



CRESTONE PEAK
RESOURCES

**WASTE MANAGEMENT PLAN
"FLUID DISPOSAL PLAN"**

Submitted with Form 2A Application for

Blue 3-65 33-32-21

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**Crestone Peak Resources' Waste Management Plan was developed in
accordance with COGCC Rule 304.c(11).**

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Authority and Revisions

The Niobrara Waste Management Guide has been prepared by Crestone Peak Resources Operating LLC (CPRO). It is authorized for use by staff and contract personnel at CPRO facilities in the Niobrara.

The goal is to provide practical, accurate, and consistent guidelines that ensure compliance with applicable regulations and company policies. It is not expected that everyone is to become regulatory experts. However, the expectation is to use tools such as this document, and its associated training program, to make sound decisions in the workplace. Most importantly, contacting the supervisor and interfacing with Health Safety Environment and Regulatory staff is expected if there are any questions about waste management, waste minimization, or recycling.

This document will be periodically reviewed and revised as needed to reflect changing regulations, policies, and practices. The review team will solicit input and feedback from each operating area. Suggestions for changes, clarifications, or additions are welcome.

1 Introduction

The “Niobrara Waste Management Guide” provides guidelines and minimum requirements for waste management according to CPRO’s best management practices, as well as state and federal laws. The guide is designed to reduce the impact of company operations on the environment and maintain compliance with company policy and regulatory requirements for waste management.

1.1 Description of Guide

This Waste Guide identifies waste management requirements for common wastes generated by the Niobrara operations (operations). It has been written with a field perspective, to provide guidance for field, staff personnel and contractors who handle and dispose of common waste materials.

This Guide:

- Supports regulatory compliance and protection of the environment;
- Provides the basis for handling and disposing of common E&P wastes at the asset; Is a basis for training of field personnel;
- Is consistent with applicable CPRO policies and procedures;

The Guide will not provide guidance on all waste handling issues but is designed to cover the common waste issues and waste streams identified for operations. Non-routine waste handling situations should be referred to the Environmental Supervisor.

Individual waste guidance for handling and disposal of specific wastes encountered by operations is provided at the end of this document in Appendix ii.

The following information is provided for individual waste material:

- Practical Description of Waste
- Waste Category
- Waste Characterization
- Handling Practices
- Waste Minimization and recycling information
- Disposal Practices
- Transportation
- Recordkeeping and documentation

1.2 Responsibilities

Waste management should be included in the planning process for all projects and activities. Inadequate waste management planning, such as management of waste on-site or where to dispose of waste, can have costly consequences. Company personnel are responsible for the proper identification, handling, and storage of waste, both at the facility and throughout the shipment process. Waste can only be disposed of at approved disposal or recycling facilities. Contractors and third parties may not bring any waste materials generated outside field boundaries into CPRO facilities for disposal, recycling, or beneficial reuse without prior written approval. Similarly, contractors and third parties must take waste materials generated on CPRO facilities off site for disposal. In general, the waste generated by contractors, in the course of performing their work, such as partially empty or empty paint cans, aerosol containers, used oil, chemicals, and blasting material, etc., must be removed and disposed of by the contractor.

1.3 Rules and Regulations

Information contained in this Guide is based primarily on regulations and policies of the U.S. Environmental Protection Agency (EPA), the U.S. Bureau of Land Management (BLM), Colorado Department of Public Health and Environment (CDPHE), and the Colorado Oil and Gas Conservation Commission (COGCC).

The EPA enforces regulations at a Federal level. These regulations include the following waste regulations: the Resource Conservation and Recovery Act (RCRA) (*codified at 40 C.F.R. 239 – 299*), which oversees the management of hazardous wastes, the Exemptions of Oil and Gas Exploration and Production Wastes, and the proper management of Oil and Gas Exploration and Production hazardous waste (*40 C.F.R. 261.4 (b)(5)*). Regulations governing hazardous wastes are in 40 CFR beginning at part 260.

The Colorado Department of Public Health and Environment, the Hazardous Material and Waste Management Division (HMWMD) protects the health and environment of Colorado by ensuring proper management of solid and hazardous waste. The HMWMD encompasses: Hazardous Waste Permitting and Corrective Actions, Inspection and Compliance, Orphan Sites, Solid Waste, Storage Tanks, and the Voluntary Remediation Program.

The Colorado Oil and Gas Conservation Commission (COGCC) 900 series rule outlines practices for managing E&P wastes, including pits, spill response and reporting, produced water, drilling fluids, and oily waste.

