

GUIDELINES
CHAPTER 3 PERMIT REQUIREMENTS
FOR
CBM AND OIL/GAS
PRODUCED WATER DISCHARGES

TABLE OF CONTENTS

I.	Authority	1
	a. Environmental Quality Act	1
	b. Chapter 3.....	1
	c. Chapter 11.....	1
II.	Who needs a permit?	1
	a. Permit Required	1
III.	Types of permits.....	2
a.	General Permits	2
b.	Individual Permits	2
IV.	Permit Application Requirements	2
	a. Chapter 3 Permit Application.....	2
	b. Management Plan	2
	c. Professional Engineer/Professional Geologist Requirements.....	2
	d. General Requirements	2
V.	Design Report Standards	3
	a. Facility Description	3
	b. Types of Waste(s).....	3
	c. Design Conditions	3
	d. Detailed plans	3
	e. Specifications	4
	f. Monitoring Plan	4
VI.	Operation and maintenance plan	4
	a. Facility Management.....	4
	b. Facility Operations and Maintenance	5
VII.	Operation.....	6
	a. Construction.....	6
	b. Operation	6
	c. Suspension or Revocation of a Permit	6
	d. Agency Inspections	6
VIII.	Local, State and Federal Agencies	7
	a. County Planning and Zoning	7
	b. State Agencies.....	7
	c. Federal Agencies	7

GUIDELINES

CHAPTER 3 PERMITS REQUIREMENTS FOR CBM DISCHARGE

This guideline consolidates into one document the existing Wyoming Department of Environmental Quality (WDEQ), Water Quality Division (WQD) rules and regulations pertaining to the permitting, construction, operation, and monitoring of treatment facilities associated with discharge of coal bed methane (CBM) discharges.

I. AUTHORITY

a. Environmental Quality Act

W.S. 35-11-301 (a) (i) requires a permit to discharge for any person who causes, threatens or allows the discharge of any pollution or wastes into waters of the state.

W.S. 35-11-301 (a) (iii) requires a permit to construct, install, modify, or operate any wastewater system, disposal system, or other facility capable of causing or contributing to pollution.

b. Chapter 3

Applies to all private, municipal, commercial and industrial (including mining) sewerage systems, treatment works, disposal facilities, biosolids management facilities, treated wastewater systems and other facilities capable of causing or contributing to pollution.

This chapter contains regulations pertaining to construction permits required by W.S. 35-11-301(a) (iii).

c. Chapter 11

Establishes minimum design and construction standards for wastewater facilities.

Section 5 under this Chapter provides a process for evaluating and permitting designs which deviate from the minimum design and construction standards for wastewater facilities. A permit to construct **must** be obtained, if an applicant wishes to construct a pilot plant to provide the data necessary to show the design will meet design and construction standards for a wastewater facility. In accordance with this section, each application for a permit to construct will be evaluated on a case-by-case basis.

II. WHO NEEDS A PERMIT?

a. Permit Required

Any person who proposes to construct, modify, or operate a treatment works shall submit a written application for a permit on forms provided by the administrator (Chapter 3 application for a permit to construct).

Under Chapter 3, Section 3, treatment works are defined as:

“either a publicly or privately owned device or system used to treat either domestic sewage or a combination of domestic sewage and commercial or industrial waste of a liquid nature.”

Any facility that proposes to treat industrial waste of a liquid nature (such as CBM discharge) **must** apply for and **obtain** a permit to construct **prior** to construction. Permits must be obtained for each location.

III. TYPES OF PERMITS

There are two types of permits issued under Chapter 3:

a. General Permits

As authorized under Chapter 3, the Water Quality Division has developed general permits for pilot plants, small wastewater treatment systems (septic systems), and extensions or modifications to existing sewage collection systems and public water supply systems.

b. Individual Permits

Individual permits are issued for any facilities not covered under general permits. Examples would be land application of wastewater, road application of wastewater, and statewide permits.

IV. PERMIT APPLICATION REQUIREMENTS

The following procedures shall be used when applying for a permit:

a. Chapter 3 Permit Application

An application for a permit to construct (Appendix A) shall be submitted in triplicate. At least one copy of the application must contain the original signature of the land owner of record or legal designee.

