, batteries should be placed inside plastic bags, double or triple bagged. If necessary, vermiculite may be used to provide cushioning to prevent battery movement.
- Label with yellow “Hazardous Waste” label, mark Accumulation Date, drum or other ID Number, Proper DOT info, and hazardous Waste Generator ID Number.

PRE-TRANSPORT REQUIREMENTS:
: Ship by authorized DOT hazardous materials transporter.
: Ship by authorized DOT hazardous materials transporter with an EPA Hazardous Waste Transporter ID Number.

TRANSPORTATION DOCUMENTS:
- Use a uniform hazardous waste manifest. Save one copy in your waste folder “Carbonaire Batteries”.
- DOT proper shipping info: WASTE BATTERIES, WET, FILLED WITH ALKALI, 8, UN2795, PGIII, LABEL – CORROSIVE
- Include in Remarks Section: EMERGENCY RESPONSE NUMBER 1-800-424-9300
  Attach appropriate MSDS sheets (referencing UHWM number).

PACKAGE SUGGESTIONS:
- Stand batteries on pallet, with caps sealed, shorter batteries surrounded by taller batteries. Height should be less than 1½ times pallet width. Protect batteries against short-circuiting.
- Strap around the batteries.
- Place plywood or chipboard on the batteries. Strap around the board and through the pallet in two directions, two straps in each direction.

ANALYSTICAL TEST:
- Batteries must be analyzed by TCLP test prior to disposal.

SPILL HANDLING:
- Spills of caustic material should be neutralized with a weak acid. Use absorbent materials designed for caustic spills.

FOR ADDITIONAL INFORMATION:
- Read MSDS for appropriate battery.
LEAD ACID BATTERIES

REGULATORY STATUS:
• This hazardous waste is considered.

RECOMMENDED MANAGEMENT:
• Used lead acid batteries SHOULD BE RECYCLED at a “Selected For Use” facility.
  
  DO NOT SEND ANY BATTERIES CONTAINING MERCURY – Batteries with mercury will be returned at our expense.

RECOMMENDED STORAGE:
As batteries are removed from service, ship using a shipping notice.
• PALLETS: Used batteries returned for manufacturer regeneration may be stored on pallets within the HWAS, provided such storage is protective of human health and the environment.
• DRUMS: Drums can be used for batteries not suitable for pallet transport. Each cell cap should be tightly secured. If leaking, batteries should be placed inside plastic bags, double or triple bagged. If necessary, vermiculite may be used to provide cushioning to prevent battery movement.
• The 90-day storage limit for hazardous waste does not apply.
• Post a sign on pallet or battery storage area indicating “BATTERIES STORED FOR EVALUATION”.

PRE-TRANSPORT REQUIREMENTS:
: Ship by authorized DOT hazardous materials transporter.
: Ship by authorized DOT hazardous materials transporter.

TRANSPORTATION DOCUMENTS:
• Use a ORION DRILLING, LLC shipping notice and save one copy in your waste folder “Lead Acid Batteries”.
• DOT proper shipping info: BATTERIES, WET, FILLED WITH ALKALI, 8, UN2795, PGIII, LABEL – CORROSIVE
• Include in Remarks Section:
  EMERGENCY RESPONSE NUMBER 1-800-424-9300
  Attach appropriate MSDS sheets (referencing SBL number).
  Include SBL Recycler’s Return Material Authorization Number or other cross-reference number.
  Include note “BATTERIES FOR EVALUATION/ REGENERATION”.

PACKAGE SUGGESTIONS:
• Stand batteries on pallet, with caps sealed, shorter batteries surrounded by taller batteries. Height should be less than 1¼ times pallet width. Protect batteries against short-circuiting.
• Strap around the batteries.
• Place plywood or chipboard on the batteries. Strap around the board and through the pallet in two directions, two straps in each direction.

ANALYSTICAL TEST:
• Lead acid batteries are not tested.

SPILL HANDLING:
• Spills of caustic material should be neutralized with a weak acid. Use absorbent materials designed for caustic spills.

FOR ADDITIONAL INFORMATION:
• Read MSDS for appropriate battery.
### NI-CAD BATTERIES

**REGULATORY STATUS:**
- These are considered Group II Recyclable Materials. Regulations **do not** consider used Ni-Cad batteries hazardous waste if they are

**RECOMMENDED MANAGEMENT:**
- Used Ni-Cad batteries **SHOULD BE RECYCLED** at an Orion Drilling, LLC “Selected For Use” facility.
- **DO NOT SEND ANY BATTERIES CONTAINING MERCURY** – Batteries with mercury will be returned at our expense.

**RECOMMENDED STORAGE:**
- As batteries are removed from service, ship using a shipping notice.
- **PALLETS:** Used batteries returned for manufacturer regeneration may be stored on pallets within the HWAS, provided such storage is protective of human health and the environment.
- **DRUMS:** Drums can be used for batteries not suitable for pallet transport. Each cell cap should be tightly secured. If leaking, batteries should be placed inside plastic bags, double or triple bagged. If necessary, vermiculite may be used to provide cushioning to prevent battery movement.
- The 90-day storage limit for hazardous waste **does not** apply.
- Post a sign on pallet or battery storage area indicating “BATTERIES STORED FOR EVALUATION”.

**PRE-TRANSPORT REQUIREMENTS:**
- Ship by authorized DOT hazardous materials transporter.
- Ship by authorized hazardous materials transporter.

**TRANSPORTATION DOCUMENTS:**
- Use an ORION DRILLING, LLC shipping notice and save one copy in your waste folder “Ni-Cad Batteries”.
- DOT proper shipping info: **BATTERIES, WET, FILLED WITH ALKALI, 8, UN2795, PGIII, LABEL – CORROSIVE**
- Include in Remarks Section: EMERGENCY RESPONSE NUMBER 1-800-424-9300
- Attach appropriate MSDS sheets (referencing SBL number).
- Include on SBL NIFE’s RMA number.
- Include note “BATTERIES FOR EVALUATION/ REGENERATION”.