Typically, when dealing with waste in a unitized area the CDPHE has primary jurisdiction. There is a Memorandum of Agreement (MOA) between the CDPHE and COGCC with the purpose of defining and clarifying the roles and responsibilities of the two agencies. For example, crude oil spill reporting and remediation would fall under the jurisdiction of the COGCC, diesel spill response and remediation would fall under the jurisdiction of the CDPHE.

This document identifies applicable waste regulations, policies, and requirements on the management practices for common waste streams that could be generated by CPRO operations. Since the laws governing waste are regulated by numerous agencies and are somewhat complex, it would be difficult to address every waste and situation in this document. Please consult the Environmental Supervisor when an unfamiliar waste situation arises or if there is a new waste to be managed. The Supervisor should also be contacted if there are changes to an existing waste stream or if an alternative waste disposal option is needed. This will help ensure that regulatory requirements are reviewed, and compliance is maintained.

Since waste disposal, recycling, and reuse activities are subject to complex environmental laws, violations of these laws may lead to enforcement actions. Criminal or civil enforcement may be directed against individuals performing waste disposal or reuse operations and/or their supervisors. In addition, civil enforcement actions may also be directed against CPRO. Be sure you understand the waste disposal requirements before disposing of waste materials.

1.4 When a Waste is E&P Exempt

Under RCRA, certain wastes generated by the oil and gas exploration and production industry are given a special treatment (exempt) status from hazardous waste regulations. A useful reference for this exemption is EPA Publication Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations (<http://www.epa.gov/osw/nonhaz/industrial/special/oil/oil-gas.pdf>).

Under no circumstances should Exempt or Non-Exempt Waste be commingled with known hazardous waste. Consult with Environmental Supervisor on questions concerning disposal.

1.4.1 Exempt Wastes

Certain E&P wastes are exempt from RCRA requirements due to the low toxicity and high volume generated from processes unique to the oil and gas drilling and production industry.

The E&P waste exemption is for drilling fluids, produced water, and other wastes associated with oil and gas exploration, development, and production. Associated wastes include fluids that come in contact with the oil and gas production stream during the removal of produced water or other contaminants from the crude oil.

All fluids are contained and there shall be no discharge of fluids with the exception of unimpacted stormwater per the Federal SPCC regulations.

SPCC regulations are addressed by the use of a field wide plan, amended by each location as an appendix. These site-specific appendices are created after construction and available per the SPCC Federal rule within 6 months of construction completion.

Use the specific Waste Guidelines (Appendix ii) at the end of this document to determine if a specific waste is exempt or contact the Environmental Coordinator.

RCRA E&P exempt wastes are not regulated as hazardous waste regardless of their composition or properties, but caution should be taken when those wastes exhibit hazardous characteristics such as reactivity or ignitability. These wastes must still be handled and disposed in compliance with waste regulations even though they are technically classified as being 'exempt' from regulation as hazardous waste.

1.4.2 Non-Exempt Wastes

Some wastes generated by operations are not exempt from federal hazardous waste regulations. For example, **new or unused leftover** products, such as acids, methanol, diesel, drilling mud, and cement, are not RCRA E&P exempt. Non-exempt waste must be evaluated to determine whether it is either hazardous or non-hazardous before transportation and disposal of the material takes place. To complete this determination, testing or process knowledge may be required.

Non-Exempt Non-Hazardous Waste: Wastes which are not specifically exempted but are not hazardous under the RCRA regulations. The generator is required to determine if a non-exempt waste is hazardous. Testing should be done if there is any question regarding whether a waste is hazardous. Disposal facilities may require testing to confirm the waste status.

Non-Exempt Hazardous Waste: Wastes which are not exempted and are hazardous by RCRA definition. These wastes must be handled and disposed as hazardous waste as specified under RCRA regulations.

Niobrara is classified as a Very Small Quantity generator. Very Small Quantity Generators (VSQG) are exempt from many of the requirements of RCRA which apply to small and large generators of hazardous waste. This is a huge benefit from a tracking and management standpoint however documentation must be maintained to verify that operations did not generate more than 220 pounds of hazardous waste in any single month. The Environmental Supervisor is responsible for tracking and documenting the amount of hazardous waste generated each month.

If generator status changes from VSQG to SQG or LQG, an EPA ID Number is required. The field must notify the Environmental Supervisor if they may exceed 220 pounds of hazardous waste generation in a month.

In that situation, a site would be required to obtain an EPA Identification number and follow additional regulatory requirements.

