



Certification Page Regular and Emergency Rules

Revised June 2020

Emergency Rules (Complete Sections 1-3 and 5-6)

Regular Rules

1. General Information

a. Agency/Board Name* Environmental Quality			
b. Agency/Board Address 200 W 17th St Ste 400		c. City Cheyenne	d. Zip Code 82002
e. Name of Agency Liaison Rich Cripe		f. Agency Liaison Telephone Number (307) 777-7075	
g. Agency Liaison Email Address rich.cripe@wyo.gov		h. Adoption Date 8/19/20	
i. Program Water Quality			
Amended Program Name (if applicable):			

* By checking this box, the agency is indicating it is exempt from certain sections of the Administrative Procedure Act including public comment period requirements. Please contact the agency for details regarding these rules.

2. Legislative Enactment For purposes of this Section 2, "new" only applies to regular (non-emergency) rules promulgated in response to a Wyoming legislative enactment not previously addressed in whole or in part by prior rulemaking and does not include rules adopted in response to a federal mandate.

a. Are these non-emergency or regular rules new as per the above description and the definition of "new" in Chapter 1 of the Rules on Rules?

No. **Yes.** If the rules are new, please provide the Legislative Chapter Numbers and Years Enacted (e.g. 2015 Session Laws Chapter 154):

3. Rule Type and Information For purposes of this Section 3, "New" means an emergency or regular rule that has never been previously created.

a. Provide the Chapter Number, Title* and Proposed Action for Each Chapter. Please use the "Additional Rule Information" form to identify additional rule chapters.

Chapter Number: 14	Chapter Name: Financial Assurance Requirements	<input type="checkbox"/> New <input checked="" type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number: 28	Chapter Name: Standards for Issuing Permits for Commercial Oilfield Wastewater Disposal Facilities	<input checked="" type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		

4. Public Notice of Intended Rulemaking

a. Notice was mailed 45 days in advance to all persons who made a timely request for advance notice. No. Yes. N/A

b. A public hearing was held on the proposed rules. No. Yes. Please complete the boxes below.

Date: 8/19/20	Time: 9:00 a.m.	City: Cheyenne	Location: Videoconference from the Board of Equalization Board Room, First Floor Hathaway Building, 2300 Capitol Ave
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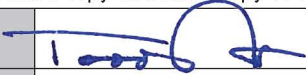
5. Checklist

a. For regular rules, the Statement of Principal Reasons is attached to this Certification and, in compliance with Tri-State Generation and Transmission Association, Inc. v. Environmental Quality Council, 590 P.2d 1324 (Wyo. 1979), includes a brief statement of the substance or terms of the rule and the basis and purpose of the rule

b. For emergency rules, the Memorandum to the Governor documenting the emergency, which requires promulgation of these rules without providing notice or an opportunity for a public hearing, is attached to this Certification.

6. Agency/Board Certification

The undersigned certifies that the foregoing information is correct. By electronically submitting the emergency or regular rules into the Wyoming Administrative Rules System, the undersigned acknowledges that the Registrar of Rules will review the rules as to form and, if approved, the electronic filing system will electronically notify the Governor's Office, Attorney General's Office, and Legislative Service Office of the approval and electronically provide them with a copy of the complete rule packet on the date approved by the Registrar of Rules. The complete rules packet includes this signed certification page; the Statement of Principal Reasons or, if emergency rules, the Memorandum to the Governor documenting the emergency; and a strike and underscore copy and clean copy of each chapter of rules.

Signature of Authorized Individual	
Printed Name of Signatory	Todd Parfitt
Signatory Title	Director
Date of Signature	August 20, 2020

7. Governor's Certification

I have reviewed these rules and determined that they:

- 1. Are within the scope of the statutory authority delegated to the adopting agency;
- 2. Appear to be within the scope of the legislative purpose of the statutory authority; and, if emergency rules,
- 3. Are necessary and that I concur in the finding that they are an emergency.

Therefore, I approve the same.