**PACKAGE SUGGESTIONS:**
- Stand batteries on pallet, with caps sealed, shorter batteries surrounded by taller batteries. Height should be less than 1½ times pallet width. Protect batteries against short-circuiting.
- Nail 1” x 2” furring strips around outer edge of the batteries to prevent movement.
- Strap around the batteries.
- Place plywood or chipboard on the batteries. Strap around the board and through the pallet in two directions, two straps in each direction.

**ANALYSTICAL TEST:**

**SPILL HANDLING:**
- Spills of caustic material should be neutralized with a weak acid. Use absorbent materials designed for caustic spills.

**FOR ADDITIONAL INFORMATION:**
- Read MSDS for appropriate battery.
NON-TOXIC ALKALI BATTERIES
Brand Names: Edison ST-NT

REGULATORY STATUS:
- This hazardous waste is considered Group II Recyclable Materials. Regulations do not consider used non-toxic alkali batteries hazardous waste if they are returned to a battery manufacturer for regeneration. They are exempt from Subchapter B (i.e. manifest requirement), except for storage.

RECOMMENDED MANAGEMENT:
- Used Ni-Cad batteries SHOULD BE RECYCLED at a Orion Drilling, LLC “Selected For Use” facility.

RECOMMENDED STORAGE:
As batteries are removed fro service, ship using a shipping notice.
- PALLETS: Used batteries returned for manufacturer regeneration may be stored on pallets within the HWAS, provided such storage is protective of human health and the environment.
- DRUMS: Drums can be used for batteries not suitable for pallet transport. Each cell cap should be tightly secured. If leaking, batteries should be placed inside plastic bags, double or triple bagged. If necessary, vermiculite may be used to provide cushioning to prevent battery movement.
- The 90-day storage limit for hazardous waste does not apply.
- Post a sign on pallet or battery storage area indicating “BATTERIES STORED FOR EVALUATION”.

PRE-TRANSPORT REQUIREMENTS:
: Ship by authorized DOT hazardous materials transporter.

TRANSPORTATION DOCUMENTS:
- Use a ORION DRILLING, LLC shipping notice and save one copy in your waste folder “Ni-Cad Batteries”.
- DOT proper shipping info: BATTERIES, WET, FILLED WITH ALKALI, 8, UN2795, PGIII, LABEL – CORROSIVE
- Include in Remarks Section:
  EMERGENCY RESPONSE NUMBER 1-800-424-9300
  Attach appropriate MSDS sheets (referencing SBL number).
  Include on SBL NIFE’s RMA number.
  Include note “BATTERIES FOR EVALUATION/ REGENERATION”.

PACKAGE SUGGESTIONS:
- Stand batteries on pallet, with caps sealed, shorter batteries surrounded by taller batteries. Height should be less than 1½ times pallet width. Protect batteries against short-circuiting.
- Strap around the batteries.
- Place plywood or chipboard on the batteries. Strap around the board and through the pallet in two directions, two straps in each direction.

ANALYSTICAL TEST:
- Batteries not on SAFT NIFE’s list should be TCLP tested.

SPILL HANDLING:
- Spills of caustic material should be neutralized with a weak acid. Use absorbent materials designed for caustic spills.

FOR ADDITIONAL INFORMATION:
- Read MSDS for appropriate battery.
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<td><strong>REGULATORY STATUS:</strong></td>
</tr>
<tr>
<td>• This waste meets the solid waste definition of garbage. As a liquid it cannot be land filled.</td>
</tr>
<tr>
<td><strong>RECOMMENDED MANAGEMENT:</strong></td>
</tr>
<tr>
<td>• Cooking oil / grease / lard should be collected and containerized and disposed with other domestic refuse or garbage.</td>
</tr>
<tr>
<td><strong>RECOMMENDED STORAGE:</strong></td>
</tr>
<tr>
<td>• Containerized cooking oil should be stored in a manner that does not cause a nuisance, minimizes odors, prevents release to the environment and keeps out insects and water.</td>
</tr>
<tr>
<td><strong>PRE-TRANSPORT REQUIREMENTS:</strong></td>
</tr>
<tr>
<td>• Wipe excess cooking oil or grease from outside of container. Clearly and boldly mark or stencil container with the words “COOKING OIL”.</td>
</tr>
<tr>
<td><strong>TRANSPORTATION DOCUMENTS:</strong></td>
</tr>
<tr>
<td>• This is not a DOT hazardous material.</td>
</tr>
<tr>
<td>• Transport with a Orion Drilling, LLC shipping notice.</td>
</tr>
<tr>
<td><strong>PACKAGE SUGGESTIONS:</strong></td>
</tr>
<tr>
<td>• Used cooking oil can be containerized in a properly and clearly marked.</td>
</tr>
<tr>
<td><strong>SPILL HANDLING:</strong></td>
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<tr>
<td>• Follow appropriate spill response and detailed in Orion Drilling, LLC’s SPCC Plan.</td>
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<td>• Absorbents should be drained and disposed as solid waste.</td>
</tr>
<tr>
<td><strong>FOR ADDITIONAL INFORMATION:</strong></td>
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<tr>
<td>• None</td>
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<tr>
<td><strong>CREOSOTE PILINGS</strong></td>
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<tr>
<td><strong>REGULATORY STATUS:</strong></td>
</tr>
<tr>
<td>• This waste is managed as an Industrial Solid Waste based on TCLP results. Disposal is subject to EPA Solid Waste Regulations.</td>
</tr>
<tr>
<td><strong>RECOMMENDED MANAGEMENT:</strong></td>
</tr>
<tr>
<td>• Others may donate reusable creosote pilings for use. Donations should be documented on a Material Transfer or similar document.</td>
</tr>
<tr>
<td>• Orion Drilling, LLC will contract disposal directly. Disposal should <strong>NOT</strong> be arranged through a third party broker or demolition contractor.</td>
</tr>
<tr>
<td>• Open burning of creosote pilings is prohibited.</td>
</tr>
<tr>
<td><strong>RECOMMENDED STORAGE:</strong></td>
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<tr>
<td>• Creosote pilings removed during facility maintenance or demolition may be stored in a manner that prevents the waste protected from rain accumulation.</td>
</tr>
<tr>
<td><strong>PRE-TRANSPORT REQUIREMENTS:</strong></td>
</tr>
<tr>
<td>• Waste generated should dispose through an approved Orion Drilling, LLC contact disposal vendor. The material can be donations.</td>
</tr>
<tr>
<td><strong>TRANSPORTATION DOCUMENTS:</strong></td>
</tr>
<tr>
<td>• “Creosote pilings” or “treatment timber” is not a DOT listed hazardous material. Ship by using Orion Drilling, LLC Shipping notice or as appropriate.</td>
</tr>
<tr>
<td>• Transport to approve landfills using landfill’s solid waste manifest. Include your solid waste generator number, solid waste code, and solid waste transporter and disposer number on manifest. Retain records for 2 years.</td>
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<tr>
<td><strong>PACKAGE SUGGESTIONS:</strong></td>
</tr>
<tr>
<td>• See Recommended Storage above.</td>
</tr>
<tr>
<td><strong>ANALYTICAL TEST:</strong></td>
</tr>
<tr>
<td>• Creosote pilings are subject to TCLP testing to prove they are non-hazardous. Primary constituents that may cause them to fail TCLP are creosols.</td>
</tr>
<tr>
<td><strong>SPILL HANDLING:</strong></td>
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<tr>
<td>• Unauthorized spills of creosote pilings shall immediately be cleaned up or otherwise rendered safe and reported to the EPA Solid Waste Division.</td>
</tr>
<tr>
<td><strong>FOR ADDITIONAL INFORMATION:</strong></td>
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<tr>
<td>• Read MSDS for creosote treated lumber.</td>
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## DOMESTIC REFUSE (GARBAGE)