2 Waste Handling and Storage

There are several important issues associated with the handling and storage of wastes, including proper containerization, container/waste labeling, waste segregation, and waste area management. Waste must be stored in tanks, transported by tanker trucks and/or pipelines, and disposed of at licensed disposal or recycling facilities.

3 Waste Disposal

Waste disposal is regulated by federal and/or state agencies. CPRO has developed guidance for proper disposal. No land treatment of oil-impacted or contaminated drill cuttings will be allowed. Disposal of oil-impacted or contaminated drill cuttings will be disposed of at licensed disposal or recycling facilities.

The process includes:

- Inspection and approval of new disposal facilities by HSE.

- Contract set up and approval by Supply Chain and the waste site vendor prior to shipping waste.

- Waste profiling and testing.

- Review and approval by the disposal facility to confirm that they can legally accept it.

- Transportation by a DOT (Department of Transportation) shipper. Hazardous wastes shipments must adhere to DOT shipping requirements.

- Any CPRO employee, contractor, or third party who would like to bring a new chemical onto CPRO operated facilities must first submit a Chemical Approval and Inventory Control form to CPRO Niobrara HSE&R.

4 Disposal Facility Selection

The waste disposal facility selection is based primarily on the type of waste or recyclable material that is being managed. The selection of an appropriate disposal or recycling facility is critical to ensure compliance and protection of the environment as well as prevention of safety incidents and violations.

The CPRO Waste Management Standard (Standard) establishes a requirement to evaluate the suitability of industrial waste disposal facilities utilized and to only use those that are company approved. Consult Appendix i for a current list of approved third-party waste sites used for waste disposal activities. Additionally, check with Supply Chain to ensure there is a current MSA in place with the facility prior to waste shipment.

Selection of a waste disposal facility depends on type of waste to be disposed (whether it is exempt, non-exempt or hazardous), the trucking distance to disposal facility and cost of disposal. Waste stream classification included in Appendix ii will help to determine which facility should be used. If the waste material is not listed in Appendix ii, please consult the Environmental Supervisor for waste handling guidance.

5 Waste Transportation

Transportation of waste can occur once the waste is contained and identified; the appropriate disposal facility is contacted; the waste profile is approved; the proper paperwork, including manifests or bills of lading are completed; and the proper state notification and/or permit requirements are complete.

The transportation of hazardous materials is regulated by the Department of Transportation (DOT) (refer to 49 CFR Part 172). Hazardous waste manifests serve as DOT shipping papers. Hazardous waste manifest preparers and signers must properly classify, label and/or placard materials transported under the jurisdiction of the DOT.

Hazardous waste transporters must comply with all federal and state DOT Hazardous Material Rules and Regulations. Transporters must utilize proper waste manifesting and shipping paper records, obtain an EPA Transporters Identification Number from EPA (if required), and contain and clean-up any spills while hazardous waste is in their possession.

6 Waste Handling and Disposal Guides

Appendix ii lists wastes streams for the facility that may be generated by operations and provides handling and disposal information for each waste. If the waste is not included in this guide, please contact the Environmental Supervisor for handling and disposal instructions.

APPENDIX i – APPROVED FACILITIES

OFF -SITE FACILITIES:

Buffalo Ridge Landfill (WM)
Clean Harbors Environmental Services
Conservation Services, Inc (WM-CSI)
Expedition Water Solutions (EWS) #3 & #4
Front Range Landfill (WC)
NGL Water Solutions C-2, C-5, C-6, C-8
Tower Landfill (Republic)

BUFFALO RIDGE LANDFILL (WM)

	Non-Hazardous Solid Waste
Name	Buffalo Ridge Landfill
Location	11655 County Road 59 Keenesburg, CO 80643
Operator	Waste Management
Materials Accepted	E&P Wastes, MSW, ACM, drill cuttings, soil, other profiled wastes
Restrictions	Waste must be profiled & approved in advance. No liquid waste
Paperwork Required	Non-Hazardous Waste Manifest
Facility Contact	Jack Epple, 303-944-7510 - cell
Compliance Contact	Doc Nyiro, 303-486-6034
Notes	Return original copy of the Non-Hazardous Waste Manifest to CPR EHS Work with CPR EHS to set up waste profile if needed