The application for approval of a permit or for modification of an approved permit must be accompanied by three (3) copies of plans, specifications, design data, or other pertinent information covering the project and any additional information requested by the administrator.

b. Management Plan

The application for a permit shall be accompanied by a management plan. A complete management plan shall have the following components:

- i. Engineering Design Report
- ii. Construction plan; and
- iii. Operation plan.

c. Professional Engineer/Professional Geologist Requirements

All plans, specifications and reports submitted under this chapter shall be sealed, signed, and dated by a licensed professional engineer under W.S. Title 33, Chapter 29 and a licensed professional geologist under W.S. Title 33, Chapter 41, if geology is involved in the project.

d. General Requirements

All plans and specifications must conform to common and accepted professional practices as determined by the administrator or as defined by applicable division regulations.

V. DESIGN REPORT STANDARDS

An engineering design report which describes existing conditions, problems, and the proposed solution is required for each project. Components of the design report are described below.

a. Facility Description

A description of the facility site and location, including scaled site plan and:

- i. Present and projected facility property. The landowner of record should also be specified.
- ii. Flood protection indicating predicted elevation of 25- and 100-year flood stages.
- iii. Present and proposed access.
- iv. Fencing and/or security.
- v. Topographic features and contours with indicated datum.
- vi. Soil and subsurface geological characteristics.
- vii. Location of soil borings, rock elevations and groundwater elevations shall be indicated.

b. Types of Waste(s)

The application must contain a detailed description of the types of waste(s) to be accepted at the facility, including analytical data of the wastewater to be treated.

c. Design Conditions

- i. Design conditions shall include:
 - A. Technical and theoretical documentation of the treatment process.
 - B. Treatment expectations.
 - C. Design flow rate.
 - D. Documentation of previous applications of the treatment process (such as bench scale tests, small field tests, etc.).
- ii. Discharge of treated water
 - A. Through WYPDES discharge point.
Include WYPDES permit and map showing location of discharge point.
 - B. In to a non-discharging pond or pit.
Non-discharging ponds or pits must be designed on the basis of a water balance.
Include documentation that the ponds/pits have been permitted and bonded by the proper agency.
 - C. Land application
Include a soils study and engineering report supporting the agronomic application of water. Land application **will require a permit to construct** under Chapter 3.
 - D. Other
- iii. Treatment controls
Description of the controls and checks to ensure water is being treated:
 - A. Type of monitoring equipment
 - B. Frequency of monitoring
 - C. Back up monitoring

d. Detailed plans

- i. All plans shall have a suitable title block and legend that includes:
 - A. Name of permittee and location of project.
 - B. The revision date and number (if applicable).
 - C. North arrow and graphical drawing scale.

- D. Name, seal, and signature of the engineer. The engineer must have a current registration in the State of Wyoming.
- ii. All plans shall be tied to the reference datum used for the project.
- iii. All drawings shall be scaled and dimensioned.
- iv. The first page of each plan set shall be a cover sheet with an index to the plans. The second page shall be the site plan referred to in Section 8 (a) (ii).
- v. Site location and layout, including existing and proposed buildings and facilities.
- vi. Locations and dimensions of piping, including those in and under buildings.
- vii. Detailed drawings showing the physical layout of the facility, including pretreatment facilities, discharge points, tanks, and/or ponds.
- viii. Schematic flow diagrams of the treatment process.
- ix. Engineering drawings of the equipment, including any monitoring equipment, flow control equipment, chemicals, etc.

e. Specifications

The specifications accompanying the construction drawings shall include the following information for all construction related to oilfield wastewater management:

- i. Identification of required performance characteristics of all construction materials.
- ii. The type, size, strength, operating characteristics, rating or requirements for all mechanical and electrical equipment; laboratory fixtures and equipment; operating tools; special appurtenances; and chemicals where applicable.
- iii. Construction and installation procedures.
- iv. Testing requirements to assure materials and equipment meet design standards.

f. Monitoring Plan

Each treatment facility will be required to prepare a monitoring plan to document the treatment effectiveness. The plan should include the following basic items:

- i. Frequency: typically, the frequency will be high initially as treatment process is brought on line and can be reduced as treatment is shown to be effective.
- ii. Criteria for reduced frequency
- iii. Constituents
- iv. On-site monitoring versus third party verification of treatment
- v. Influent and effluent from the treatment plant (sampling of just the WYPDES discharge point is not considered sufficient to document the treatment effectiveness).