### REGULATORY STATUS:
- Domestic Refuse or Garbage as simple Solid Waste. Defines garbage as animal and vegetable matter from the handling, preparation, cooking and serving of foods. Garbage DOES NOT include Industrial Solid Waste.

### RECOMMENDED MANAGEMENT:
- Identify a person (or persons for 7/7) who is in charge of supervising disposal and should post an appropriate Waste Management Plan.

### RECOMMENDED STORAGE:
- Containerized waste should be stored in a manner that does not cause a nuisance or a health hazard. Containers should prevent access by rodents and insects, minimize the escape of odors and keep out water.

### PRE-TRANSPORT REQUIREMENTS:
- Bodies of trash shall be covered to prevent waste from falling or blowing on vehicle.

### TRANSPORTATION DOCUMENTS:
- Garbage transported should be documented on Orion Drilling, LLC.

### PACKAGE SUGGESTIONS:
- Pack garbage in a suitable container as determined by your supervisor.

### ANALYTICAL TEST:
- None

### SPILL HANDLING:
- Unauthorized spills of garbage shall immediately be cleaned up or otherwise rendered safe and reported.

### FOR ADDITIONAL INFORMATION:
EMPTY DRUMS

REGULATORY STATUS:
- Empty drums are industrial solid waste regulated.

RECOMMENDED MANAGEMENT:
The regulatory definition of an “empty” drum is that all waste have been removed using the normal means of removing materials from that type of drum, and that less than 1” of material remains in the drum, or less than 3% by weight of the drum’s total capacity remains (40 CFR 261.7(b)).

For drums containing liquid, a better definition is that of “truck driver empty”. That is, when placed on edge and shaken, no fluid should be heard splashing in the drum. This “truck driver empty” test is in reference to the vendor truck driver procedure performed prior to acceptance or refection of drums.

When the drum contains a residue that is an acute hazardous waste, as defined in 40 CFR 261.33( c ), it must be triple rinsed. Where possible, reinstate from drums should be used in the system in the manner that the pure product was intended to be used. Otherwise, the reinstate may have to be handled as hazardous waste and shipped in for proper disposal.

- The vendors should reclaim empty metal, poly or plastic drums where possible.
- If not reclaimed by the vendors, empty metal drums can be collected and sent to the yard facility.
- Empty metal drums can be crushed and placed in metal bin for metal recycle.

RECOMMENDED STORAGE:
- Rough handling of drums, when containing chemicals and when empty, should be avoided because disposal of damaged drums is difficult. The label should stay on each drum so that its contents are known.
- Bungs should remain with drum before, during and after use.
- Drums should be stored out of, or above standing water, and in a position not to collect rainwater.

PRE-TRANSPORT REQUIREMENTS:
The drum must have all of the warning labels it had when it was full. An “EMPTY” label may be affixed.

TRANSPORTATION DOCUMENTS:
The DOT shipping paper requires the following note for drums that are empty, but have a residue “RESIDUE: Last Contained” preceding the DOT Proper Shipping Name. in addition, the letters “RQ” must be added for a drum that still contains the reportable quantity of a hazardous substance.

PACKAGE SUGGESTIONS:
All containers shall provide containment of the wastes, as well as keep out water.

ANALYTICAL TEST:
- None

SPILL HANDLING:
For spills of pure chemical, reference MSDS sheet.

FOR ADDITIONAL INFORMATION:
Empty drums that are reused for different materials must have all original markings removed or blocked out. The second material must be compatible with the contents originally in the drum label and mark the drum and describe on the shipping paper the second material. There can be no incompatible residues, ruptures, punctures or other damage that weakens the drums structural integrity.
REGULATORY STATUS:
Regulated by Radiation Protection Division. All wastes and accumulations from tanks, vessels and other equipment which have external or internal surface readings greater than 25 micro roentgens per hour (25 uR/hr) above background should be handled as NORM contaminated wastes.

RECOMMENDED MANAGEMENT:
EQUIPMENT should be marked and identified as NORM contaminated if external or internal radiation levels exceed 25 .uR/hr above background.

LAND areas with meter screening surveys greater than 25 .uR/hr above background shall be identified as NORM contaminated when laboratory analyses of soil samples indicate that the concentration for Radium-226 or Radium-228, averaged over any 100 square meters, exceed background levels by more than the following:

- 5 pCi/gm averaged over the first 15 cm of soil below the surface, and/or 15 pCi/gm over each subsequent 15 cm thick layer of soil if Radon emanation rates greater than 20 pCi/m²-sec or
- 30 pCi/gm averaged over a maximum depth of 15 cm of soil below the surface if Radon emanation rates are less than or equal to 20 pCi/m²-sec.