CLEAN HARBORS ENVIRONMENTAL SERVICES

	Hazardous Solid & Liquid Waste	Non-Exempt Solids and Liquids
Name	Clean Harbors Environmental Services	Clean Harbors Environmental Services
Location	Clean Harbors Environmental Services Deer Trail Facilities 108555 E. Highway 36 Deer Trail, CO 80105	Clean Harbors Environmental Services Deer Trail Facilities 108555 E. Highway 36 Deer Trail, CO 80105
Operator	Clean Harbors Environmental Services 4721 Ironton Street, Denver, CO 80239	Clean Harbors Environmental Services 4721 Ironton Street, Denver, CO 80239
Materials Accepted	RCRA Waste	RCRA Non-Exempt Waste
Restrictions	Waste must be profiled & approved in advance	Waste must be profiled & approved in advance
Paperwork Required	Hazardous Waste Manifest	Hazardous Waste Manifest
Facility Contact	Jack Kehoe 970-386-2293	Jack Kehoe 970-386-2293
Compliance Contact	Jack Kehoe 970-386-2293	Jack Kehoe 970-386-2293
Notes	Return original copy of the Hazardous Waste Manifest to CPR EHS Work with CPR EHS to set up waste profile if needed	Return original copy of the Hazardous Waste Manifest to CPR EHS Work with CPR EHS to set up waste profile if needed

CONSERVATION SERVICES, INC.

	Non-Hazardous Solid & E&P Exempt Waste
Name	Conservation Services, Inc. (CSI)
Location	41800 East 88 th Avenue Bennett, CO 80102
Operator	Waste Management
Materials Accepted	Industrial Non-Hazardous Waste Landfill: Asbestos-Friable, Asbestos-Non-Friable, Bioremediation, Drum Management- Liquids, Drum Management-Solids, E&P Wastes, Industrial &Special Waste, Liquifix (Solidification Services)
Restrictions	Waste must be profiled & approved in advance
Paperwork Required	Non-Hazardous Waste Manifest
Facility Contact	Dan Swaney, 281-850-7669 - cell
Compliance Contact	Ron Chacon, 303-886-9695
Notes	Return original copy of the Non-Hazardous Waste Manifest to CPR EHS Work with CPR EHS to set up original profile if needed

EXPEDITION WATER SOLUTIONS (EWS) #3 & #4 SWD

	Non-Hazardous E&P Exempt Liquid Waste	Non-Hazardous E&P Exempt Liquid Waste
Name	EWS #3 SWD	EWS #4 SWD
Location	20668 Niobrara Blvd. La Salle, CO 80645	31631 Co Rd 398, Keenesburg, CO 80643
Operator	Expedition Water Solutions	Expedition Water Solutions
Materials Accepted	Flowback and produced water	Flowback and produced water
Restrictions	Water waste must have no solids	Water waste must have no solids
Paperwork Required	Run ticket	Run ticket
Facility Contact	Nick Goddard, 970-515-7722	Matt Gonzales 970-888-9888
Compliance Contact	Dave Gage 970-590-6463	Dave Gage 970-590-6463
Notes	Work with CPR EHS to set up original profile if needed	Work with CPR EHS to set up original profile if needed

NGL WATER SOLUTIONS C-2, C-5, C-6, C-8

	Non-Hazardous E&P Exempt Liquid Waste	Non-Hazardous E&P Exempt Liquid Waste	Non-Hazardous E&P Exempt Liquid Waste	Non-Hazardous E&P Exempt Liquid Waste
Name	C-2 SWD	C-5 SWD	C-6 SWD	C-8 SWD
Location	1635 CR 19 Brighton, CO 80603	CR16 Hudson, CO 80642	CR16 Hudson, CO 80642	61635 CR77 Grover, CO 80729
Operator	NGL Water Solutions	NGL Water Solutions	NGL Water Solutions	NGL Water Solutions
Materials Accepted	Flowback and produced water	Flowback and produced water	Flowback and produced water; liquids with solids	Flowback and produced water
Restrictions	Water waste must have no solids	Water waste must have no solids	Water waste can have solids	Water waste must have no solids
Paperwork Required	Run ticket	Run ticket	Run ticket; non-hazardous manifest	Run ticket
Facility Contact	Josh Patterson, 303-868-1286	Josh Patterson, 303-868-1286	Josh Patterson, 303-868-1286	Josh Patterson, 303-868-1286
Compliance Contact	Doug White, 303-809-3326 cell	Doug White, 303-809-3326 cell	Doug White, 303-809-3326 cell	Doug White, 303-809-3326 cell
Notes	Work with CPRO HSE&R to setup original profile if needed	Work with CPRO HSE&R to setup original profile if needed	Work with CPRO HSE&R to setup original profile if needed	Work with CPRO HSE&R to setup original profile if needed

Tower Landfill (Republic)

