



Kerr-McGee Oil & Gas Onshore LP

Waste Management Plan

Gaddis 3-36HZ Pad

Weld County, Colorado

November 2021

Waste Management

Kerr-McGee Oil & Gas LP operations will meet the requirements WC CO Sec. 21-5-320.B.9, Sec. 21-5-450, COGCC 900 Series, and EPA CFR 40 & 49, Including 40 CFR 261.4(B)(5). All waste management and best management practices will be conducted in accordance with the operational requirements listed below.

Waste Storage, Handling, and Best Management Practices

The proper handling and storage of waste is essential to ensuring protection of human health and the environment, while minimizing company liability. The following guidelines identify proper waste handling and storage practices to be employed by personnel at the Gaddis 3-36HZ Pad.

- Wastes will be stored in containers or on lined containment that are chosen for compatibility and checked periodically for leaks or integrity problems. Examples of containment include but are not limited to 3-sided steel tanks, steel tanks, lined containment, plastic totes, drums, etc.
- All specific wastes in the attached site-specific Table will have a detailed Safety Data Sheet available which includes information such as the properties of the wastes; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.
- The proper personal protective equipment will always be worn when handling waste. Employees will refer to the Safety Data Sheet for additional information.
- Good housekeeping measures will be implemented in the operating area and to ensure safety and environmental well-being.
- Wastes will be segregated and stored according to its waste type.
- When feasible, wastes will be recycled, re-used, or treated onsite. As a best management practice fluids are generally re-used from location to location if possible. No onsite treatment or recycling is planned onsite for the Gaddis 3-36HZ Pad. In the event, that onsite treatment or recycling is feasible, a written management plan will be submitted to the Director for approval on a Form 4.

Waste Characterization and Volumes

Wastes will be characterized in accordance with local, state, and federal requirements. Different types of wastes will be characterized via process knowledge, safety data sheets, or laboratory analysis in accordance with regulations and the requirements of the permitted facility to which they will be taken for ultimate disposition. Different types of wastes have different classifications such as hazardous, non-hazardous, and E&P exempt. The majority of wastes generated at this well pad will be E&P exempt. Volumes of wastes will be highly variable with some potential wastes never being generated and can vary greatly throughout the life of the well. Wastes such as drill cuttings and produced fluids will certainly be generated with volumes ranging from approximately 350-700 cubic yards per well and 1-1,500 barrels per day per well, respectively.

Waste Transportation and Disposal

Wastes will be transported to facilities authorized by the Director, to permitted commercial waste disposal facilities, permitted commercial waste facilities, or permitted beneficial use sites.

All E&P wastes transported offsite will be manifested, signed by the generator and transporter, and maintained to be provided upon request for a minimum of 5 years. Each ticket will include the information listed below

- The date of the transport.
- The identity of the waste generator.
- The identity of the waste transporter.
- The location of the waste pickup site.
- The type and volume of waste.
- The name and location of the treatment or disposal site.

Site Specific Information

The attached table lists the potential waste management options for the Gaddis 3-36HZ Pad. For each waste type a variety of options are identified due to factors that change during the course of normal operation and life of the facility such as waste volumes, disposal facility hours of operation, facility capacities, etc.

Attachment

Waste Type	Storage Container	Waste Disposal or Centralized E&P Management Facility	Waste Characterization	Potential Hazard	E&P Exempt
Water-based drilling fluids and associated drill cuttings	Steel bins, roll-offs, or tanks	Drilling Fluid Management Facility #3 (COGCC Facility ID 439305)	DFMF 3 COGCC permit requirements	None	Yes
		Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements		
		Waste Connections, Erie, Colorado	Landfill requirements		
		Buffalo Ridge, Keenesburg, Colorado			
Oil-based drilling fluids and associated drill cuttings	Steel bins, roll-offs, or tanks	Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements	Ingitable/Combustible, Toxic	Yes
		Waste Connections, Erie, Colorado	Landfill requirements		
		Buffalo Ridge, Keenesburg, Colorado			
Flowback and produced water	Steel tanks	KMOG 16-24i and 19-3i SWDs	COGCC UIC permit requirements	Ingitable/Combustible, Toxic	Yes
		EWS #3, #4, and #5 SWDs			
		Lonestar Select SWD			
Oil and produced fluid impacted soil	Containment, steel roll-offs, or loaded directly into transportation	KMOG Land Treatment Facility (COGCC Facility ID 149007)	Land Treatment Facility Waste Management Plan requirements	Ingitable/Combustible, Toxic	Yes
		Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements		
		Waste Connections, Erie, Colorado	Landfill requirements		
		Buffalo Ridge, Keenesburg, Colorado			
Tank bottoms, oily waste, and workover fluids	Steel bins, roll-offs, tanks, containment, or loaded directly into transportation	KMOG Landfarm (COGCC Facility ID 149007)	Land Treatment Facility Waste Management Plan requirements	Ingitable/Combustible, Toxic	Yes
		Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements		
		Waste Connections, Erie, Colorado	Landfill requirements		
		Buffalo Ridge, Keenesburg, Colorado			
		Tower Road Landfill, Denver, Colorado			
		Foothills Landfill, Golden, Colorado			
		Clean Harbors, Deer Trail, Colorado			
Hazardous materials	Steel bins, roll-offs, tanks, totes, drums, clean packs	Clean Harbors, Kimble, Nebraska	Resource, Conservation, and Recovery ACT (RCRA) and Landfill requirements	Ingitable/Combustible, Corrosive, Reactive, Toxic	No
		Clean Harbors, Deer Trail, Colorado			
General trash and non-hazardous municipal solid waste	Steel bins or roll-offs	Waste Connections, Erie, Colorado	No characterization required	None	No
		Buffalo Ridge, Keenesburg, Colorado			