NOTE 1: any waste emitting a radiation level greater than .uR/hr above background should be analyzed by a certified radiochemistry laboratory for Radium-226 prior to disposal or release to the environment.

NOTE 2: All decontamination of NORM contaminated equipment should be performed by a State of “specifically licensed” contractor that is also on Orion Drilling, LLC Acceptable for Use List.

RECOMMENDED STORAGE:
- For long-term storage, greater than 90 days, store NORM in DOT approved plastic drums or DOT approved metal drums with a plastic liner due to the corrosive properties of scale.
- For short-term storage, less than 90 days, NORM may be stored in DOT approved plastic or metal drums, or approved cutting boxes. All containers shall be secured in a manner to prevent release of NORM to the environment.
- If the drum of NORM is not in good condition, the drum should be placed in an over pack.
- The containers should be stacked in such fashion that each identification label can be read from the access isle.
- The hottest drums should be placed in the middle of other drums to minimize perimeter exposure levels.
- Drums should be stored on pallets and handled carefully.
- Each radiation area shall be posted with signs bearing the 3-blade caution symbol and the words “CAUTION RADIOACTIVE MATERIALS”.
- Areas where containers of NORM are stored should be inspected quarterly and records should be maintained indefinitely.

PRE-TRANSPORT REQUIREMENTS:
- Contact the desired storage/ disposal location prior to transporting NORM. Verify location will accept NORM.
- All drums should be properly labeled prior to shipping by stenciling the following: Generator Name, Facility of Origin, Maximum Surface Radiation Level, Content, Description, Unique Number of Identification Number, “Radioactive Material, Low Specific Activity, n.o.s., 7, UN 2912”

<table>
<thead>
<tr>
<th>.uR/hr On surface</th>
<th>.uR/hr 3.3 ft from Surface</th>
<th>Transport Index</th>
<th>DOT LABEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;500</td>
<td>N/A</td>
<td>N/A</td>
<td>White – I</td>
</tr>
<tr>
<td>500&lt;RL≤50,000</td>
<td>≤1,000</td>
<td>≤1.0</td>
<td>Yellow – II</td>
</tr>
<tr>
<td>&gt;50,000</td>
<td>&gt;1,000</td>
<td>&gt;1.0</td>
<td>Yellow – III</td>
</tr>
</tbody>
</table>

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## TRANSPORTATION DOCUMENTS:
Shipping papers must accompany all shipments of NORM. The shipping papers should include Reportable Quantity, Radioactive Material, Low Specific Activity, n.o.s. (isotope identity, Ra-226 and/or Ra-228), 7, UN 2912, number of drums, weight, solid, micro curies, category of label (Ex. Radiation White – 1) and the transportation index = N/A or ≤ 1.0 (rounded to first decimal place).

- An MSDS or equivalent document should accompany shipments of NORM.
- Shipments of NORM waste shall also be transported under the exclusive use provisions of 49 CFR SS 173.425.
- A NORM Waste Manifest must also accompany all shipments of NORM. Contact the Safety Department for instruction on how to fill out the manifest.
- Although a NORM Waste manifest must accompany all shipments of NORM for tracking purposes, the form does not have to be submitted to the State EPA.
- Recommend manifest records be kept indefinitely.

## PACKAGING SUGGESTIONS:
- NORM should be packaged in DOT approved drums.

## SPILL HANDLING:
- The reportable quantity for radium is 0.053 curies; however, in the event of an accident or unusual occurrence at one of Orion Drilling, LLC State NORM storage facilities, the person in charge will immediately notify: *Environmental Protection Agency.*
- In the event it is necessary to call emergency medical, fire or police to the scene, they will be advised, by the person in charge, of the presence of NORM, exposure levels and necessary health and safety precautions.
- In the event of an accident or unusual occurrence at one of our OCS NORM storage facilities, the person in charge should immediately notify the contact list provided in the SPCC Manual. It is not necessary to contact EPA for NORM accidents.
- All decontamination or clean up required at Orion Drilling, LLC facility will be performed by Orion Drilling, LLC Acceptable for use contractor “specifically licensed” to do such work.

## FOR ADDITIONAL INFORMATION:
- Consult the Material Safety Data Sheet or your Environmental or Safety Representative.
# OILY ABSORBENT BOOM & PADS (NOT NOW)

## REGULATORY STATUS:
- Absorbent booms and pads not suitable for management at a disposal facility are managed as an Industrial Solid Waste based on TCLP results.

## RECOMMENDED MANAGEMENT:
- Oiled absorbent booms and pads may be cleaned for reuse by Orion Drilling, LLC “Approved for Use” facility.
- Regulations prohibit open burning.
- Orion Drilling, LLC should dispose of oiled absorbent booms and pads not recycled at Orion Drilling, LLC “Approved for Use” Facility.

## RECOMMENDED STORAGE:
- Drained booms and pads may be stored in a metal open head drum. Protect from rain accumulation. Properly and clearly mark drum with the words “ABSORBENT BOOM/PADS”. There is not time on storage.
- Review profile to verify if absorbents may be commingled with other industrial solid waste such as used filters or oily rags. Store in roll-offs or other appropriate container. Protect from rainfall. There is not time limit on storage.

## PRE-TRANSports REQUIREMENTS:
- Drain containers of ALL free liquids.

## TRANSPORTATION DOCUMENTS:
- Ship by using Orion Drilling, LLC Shipping notice.
- Transport to approved landfill using landfill’s Solid Waste Manifest. Include your solid waste generator number, solid waste code, solid waste transporter number and disposer number on manifest. Retain records for 2 years.

## PACKAGE SUGGESTIONS:
- See Recommended Storage above.

## ANALYTICAL TEST:
- Absorbent booms & pads are subject to TCLP testing to prove they are non-hazardous.

## SPILL HANDLING:
- Unauthorized spills of oil absorbent booms & pads shall immediately be cleaned up or otherwise rendered safe.