	Non-Hazardous Solid Waste
Name	Tower Landfill
Location	8480 Tower Rd Commerce City, CO 80022
Operator	Republic Services
Materials Accepted	E&P Wastes, MSW, ACM, drill cuttings, soil, other profiled wastes
Restrictions	Waste must be profiled & approved in advance.
Paperwork Required	Non-Hazardous Waste Manifest
Facility Contact	Daniel Bargmann, 720-590-4045
Compliance Contact	Elizabeth Stengl, 720-590-4048
Notes	Return original copy of the Non-Hazardous Waste Manifest to CPR EHS Work with CPR EHS to set up original profile if needed

APPENDIX ii – WASTE HANDLING AND DISPOSAL GUIDES (REVISED)

Absorbent Materials, Impacted (crude oil/condensate)

Description:	Absorbent material contaminated with crude oil, condensate, or other exempt waste. Includes oil rags, booms, pads, towels, paper products, and peat moss/vermiculite material.
Waste Category:	E&P Exempt; non-hazardous
Waste Characterization:	Sample and analyze for potential contaminants such as metals, benzene, etc. or use generator knowledge supported by past analytical data.
Waste Minimization:	<p>Maintain equipment/facilities to prevent drips, leaks, spills, etc., which would require cleanup. Use drip pans or other containment to collect drips, leaks, etc.</p> <p>Reuse absorbent material if possible. Recycle absorbent pads and booms and other soaked material with an approved recycler.</p>
Handling:	Handle in a manner that prevents spillage. Soaked material cannot be placed in the landfill. Soaked items must be stored in leak proof containers in the waste storage area.
Disposal:	<p>Remove free liquids with a wringer and allow the material (rags, booms, pads, towels) to dry.</p> <p>Dispose at an industrial or municipal landfill authorized to accept this waste.</p>
Transportation:	This type of material is not regulated under DOT. Containers should be marked: <i>COPC, OILY ABSORBENT MATERIAL ONLY.</i>
Records:	Keep all manifests and shipping records and applicable documents.

Condensate

Description:	Condensed fluid refers both to condensed water and light condensed hydrocarbons. The principal sources are compressors, knockouts, coolers, treaters, and dehydrators.
Category:	Exempt Waste
Waste Minimization:	Treat in production system. Send to oil reclaimer
Handling:	Hydrocarbon condensate should be returned to the production stream. For safety reasons, hydrocarbon condensate should never be stored or handled except in gas plants or other facilities specifically equipped for its storage and handling.
Transportation:	Disposal facility manifest required; transporter must have appropriate Waste Hauler Permit. All shipments to an approved disposal facility must be accompanied by a state or the disposal facility manifest.
Disposal:	Condensate should be recycled back into the process flow whenever possible. If that is not possible, condensate/contaminated water should be taken to an approved SWD facility or other approved disposal facility.
Records:	Keep all manifest records and applicable documents.
Comments:	Waste contractors may not be used if they are not on the approved list.

Contaminated Soil (Contaminated with materials from down-hole)

Description:	Spills on soil of crude oil, condensate, produced water, and other materials from down-hole. This contaminated soil is considered a waste itself when disposed.
Waste Category:	E&P Exempt Waste
Waste Minimization:	Every effort must be taken to avoid the spill from occurring so as to minimize waste volume. If a spill occurs, pick up the free liquid or solid spilled as soon as possible after the spill is contained.
Handling:	<p>Recovered liquid may be recycled back into the production stream.</p> <p>If the state agency requires and/or allows, manage the contaminated soil in place. There are several remediation techniques available and effective for hydrocarbon spills. For non-hydrocarbon spills, typically a different approach to remediation would be used.</p> <p>State requirements must be implemented, and guidance must be considered. For additional guidance on spill clean-up reference the <u>L48 Spill Clean-up Guidelines</u>.</p> <p>If the volume of impacted soil exceeds the soil's natural capacity for bioremediation, or if removal of contaminated soil is necessary, remove the impacted material and manage as waste material on-site.</p>
Disposal:	If not left in place, dispose of contaminated soil at an approved waste disposal facility.
Records:	<p>Document and describe the cleanup procedure and contamination levels after clean-up. This is usually sufficient record keeping for cleanup of most non-hazardous waste.</p> <p>For contaminated soil taken off location for disposal, keep the manifest and other records.</p>
Comments:	For assistance, consult Environmental Supervisor.