VI. OPERATION AND MAINTENANCE PLAN

An operation and maintenance plan is required for each new or modified wastewater treatment facility (Chapter 11, Section 24). The plan shall be finalized and approved prior to the approval of the permit. The plan shall address the following items, as appropriate for the facility. Additional items may be required based on the facility.

a. Facility Management

- i. Operator
- ii. Staffing
- iii. Permit
 - A. General
 - B. Permit and Permit Conditions
 - C. Facility Drawings

- D. Maintenance versus Modification Guidelines
- iv. File System
- v. Report System
 - A. Operator (internal)
 - Submittal schedule
 - Routing and contacts
 - Information
 - B. Regulatory Agencies
 - Submittal schedule
 - Contacts
 - Information

b. Facility Operations and Maintenance

- i. Facility
- ii. Wastewater Treatment Facilities
 - A. Description
 - Basic Components
 - Purpose of wastewater treatment facilities
 - Treatment process
 - Wastewater treatment specifications
 - B. Operations
 - Process
 - Pipe system
 - Chemical usage (if applicable)
 - Waste disposal
 - Treated water disposal
 - Inspections (by operator)
 - C. Maintenance
 - Schedule
 - Reports
 - D. Troubleshooting
 - Out-of-spec treated water
 - Plant upset
- iii. Contingency Plans (for respective emergencies)
 - A. Procedures
 - Assessment
 - Containment (if applicable)
 - Remediation (if applicable)
 - Facility closure (if applicable)
 - Documentation
- iv. Follow-up
 - A. Monitoring
 - Monitor wells
 - Influent/effluent/discharge
 - B. Inspection
 - Operator
 - Regulatory Agencies
 - C. Maintenance
 - D. Modifications
 - E. New construction
 - F. Reporting

VII. OPERATION

Under W.S. 35-11-306, any person who knowingly locates, constructs or operates a wastewater treatment facility in violation of statutes in the Environmental Quality Act of Wyoming is subject to the penalties provided by W.S. 35-11-901.

a. Construction

Section 5, Chapter 3, Wyoming Water Quality Rules and Regulations specifies that the construction, installation, or modification of facilities shall be allowed only in accordance with the terms and conditions of issued permits and provisions of Wyoming Water Quality Rules and Regulations.

Under Section 11, Chapter 3, a permittee shall conduct all construction, installation, or modification of any facility permitted consistent with the terms and conditions of the permit. Unauthorized changes, deviations, or modifications will be a violation of the permit.

b. Operation

Section 11, Chapter 3, states that a permittee shall conduct the operation in accordance with statements, representations, and procedures presented in the complete application and supporting documents, and permit conditions.

If deemed necessary by the division, the permittee shall be required to close the facility and cease acceptance of all wastewater until operations are conducted in accordance with applicable regulations, permit conditions, and/or operation and maintenance plan.

c. Suspension or Revocation of a Permit

Section 16, Chapter 3, states that a permit may be suspended or revoked for:

- i. Noncompliance with the terms of the permit; or
- ii. Unapproved modifications in design or construction; or
- iii. False information submitted in the application; or
- iv. Changing site conditions which would result in violations of applicable regulations; or
- v. Non-compliance with requirements of Section 18 (state and local water quality management plans); or
- vi. Any other reason necessary to effectuate applicable statutes, standards or regulations.

d. Agency Inspections

The owner of the facility shall allow authorized representatives of the WDEQ, upon presentation of credentials, in compliance with the permittee's established, printed site security protocols, and at reasonable times to:

- i. Enter upon the premises of the operation, land application areas, or premises where records are kept as required by the permit.
- ii. Read or copy any records required to be kept under the terms of the permit.
- iii. Inspect any facilities, equipment, and land application areas covered under the permit.
- iv. Sample any waste, wastewater, sludge, residuals, and byproducts covered under the provisions of the permit.