## FOR ADDITIONAL INFORMATION:
- Read MSDS for crude oil.
- Absorbent booms and pads contaminated with chemical other than crude oil may require handling as Hazardous Waste.
# OILY RAGS

## REGULATORY STATUS:
- This waste is managed as an Industrial Solid Waste based on TCLP results. Disposal is subject to EPA Solid Waste Regulations.

## RECOMMENDED MANAGEMENT:
- Oily rags can be reused by participating in an industrial laundry service, such as provided by CINTAS or similar company.
- Oily rags should be drained of **ALL** free liquids prior to disposal.

## RECOMMENDED STORAGE:
- Drained oily rags may be stored in a metal open head drum. Protect from rain accumulation. Properly and clearly mark drum with the words “OILY RAGS”. There is no time limit on storage.
- Review profile to verify if oily rags may be commingled with other industrial solid waste such as used filters or absorbents. Store in roll-offs or other appropriate container. Protect from rainfall. There is no time limit on storage.

## PRE-TRANSPORT REQUIREMENTS:
- Drain off **ALL** free liquids, then package in proper container.

## TRANSPORTATION DOCUMENTS:
- Ship by using Orion Drilling, LLC Shipping notice, as appropriate.
- Transport to approved landfill using landfill’s Solid Waste Manifest. Include your solid waste generator number, solid waste code, solid waste transporter number and disposer number on manifest. Retain records for 2 years.

## PACKAGE SUGGESTIONS:
- See Recommended Storage above.

## ANALYTICAL TEST:
- Oily rags are subject to TCLP testing to prove they are non-hazardous.

## SPILL HANDLING:
- Unauthorized spills of oil absorbent booms & pads shall immediately be cleaned up or otherwise rendered safe.

## FOR ADDITIONAL INFORMATION:
- Read MSDS for crude oil.
<table>
<thead>
<tr>
<th><strong>PAINT</strong></th>
</tr>
</thead>
</table>

**REGULATORY STATUS:**
- Depending on chemical composition, waste paint is either Industrial Solid Waste or Hazardous Waste.

**RECOMMENDED MANAGEMENT:**
- Typically paint becomes waste to Orion Drilling, LLC either because it is past its expiration date and we would not use it to protect our structures or the containers are severely deteriorated. It is acceptable to donate this paint to another user, as long as we document the donation with a material transfer or similar document.
- Minimize generation of waste paint by purchasing only the quantity you need and painting all products received.

**RECOMMENDED STORAGE:**
- Paint for donation should be stored in the same manner as usable product until transported.
- Depending on chemical composition, paint for disposal may have to be managed as hazardous waste. Store paint in designed paint locker.

**PRE-TRANSPORT REQUIREMENTS:**
- Inspect containers to verify they are in good condition suitable to enter the transportation without leaking or bursting. Repackage or over pack where necessary.
- Paint for Disposal – If paint is hazardous waste disposal arrangements must be made and confirmed prior to shipping.

**TRANSPORTATION DOCUMENTS:**
- Paint for Donations – Ship by using same type paperwork as when received: for non-hazardous paint and Shipping notice for hazardous paint.
- DOT proper shipping info: Refer to MSDS on original transportation documents.
- Paint for Disposal – Non-hazardous waste paint may be transported with a shipping notice.

**PACKAGE SUGGESTIONS:**
- See Pre-Transport Requirements above.

**ANALYTICAL TEST:**
- Depending on its final disposition waste paint may be subject to TCLP analysis. If uncontaminated, the MSDS and RCI analysis may be sufficient to characterize the waste for disposal.

**SPILL HANDLING:**
- If the paint has associated RQ follow the hazardous substance spill reporting requirements as detailed in Orion Drilling, LLC’s SPCC Manual.
- Absorbents, pads and contaminated soil must be managed as industrial Solid Waste.

**FOR ADDITIONAL INFORMATION:**
- Read MSDS for appropriate paint.
- Liquids cannot be land filled.
# PAINT SOLVENTS

## REGULATORY STATUS:
- Most waste paint solvents are hazardous waste. Management and disposal are regulated by federal and state regulations.

## RECOMMENDED MANAGEMENT:
- Use paint solvents to clean equipment at the end of the day. Capture and reuse as paint solvent the next day or the next time that particular color is painted.

## RECOMMENDED STORAGE:
- Store “tinted” paint solvent in the same manner as original product, appropriately label container.
- Paint solvent for disposal may be disposed along with used oil.

## PRE-TRANSPORT REQUIREMENTS:
- Inspect containers to verify they are in good condition suitable to enter the transportation without leaking or bursting. Repackage or over pack where necessary.
- Paint for Disposal – If paint is hazardous waste disposal arrangements must be made and confirmed prior to shipping.

## TRANSPORTATION DOCUMENTS:
- Paint for Donations – Ship by using same type paperwork as when received: for non-hazardous paint and Shipping notice for hazardous paint.
- DOT proper shipping info: Refer to MSDS on original transportation documents.
- Paint for Disposal – Non-hazardous waste paint may be transported with a shipping notice.

## PACKAGE SUGGESTIONS:
- See Pre-Transport Requirements above.

## ANALYTICAL TEST:
- Depending on its final disposition waste paint may be subject to TCLP analysis. If uncontaminated, the MSDS and RCI analysis may be sufficient to characterize the waste for disposal.

## SPILL HANDLING:
- If the paint has associated RQ follow the hazardous substance spill reporting requirements as detailed in Orion Drilling, LLC’s SPCC Manual.
- Absorbents, pads and contaminated soil must be managed as industrial Solid Waste.