Contaminated Soil (Other than from down-hole materials)

Description:	Soil contaminated with spills of chemicals, solvents and other materials used on the lease that have not been used downhole. This contaminated soil is considered a regulated waste.
Waste Category:	E&P Non-Exempt Waste. The soil may be a Hazardous Waste if it contains a RCRA listed waste or if it exhibits one of the hazardous characteristics listed in the RCRA regulations (e.g., pH less than 2 or flammability). Contact Environmental Supervisor for waste characterization and classification assistance and preparation of waste profile.
Waste Minimization:	Ensure containers are not leaking and have covers tightly fastened. Store containers in containment and where vehicles will not impact them.
Handling:	<p>Recovered liquids and solids which are not exempt should be evaluated to determine if these materials are a hazardous waste. The material must be picked up and containerized, and properly managed on site prior to disposal. Typically, this includes labeling and inspecting the containers.</p> <p>Hazardous waste requires special handling, additional record keeping, inspections, and labeling. Additionally, if hazardous, the waste will count toward generator status volumes. Consult HSE&R for guidance.</p>
Disposal:	<p>The contaminated soil, whether hazardous or non-hazardous, must be taken to an appropriate waste disposal facility.</p> <p>Contact Environmental Supervisor for cleanup and disposal assistance.</p>
Records:	<p>Document and describe the cleanup procedure and material removal activities performed after a spill.</p> <p>For contaminated soil taken off location for disposal, keep the manifest or records on the cleanup and removal work.</p>
Comments:	For assistance, consult Environmental Supervisor.

Hydrocarbons Impacted Soil

Description:	Hydrocarbon impacted soil occurs when condensate, crude, or lube oil spills on the ground.
Waste Category:	E&P Exempt; - condensate, or crude oil Non-Exempt, non-hazardous, or hazardous, – used or unused lube oil. Contact Environmental Supervisor for waste characterization and classification assistance and preparation of waste profile.
Waste Characterization:	E&P Exempt (Condensate, crude oil) – no testing required. Non-Exempt – Unused lube oil impacted soil requires SDS for disposal- For used lube oil impacted soil requires TCLP, RCRA 8 Metals testing
Waste Minimization:	Conduct inspections and preventative maintenance on flow lines, storage tanks, and other E&P production equipment; use proper containers, keep lids on containers, and store containers properly to prevent overflow or spillage; maintain secondary containment for recovery of spills; and review SPCC Plans if applicable
Handling:	Workers must have appropriate safety and protective gear. If safe to do, immediately stop the spill and contain the flow; notify respective supervisor immediately; workers must have appropriate safety and protective gear; if possible, recycle free liquid back into the production stream; and contact the Environmental Supervisor for guidance.
Disposal Options:	COP facilities must ship waste only to audited and permitted disposal facilities. Only commercial disposal facilities which have been audited and approved for use and have appropriate permits can be used. Contact Environmental Supervisor to classify waste and select appropriate waste disposal facility.
Transportation:	Use a CPRO approved vendor with appropriate permits to transport the waste.
Records:	Keep all manifests and shipping records and applicable documents.

Soil, Contaminated (chemicals, crude oil, condensate, produced water, petroleum products, glycol)

Description:	Spills of crude oil, condensate, produced water, glycol, chemicals, or solvents used on the lease often contaminate soil around facilities. This contaminated soil is considered a waste itself. Every effort must be taken to avoid the spill from spreading.
Waste Category:	Exempt (condensate, crude oil, used glycol, produced water) Non-Exempt (Unused lube oil impacted soil requires SDS for disposal – for used lube oil in impacted soil TCLP, RCRA 8 Metals testing required) Contact your Environmental Supervisor for waste characterization assistance.
Waste Characterization:	Soil contaminated with exempt or non-exempt material
Waste Minimization:	Conduct inspections and preventative maintenance on flow lines, storage tanks, and other E&P production equipment. Use proper containers, keep lids on containers, and store containers properly to prevent overflow or spillage. Collect free liquid or solid spilled as soon as possible after the spill is contained. Recovered liquid, which is an exempt waste, may be recycled back into the production stream.
Handling:	Immediately stop the spill and contain the flow. Notify supervisor immediately. If possible, recycle free liquid back into the production stream. Recovered liquids and solids which are not exempt should be evaluated to determine if the waste is hazardous (contact Environmental Supervisor). Hazardous waste requires special handling, additional record keeping, inspections, and labeling.
Disposal Options:	Remove the soil contaminated by produced oil, water or used glycol and dispose at a CPRO approved disposal facility. Current waste profile must be in place prior to shipment. Manifest with profile number must accompany shipment to disposal site. If the soil is contaminated with a Non-Exempt Waste, notify your Environmental Supervisor for waste classification and disposal options.
Transportation:	Use a CPRO approved vendor with appropriate permits to transport the waste if applicable.
Records:	Document and describe the cleanup procedure performed to remove contaminated material. Collect photographs of site, before and after. For hazardous waste contact the Environmental Coordinator. For contaminated soil taken off location for disposal, retain the manifest or records on the removal job, including: <ul style="list-style-type: none"> a. Procedure and criteria required by agency for removal/disposal of soil b. Date of shipment c. Hauler's name and approval number d. Disposer's name and approval number e. Soil's source/location f. Waste profile number g. Volume of load a. Analysis of soil, if required