VIII. LOCAL, STATE AND FEDERAL AGENCIES

a. County Planning and Zoning

Approval of a permit for a wastewater treatment facility does not relieve the permittee of the responsibility to comply with any local requirements including land use, zoning, or permitting requirements established by any local government. It is the permittee's responsibility to obtain required local permits.

b. State Agencies

A permit does not allow the permittee to violate any provision of the Environmental Quality Act or any other applicable regulation. Other state requirements/permits may include, but are not limited to, the following:

- i. The Wyoming Department of Environmental Quality, Air Quality Division requires new sources of air emissions to obtain a permit.
- ii. The Wyoming State Engineer regulates the appropriation and use of water and the safety of dams.
- iii. All water well construction requires a permit from the State Engineer. Appropriate water rights must be granted by the State Engineer before the use or detention of surface water.
- iv. The Wyoming Department of Environmental Quality, Water Quality Division requires a storm water permit for construction activities including clearing, grading, and excavation activities that disturb more than one acre.
- v. Disposal / acceptance of any hazardous waste is expressly not permitted. The Wyoming Department of Environmental Quality, Solid and Hazardous Waste Division regulates disposal of hazardous and non RCRA-exempt E&P wastes.
- vi. The [Wyoming Oil and Gas Conservation Commission](#) (WOGCC) is the state agency authorized to regulate oil and gas exploration and production waste and pit treatment processes.

The WOGCC is the agency responsible for permitting the location, construction, operation and reclamation of noncommercial reserve pits and produced water retention and emergency pits used solely for the storage, treatment and disposal of drilling fluids, produced waters, emergency overflow wastes or other oil field wastes associated with the maintenance and operation of oil and gas exploration and production wells on a lease, unit, or communitized area. Storage, treatment and disposal of drilling fluids, produced waters, or other oil field wastes outside of a lease, unit or communitized area is regulated by WDEQ.

One time land spreading of reserve pit fluids and solid on the drilling pad is regulated by the WOGCC. All other general road spreading, land spreading and land farming operations are regulated by WDEQ and require a separate permit to construct under Chapter 3.

c. Federal Agencies

The permittee is responsible for complying with any federal requirements and may include, but are not limited to:

- i. U.S. Environmental Protection Agency
The [U.S. Environmental Protection Agency](#) (the EPA or the Agency) is entrusted with protecting human health and safeguarding the natural environment — air, water, and land. Disposal of Naturally Occurring Radioactive Materials (NORM) is regulated by EPA.

Regulations promulgated by the EPA are published in Code of Federal Regulations, Title 40 (40 CFR).

- ii. U.S. Fish and Wildlife Service
The U.S. Fish and Wildlife Service (USFWS) regulates provisions of the Migratory Bird Treaty Act. In addition, the USFWS investigates bird and wildlife deaths associated with operations at commercial oilfield wastewater disposal facilities.
- iii. U.S. Bureau of Land Management
The [Bureau of Land Management](#) (BLM), a bureau in the [U.S. Department of the Interior](#), has jurisdiction over onshore leasing, exploration, development, and production of oil and gas on federal lands. In addition, the BLM approves and supervises most oil and gas operations on American Indian lands. The BLM regulations governing onshore oil and gas operations are codified at [43 CFR Part 3160 \(Onshore Oil and Gas Operations\)](#). General requirements for operating rights of owners and operators include compliance with applicable laws and regulations, the lease terms, Onshore Oil and Gas Orders, Notices to Lessees and Operators (NLTs), and other orders and instructions of the authorized officer.
- iv. U.S. Army Corp of Engineers
The mission of the Corps of Engineers Regulatory Program is to protect the nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the nation's waters, including wetlands. Corps permits are also necessary for any work, including construction and dredging, in the nation's navigable waters.