## FOR ADDITIONAL INFORMATION:
- Read MSDS for appropriate paint.
## RECYCLABLE SOLID WASTE
### Aluminum, Cardboard, Glass, Newspaper, Paper & Plastic

<table>
<thead>
<tr>
<th>REGULATORY STATUS:</th>
<th>Orion Drilling, LLC is committed to helping the parishes/county we operate in reaching their goal by having our own recycling program.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECOMMENDED STORAGE:</td>
<td>Segregated, containerized recyclables should be stored in a manner that does not cause a nuisance, prevents access by rodents and insects and keeps out water.</td>
</tr>
<tr>
<td>PRE-TRANSPORT REQUIREMENTS:</td>
<td>Trash baskets should be covered to prevent recyclables from falling or blowing from vehicles.</td>
</tr>
<tr>
<td>TRANSPORTATION DOCUMENTS:</td>
<td>The type and number of containers, as well as type of recyclable, should be noted on the</td>
</tr>
<tr>
<td>PACKAGE SUGGESTIONS:</td>
<td>Package according to guidelines established by your Supervisor.</td>
</tr>
<tr>
<td>ANALYTICAL TEST:</td>
<td>None</td>
</tr>
<tr>
<td>SPILL HANDLING:</td>
<td>Unauthorized spills of recyclable solid waste shall immediately be cleaned-up or otherwise rendered safe.</td>
</tr>
<tr>
<td>FOR ADDITIONAL INFORMATION:</td>
<td>Read MSDS for liquid being filtered.</td>
</tr>
</tbody>
</table>
**SANDBLAST MEDIA (HAZARDOUS)**

<table>
<thead>
<tr>
<th>REGULATORY STATUS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>This waste is managed as Hazardous Waste because it fails TCLP analysis for leachable lead. Disposal is subject to Hazardous Waste Regulations. On-site management and transportation are subject to EPA Hazardous Waste Regulations, depending on Orion Drilling, LLC’s facility location.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECOMMENDED MANAGEMENT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To minimize disposal volumes, blasting media should be recycled whenever practical.</td>
</tr>
<tr>
<td>Spent sandblast media that cannot be recycled/reused should be collected for disposal at a Orion Drilling, LLC &quot;Approved for Use&quot; disposal facility.</td>
</tr>
<tr>
<td>Exercise good housekeeping by removing oil from drip pans, isolating sumps, etc. to prevent blast from becoming contaminated or wet.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECOMMENDED STORAGE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect and contain spent abrasive that falls on solid decks. Store in 55-gallon drums, approved cutting boxes with liner or plastic/vinyl bags. Storage per container is limited to &lt;90 days after initial accumulation in that container.</td>
</tr>
<tr>
<td>Approved transfer facilities with a limit of 10 days.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRE-TRANSPORT REQUIREMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint foreman or coordinator shall call selected disposal facility to schedule pick-up disposal. Confirmation should be in writing.</td>
</tr>
<tr>
<td>Arrange for transport on a vessel with EPA or Hazardous Waste Transporter ID Number.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRANSPORTATION DOCUMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste is manifested from site of origin using a Uniform Hazardous Waste manifest (UHWM). Regulations require manifest retention for 3 years.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PACKAGE SUGGESTIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Recommended Storage above.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANALYTICAL TEST:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling and testing to coincide with waste profile renewal, usually every year.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPILL HANDLING:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The reportable quantity for this waste (D007) is one pound.</td>
</tr>
<tr>
<td>Containerized recovered material immediately.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOR ADDITIONAL INFORMATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read MSDS for blasting media.</td>
</tr>
</tbody>
</table>
# SANDBLAST MEDIA (NON-HAZARDOUS)

## REGULATORY STATUS:
- This waste is managed as Hazardous Waste because it fails TCLP results and MSDS data. Disposal is subject to Solid Waste Regulations.
- Orion Drilling, LLC will collect and contain spent sandblast media that fall on solid decking.

## RECOMMENDED MANAGEMENT:
- Blasting media should be recycled whenever practical.
- Spent sandblast media that cannot be recycled/reused should be collected for disposal at an Orion Drilling, LLC “Approved for Use” disposal facility.
- Exercise good housekeeping by removing oil from drip pans, isolating sumps, etc. to prevent blast from becoming contaminated or wet.

## RECOMMENDED STORAGE:
- Collect and contain non-hazardous spent sandblast media in 55-gallon drums or disposable bulk bags. No time limit on storage.

## PRE-TRANSPORT REQUIREMENTS:
- Minimize exposure to rain. Free liquids cannot be disposed.
- No hazardous spent sandblast media is not a DOT hazardous material.

## TRANSPORTATION DOCUMENTS:
- Ship using the same type paperwork used to receive the new blasting media.
- Transport to approved landfill using landfill’s Solid Waste manifest. Include your solid waste generator number, solid waste code, solid waste transporter number and disposer number on manifest.

## PACKAGE SUGGESTIONS:
- See Recommended Storage above.

## ANALYTICAL TEST:
- Non-hazardous spent sandblast media is subject to TCLP testing to prove it is non-hazardous.

## SPILL HANDLING:
- Unauthorized spills of non-hazardous sandblast media shall immediately be cleaned up or otherwise rendered safe.

## FOR ADDITIONAL INFORMATION:
- Read MSDS for blasting media.
SPENT XEROX TONER

REGULATORY STATUS:
- Spent Xerox Toner from the Versatec plotters or similar equipment that meets both EPA definitions of hazardous waste because the flashpoint is below 140° F.
- This waste is only generated at office locations that have Versatec or similar plotters. This stream is generated in quantities less than 220 pounds/month; therefore generators are classified as Small Quantity Generators (SQG).

RECOMMENDED MANAGEMENT:
- This waste should be recycled through a solvent recovery program run by a Orion Drilling, LLC “Approved for Use Facility”.
- At all times there must be at least one employee either on the premises or on call (i.e. available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified. This employee is the emergency coordinator.

RECOMMENDED STORAGE:
- The office may store this waste on-site for 180 days or less.
- Clearly mark on each container the date accumulation began and label or mark with words “HAZARDOUS WASTE”. The container should also be marked with appropriate hazard communication information.

PRE-TRANSPORT REQUIREMENTS:
- Prior to shipping each container must be marked with proper DOT information and labeled with a yellow “HAZARDOUS WASTE” label.
- Prior to shipping the generator must verify that the selected will accept the waste.
- Ship by authorized DOT hazardous material transporter with a valid EPA or Transporter ID Number.