ADDENDUM – BLUE SITE-SPECIFIC WASTE HANDLING AND DIPOSAL GUIDE

Waste	Characterization ¹	Treatment ²	Storage ³	Transport	Disposal ⁴	Recycle
Drill Cuttings	See Note 1 Below	None	A	Truck	WC	No
Drilling Fluids	See Note 1 Below		B	Truck		Yes
Cement Returns	See Note 1 Below	None	C	Truck	WM	No
Frac Sand	See Note 1 Below	None	C	Truck	WC	No
E&P Exempt Liquids						
Produced Water	See Note 1 Below	None	B	Truck	NGL/EWS	No
Stormwater	See Note 1 Below	None	D	Truck	Republic	No
Impacted Soil	See Note 1 Below	None	E	Truck	WC/WM	No

Notes:

1. Drill cuttings: CPRO will use knowledge of process and the drilling fluid Safety Data Sheet for characterization. Drill cuttings are sent for disposal to permitted commercial solid waste facilities per COGCC Rule 905.e.(1).A.

Drilling fluids: CPRO will employ only International Association of Oil & Gas Producers (IOGP) Group III drilling base fluids with <0.5 weight % aromatics and will not use drilling fluids based on diesel. These Group III drilling fluids are odorless and contain no BTEX. This material is recovered and re-used, in accordance with COGCC Rule 905d.

Produced water: In accordance CDPHE 6 CCR 1007-1 Part 20 Addendum A (TENORM Characterization) a sampling plan will be submitted to CDPHE for the characterization of TENORM in produced water. Upon approval samples will be collected for analysis of Ra-226 and Ra-228. This will be completed prior to June 2022. Produced water is sent to Class II injection wells for disposal per COGCC rule 905.c.(2).A.

CPRO will use knowledge of process for characterization of all other waste streams listed. These will be sent for disposal per COGCC Rule 905.f.(1) and (3).

2. CPRO does not generate hazardous waste. CRPO does not treat waste prior to disposal.

3. Except where identified below, waste is only stored temporarily on location.

- A. Stored in bins. Material is trucked off location every 24 hours except Sundays.
- B. On site storage tanks. Drilling fluid is only stored on location during drilling operations.
- C. Stored in bins. Material is trucked off location weekly.
- D. Vac trucked immediately and sent for disposal.
- E. Small volumes of impacted soils are stored in lined 1 cubic yard metal bins. When the bin is full it is emptied. Larger volumes are trucked to disposal immediately after removal.

4. NGL – NGL Water Solutions UIC well(s) is determined by NGL
 EWS – Expedition Water Solutions UIC well(s) is determined by EWS
 Republic – Republic Services Tower Landfill
 WM – Waste Management Buffalo Ridge and CSI Landfills

Site-Specific BMPs:

- a. Trucks will use the haul route approved with the local permit shown in Appendix iii.
- b. E&P wastes will be transported offsite via truck by a licensed transporter to a licensed third-party solid waste disposal facility/landfill. Frequency of these operations will vary by site based on waste volumes but will be temporary in most cases.
- c. Waste will be stored on location in compatible container or containment devices designed or engineered for the purposes for which they will be utilized. These containers will be inspected on a regular basis to ensure that no undue wear, structural issues, severe rust, other defects, which may impact their effectiveness.
- d. Drilling fluids are recovered and will be separated from the cuttings at surface. At the end of its use on a particular well, the liquid synthetic mud will be reused for additional drilling operations, or it will be returned to the vendor who originally supplied the mud. Transportation will occur on a daily basis as required to facilitate ongoing drilling operations in accordance with COGCC Rule 905d.
- e. Drill cuttings will be separated from liquid mud onsite, and the cuttings will be temporarily stored onsite in steel bins. Accumulated cuttings will be transported for permanent disposal to a licensed solid waste disposal facility. The actual solid waste disposal facility that will be used will depend on geographic proximity to the well being drilled. Transportation will occur on a daily basis as required to facilitate ongoing drilling operations.
- f. Any soils contaminated by E&P waste will be disposed of at a licensed third-party solid waste disposal facility/landfill.
- g. Tank bottoms will be disposed of at licensed third-party solid waste disposal facilities.
- h. Liquid wastes such as produced water will be disposed of at licensed third-party injection facilities such as those run by NGL Water Solutions.