Governor's Signature	
Date of Signature	

FILED

AUG 19 2020

Jim Ruby, Executive Secretary
Environmental Quality Council

**BEFORE THE
ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING**

**IN THE MATTER OF REVISIONS TO)
WATER QUALITY RULES AND)
REGULATIONS: CHAPTER 14, FINANCIAL)
ASSURANCE REQUIREMENTS, AND)
CHAPTER 28, STANDARDS FOR ISSUING)
PERMITS FOR COMMERCIAL OILFIELD)
WASTEWATER DISPOSAL FACILITIES)**

**STATEMENT OF
PRINCIPAL
REASONS
FOR
ADOPTION**

The Environmental Quality Council, pursuant to the authority vested in it by Wyoming Statutes (W.S.) § 35-11-112 (a)(i) has adopted revisions to Wyoming Water Quality Rules and Regulations Chapter 14, Financial Assurance and Chapter 28, Minimum Standards for the Design and Construction of Commercial Oilfield Waste Disposal Facilities.

The Department of Environmental Quality, Water Quality Division proposed removing requirements to allow self-bonding as an allowed instrument for financial assurance as there is little demand to use the instrument and the previous regulations required substantial revision in order to be consistent with authorizing statutes and other Department regulations. Water Quality Division also proposed revisions to Chapter 14 in order to make the financial assurance requirements consistent with other Department and banking rules and statutes related to financial assurance. Water Quality Division proposed adding corrective action plan requirements as the rule had previously required a corrective action plan but did not elaborate on the submission requirements. Water Quality Division proposed formatting and grammar corrections.

The Water Quality Division proposed the adoption of a new chapter, Chapter 28, Standards for Issuing Permits for Commercial Oilfield Wastewater Disposal Facilities in order to streamline and clarify the design, construction, operation, monitoring, and reporting requirements for Commercial Oilfield Waste Disposal Facilities (COWDFs). Previously, Water Quality Division has guided permittees through the various requirements established in Water Quality Rules and Regulations, Chapter 3, Regulations for Permit to Construct, Install or Modify Public Water Supplies, Wastewater Facilities, Disposal Systems, Biosolids Management Facilities, Treated Wastewater Reuse Systems and Other Facilities Capable of Causing or Contributing to Pollution; Chapter 8, Quality Standards for Wyoming Groundwaters; Chapter 11, Design and Construction Standards for Sewerage Systems, Treatment Works, Disposal Systems or other Facilities Capable of Causing or Contributing to Pollution and Mobile Home Park and Campground Sewerage and Public Water Supply Distribution Systems; and Chapter 14, Financial Assurance Requirements through *GUIDELINES: COMMERCIAL OILFIELD WASTEWATER DISPOSAL FACILITIES (COWDF)*, revised October 2013.

7/21/20
Additionally, the Water Quality Division proposed new public participation, public notice, and public hearing requirements for COWDFs that are consistent with other Water Quality Division regulations and practices in order to provide a balanced opportunity for the public to participate in the COWDF permitting process.

The Council finds that these regulations are reasonable and necessary to accomplish the policy and purpose of the Environmental Quality Act, as stated in § W.S. 35-11-102, and that they have been promulgated in accordance with rulemaking provisions of the Wyoming Administrative Procedures Act.

Dated this 19th day of August, 2020.

Marjorie E. Bedessem
Hearing Examiner – *Printed Name*
Wyoming Environmental Quality Council

Marjorie E. Bedessem
Hearing Examiner – *Signed Name*
Wyoming Environmental Quality Council

Proposed Revisions to Water Quality Rules and Regulations, Chapter 14, Financial Assurance; and Chapter 28, Standards for Issuing Permits for Commercial Oilfield Waste Disposal Facilities

Analysis of Comments Received for Docket 20-3102



August 12, 2020

Prepared by:
Wyoming Department of Environmental Quality
Water Quality Division
Water and Wastewater Program

Commenter:

Dominion Energy Wexpro

Comments and Responses

Chapter 14

Section 1(c)(vi)

Dominion Energy Wexpro: “In Section 1(c), the proposed revision to the definition of “release” encompasses any pollutant entering or threatening to enter the air, land or waters of the State. We see potential for confusion here, because this regulation governs water quality only, is overseen and enforced by personnel with expertise in water quality, and uses terminology specific to water. We recommend maintaining a narrow water quality-specific definition in the water quality rules and, instead, referring to applicable sections of the regulations that protect air. This would allow for continued reliance on customary terms such as “emissions” in Chapter 1 of Air Quality Standards and Regulations.”