TRANSPORTATION DOCUMENTS:
- Use a Uniform Hazardous Waste Manifest (UHWM). Make distribution as indicated on back. Save copy for your file, retain 3 years.
- DOT proper shipping info: WASTE COMBUSTIBLE LIQUIED, N.O.S. (Mineral Spirits), NA1993, PGIII, (D001)(ERG #27). Note the RQ for this waste is D001 = 100 pounds and D039 = 100 pounds.

PACKAGE SUGGESTIONS:
- Except for transport by passenger aircraft, the following single packaging are authorized: Steel Drum – 1A1 or 1A2, Aluminum Drum – 1B1 or 1B2, Plastic Drum – 1H1 or 1H2.

ANALYTICAL TEST:
- This waste is typically not analyzed except for Reactivity, Corrosively and Ignitability by at time of profiling. Orion Drilling, LLC profiles this waste based on MSDS and generator knowledge.

FOR ADDITIONAL INFORMATION:
- Read MSDS for appropriate toner solvent.
### USED FILTERS

#### REGULATORY STATUS:
- This waste is managed as Hazardous Waste because it fails TCLP results and MSDS data. Disposal is subject to Solid Waste Regulations.

#### RECOMMENDED MANAGEMENT:
- Used filters should be drained of **ALL** free liquids prior to packaging for disposal.
- Orion Drilling, LLC profiles this stream as an assortment of used filters; including engine, hydraulic, and oil.

#### RECOMMENDED STORAGE:
- Drained used filters may be stored and packaged for transport in metal open head drums. Properly and clearly mark drum with the words “USED FILTERS”. There is not time on storage.
- Store in metal drums, roll-offs or other container appropriate for landfill disposal. Protect from rainfall.

#### PRE-TRANSPORT REQUIREMENTS:
- Drain containers of **ALL** free liquids.

#### TRANSPORTATION DOCUMENTS:
- Ship using Orion Drilling, LLC shipping notice or, as appropriate.
- Transport to approved landfill using landfill’s Solid Waste manifest. Include your solid waste generator number, solid waste code, solid waste transporter number and disposer number on manifest. Retain records for 2 years.

#### PACKAGE SUGGESTIONS:
- See Recommended Storage above.

#### ANALYTICAL TEST:
- Used filters are subject to TCLP testing to prove they are on-hazardous.

#### SPILL HANDLING:
- Unauthorized spills of used immediately be cleaned up or otherwise rendered safe and reported.

#### FOR ADDITIONAL INFORMATION:
- Read MSDS for liquid being filtered.
**USED OIL**

**REGULATORY STATUS:**
This waste is managed as a recycled hazardous waste and is allowed certain exemptions to the hazardous waste regulations when recycled. (Federal): Regulated by the Environmental Protection Agency (EPA) 40 CFR Parts 260, 261, 264, 265, 266, 271 and 279. Regulations apply to Alaska and Wyoming. State locations should continue their current practices, but should expect the promulgation of similar state regulations in one to two years.

**RECOMMENDED MANAGEMENT:**
Used oil is defined by the EPA as any oil that has been refined from crude oil or any synthetic oil that has been used and as result of such use is contaminated by chemical or physical impurities. In Orion Drilling, LLC operations this would include oil changes from any type of equipment or machinery, such as compressors, generators, turbines, pumps, cranes, etc. Do NOT mix homogenate solvents, such as trichloroethylene or methylene chloride, with any used oil.

Case 1: Store the used oil on site for periods of less than 35 days, then transport for pick up by a Orion Drilling, LLC “Acceptable for Use” used oil recycler per Used Oil Generator and Transporter Regulations.

**RECOMMENDED STORAGE:**
- In no case should the used oil be stored for more than 35 days.
- If storage is necessary, it must be stored in tanks or containers labeled “USED OIL”.
- Operators must maintain there are no visible spills or leaks and that the containers/tanks have no severe rusting, apparent structural defects or deterioration.
- Operators must make sure that adequate quantities of sorbent materials are available on site all the time and are used to contain spills or leaks occurring during normal activities.
- Releases must be responded to timely by stopping and containing the release, and replacing/repairing the tank/container before returning it to service.

**PRE-TRANSPORT REQUIREMENTS:**
- Generators transporting individual shipments of 55 gallons or less are exempt from the requirement to have an EPA Transporter Identification Number.
- All shipment of used oil transported offsite from the must be by a transporter who has an EPA transporter identification number.

**TRANSPORTATION DOCUMENTS:**
- Field personnel must ensure that all shipments of used oil reach the designated state location. Non-bulk shipments of used oil, such as 55-gallon drums, are not DOT regulated; therefore, either a shipping ticket may be use.
- Ship to approved recycler using recycler’s manifest/shipping paper or using REUSE/RECYCLE Manifest. Retain all records for 3 years. Data will be used for tracking Orion Drilling, LLC’s waste minimization efforts.

**PACKAGE SUGGESTIONS:**
- See Recommended Storage above.

**ANALYTICAL TEST:**
- Absorbent booms and pads are subject to TCLP testing to prove they are non-hazardous.

**SPILL HANDLING:**
- Follow reporting requirements as detailed in Orion Drilling, LLC’s SPCC Manual.
- Absorbents, pads and contaminated soil must be managed as Industrial Solid Waste.

**FOR ADDITIONAL INFORMATION:**
- Read MSDS for product oil.
### USED TIRES

#### REGULATORY STATUS:
- Regulations see this waste stream as a Solid Waste. EPA defines waste tires as whole tires that are no longer suitable for their original purpose because of wear, damage or defect.

#### RECOMMENDED MANAGEMENT:
- Tires shall be exchanged/ discarded with approved Orion Drilling, LLC vendors.

#### RECOMMENDED STORAGE:
- Tire piles shall not exceed: height – 10 feet, width – 20 feet, length – 50 feet.
- Tire piles shall be separated by fire lanes a minimum of 50 feet wide.

#### PRE-TRANSPORT REQUIREMENTS:
- EPA permitted solid waste landfills may accept chipped, shredded, cut or sliced tire material.