CPRO will keep records of all E&P waste that is transported offsite for a period of not less than five (5) years. If requested, CPRO will provide copies of these records to the COGCC.

APPENDIX iii – BLUE HAUL ROUTE MAP

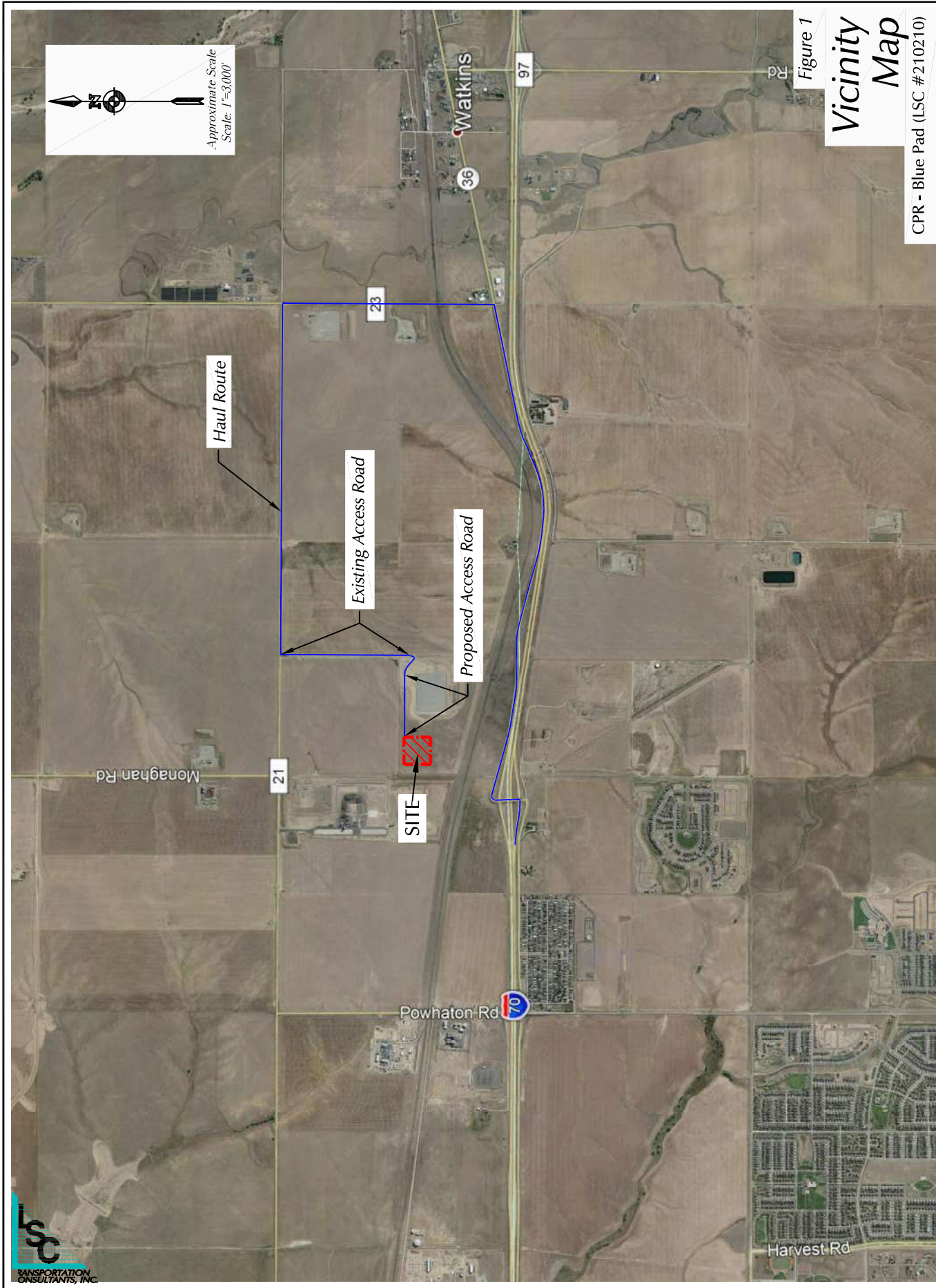


Figure 1

Vicinity Map

CPR - Blue Pad (LSC #210210)