#### TRANSPORTATION DOCUMENTS:
- Tire pieces (chipped, shredded, etc.) going to a solid waste landfill should be manifested on the facility’s usual form.
- Whole tires going to a tire collection or processing facility must be shipped using the EPA’s four-part numbered manifest. The tire transporter, if transporting more than five tires, must have a state transporter’s permit, a tire transporter number, and a tire transporter’s decal (on the driver’s door of truck).

#### PACKAGE SUGGESTIONS:
- No specific suggestions. Truck should be loaded as to not discard any waste tires during transport.

#### ANALYTICAL TEST:
- None

#### SPILL HANDLING:
- Not applicable.

#### FOR ADDITIONAL INFORMATION:
- Not applicable
### FUEL TANKS

**REGULATORY STATUS:**
The regulatory definition of an “empty” tank is that all the product have been removed using the normal means of removing materials from that type of tank or less than 3% by weight of the tank’s total capacity remains.

Orion Drilling, LLC approved vendor is to empty tanks before moving tanks off of location. Vendor is also responsible for empty tank when transporting tank to yard facility.

- DOT The hazard class of danger goods is indicated either by its class or division. Placard corresponding to the primary hazard class must be displayed. Class 3 Flammable Liquids.

**RECOMMENDED MANAGEMENT:**
- Storage tanks on location are steel construction and all were treated for corrosion upon completion of construction of each.

**RECOMMENDED STORAGE:**
- Secondary containment consists of a dirt level completely around the location to contain any spill, which may occur, including sufficient room for precipitation.

**PRE-TRANSPORT REQUIREMENTS:**
- EPA permitted solid waste landfills may accept chipped, shredded, cut or sliced tire material.

**TRANSPORTATION DOCUMENTS:**
- The DOT shipping paper requires the following note for tanks that are empty, but have a residue “RESIDUE: Last Contained” preceding the DOT Proper Shipping Name.

**PACKAGE SUGGESTIONS:**
- Placards with shipping notice.

**ANALYTICAL TEST:**
- None

**SPILL HANDLING:**
- Orion Drilling, LLC SPCC Plan.

**FOR ADDITIONAL INFORMATION:**
- MSDS
WASTE MINIMIZATION GOALS

Minimization Strategy

The oil and gas industry is an extractive industry. Consequently, the source of certain wastes (i.e., produced water, sand, sludge, etc.) cannot be drastically reduced because they are inherent in our raw materials (i.e., oil and gas) production. Similarly, the amount of drilling fluids and cuttings generated is directly proportional to drilling activity. With this in perspective, we can feasibly only focus on better commercial product management, treatment of certain wastes, and recycle options for associated wastes.

Below are a few simple suggestions to aid waste minimization:

- Switch to bulk product where possible; bulk poly or metal tanks are used in lieu of purchasing materials in 55-gallon drums. Bulk product is often less expensive than drummed material. Bulk containers also eliminate problems associated with handling and disposal of empty drums. Use caution to avoid cross contamination and waste generation when refilling bulk tanks.

- Install drip pans under chemical drums and other equipment that is prone to leakage, allowing the material capture and return to the system for use in its intended purpose. These drip pans also eliminate the need to remediate contaminated ground.

- If a product is discontinued at one location, prior to being completely used, every effort should be made to return the product to the vendor or find another Orion Drilling, LLC location that has a need for the product.
EMPLOYEE AWARENESS PROGRAM

Employees are made aware of Orion Drilling, LLC waste minimization efforts primarily through meetings, discussions and published policies and procedures. Orion Drilling, LLC utilizes their Health, Safety and Environmental (HSE) department to keep abreast of new regulations and to propose waste minimization ideas.

The HSE department asks that if an employee identifies a new waste stream or new waste management method, they relay their suggestion to one of the members of the HSE team. Each suggestion will be evaluated as to the degree of compliance, economics, and feasibility.
## WASTE DISPOSAL APPROVED VENDORS

<table>
<thead>
<tr>
<th>VENDORS</th>
<th>WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Office</td>
<td>ASBESTOS</td>
</tr>
<tr>
<td>Contact Office</td>
<td>BATTERIES, CARBONAIRE, LEAD ACID, NI-CAD,</td>
</tr>
<tr>
<td></td>
<td>NON-TOXIC</td>
</tr>
<tr>
<td>Industrial Land Fill</td>
<td>COOKING OIL / GREASE / LARD (stored in</td>
</tr>
<tr>
<td></td>
<td>original container or approved container)</td>
</tr>
<tr>
<td>Industrial Land Fill</td>
<td>CREOSOTE PILINGS</td>
</tr>
<tr>
<td>Industrial Land Fill</td>
<td>DOMESTIC REFUSE (Garbage)</td>
</tr>
<tr>
<td>Yard Facility</td>
<td>EMPTY DRUMS</td>
</tr>
<tr>
<td>Contact Office</td>
<td>NORM</td>
</tr>
<tr>
<td>Thomas Petroleum</td>
<td>OILY ABSORBENT BOOM &amp; PADS (Not Now)</td>
</tr>
<tr>
<td>Thomas Petroleum</td>
<td>OILY RAGS</td>
</tr>
<tr>
<td>Industrial Land Fill</td>
<td>PAINT (Dry in Can)</td>
</tr>
<tr>
<td>Used Oil Drum</td>
<td>PAINT SOLVENTS</td>
</tr>
<tr>
<td>Contact Office</td>
<td>SANDBLAST MEDIA (HAZARDOUS)</td>
</tr>
<tr>
<td>Contact Office</td>
<td>SANBLAST MEDIA (Non-Hazardous)</td>
</tr>
<tr>
<td>Contact Office</td>
<td>SPENT XEROX TONER</td>
</tr>
<tr>
<td>Thomas Petroleum</td>
<td>USED FILTERS</td>
</tr>
<tr>
<td>Thomas Petroleum</td>
<td>USED OIL</td>
</tr>
<tr>
<td>Approved Facility</td>
<td>USED TIRES</td>
</tr>
<tr>
<td></td>
<td>FUEL</td>
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WASTE MANAGEMENT REVIEW PROCEDURES

New projects within the company are reviewed on a case-by-case basis to determine whether waste minimization efforts should be considered. If the volume and/or toxicity of waste generated are significant, alternate procedures will be developed where feasible.