Department Response: WDEQ/WQD considered the comment. The passage at Section 1(c)(vi) is proposed to be revised for consistency with Wyoming Statutes 35-11-306(d)(ii), which requires rules for commercial oil field waste disposal facilities to ensure the availability of funds to cover “the estimated costs of remedying or abating, in a cost-effective manner, the violation or damages caused by the violation in the event of any discharge of pollution to the air, land or to waters of the state which is in violation of a permit, standard, rule or requirement established under the provisions of this act.” While the statutes require WDEQ/WQD to have rules that require financial assurance from Commercial Oil Field Waste Disposal Facilities (COWDFs) for releases to air, land, or water, the statutes do not provide authority to the Air Quality Division or the Land Quality Division to require financial assurance from Commercial Oil Field Waste Disposal facilities. This authority is provided only to the Water Quality Division. The statutes also do not provide Water Quality Division the authority to permit or enforce Air Quality or Land Quality regulations for COWDFs. The passage will remain as written.

Section 4

Dominion Energy Wexpro: “Section 4 of Chapter 14 requires permittees to prepare a plan to conduct an investigation of the release, the release site and any surrounding area that may be affected by the release. This plan includes a comprehensive subsurface investigation to define the extent and degree of contamination. Wexpro recommends that WDEQ clarify the magnitude and character of releases that would require subsurface investigation, as this step would be unnecessary for certain releases depending on volume or specific site characteristics.”

Department Response: WDEQ/WQD considered the comment. Releases would also be subject to the reporting requirements in Water Quality Rules and Regulations Chapter 4, Section 4, which states that if a release “does not physically enter waters of the state, and it is immediately contained, removed, and disposed of in accordance with departmental regulations,” and it is “ten barrels (420 gallons) or less of crude oil, petroleum condensate, produced water, or a combination thereof” or “twenty-five (25) gallons or less of refined crude oil products, including but not limited to, gasoline, diesel motor fuel, aviation fuel, asphalt, road oil, kerosene, fuel oil, and derivatives of mineral, animal, or vegetable oils,” then the release would not be required to be reported to WDEQ/WQD and would not require a subsurface investigation. However, if a release does not meet these criteria, then WDEQ/WQD requires a subsurface investigation. WDEQ/WQD has edited Chapter 14, Section 4(b) to bring in the reference to Chapter 4, Section 4 to add clarity regarding the thresholds and when the subsurface investigation would be required.

Chapter 28

Section 2(c)(i)

Dominion Energy Wexpro: “In Section 2 (c) (ii), we note the proposed requirement for hazardous waste characteristic analysis of all non-exempt wastes proposed to be disposed of at a commercial oilfield waste disposal facility. For this new requirement, we recommend the provision be clarified to align with federal requirements that allow for onsite personnel’s specific knowledge and expertise to be considered. Under the USEPA’s hazardous waste regulations (see 81 FR 85732), acceptable “generator knowledge” can be used includes waste origin, composition, the process producing the waste, feedstock and other reliable and relevant information.”

Department Response: WDEQ/WQD considered the comment. WDEQ/WQD's current practice already takes into account the generator knowledge. We have clarified the passage at Section 2(c)(i) to state "The Division requires hazardous waste characteristic analysis of all non-exempt wastes proposed to be disposed of at a commercial oilfield waste disposal facility. Additional or reduced sampling may be required by the Division based on the type of waste to be disposed and the generator's knowledge of the waste, including waste origin, composition, the process producing the waste, feedstock, and other reliable and relevant information. If any of the hazardous waste regulatory levels are exceeded, the wastes shall be disposed at a facility approved to accept hazardous wastes."

Sections 8 and 13

Dominion Energy Wexpro: "We note minor clarifications that would be beneficial in the reporting requirements in Sections 8 and 13. Specifically, we recommend that the regulation specify that the annual reporting and public participation provisions only apply to facilities subject to Chapter 28. Also, specifying that the default reporting period is the calendar year would add standardization and regulatory certainty."

Department Response: WDEQ/WQD considered the comment. Regarding the request to clarify Sections 8 and 13, we note that Section 2 explains that the proposed chapter applies to COWDFs that are required to apply for a Chapter 3 permit. Section 3 further clarifies that applicants for new permits or applicants that are applying to modify an existing permit will be subject to Chapter 28. Section 8 states that it applies to permittees, which would be applicants that have obtained a permit for a new or modified COWDF. Section 13 is triggered only when the Administrator intends to issue a permit, intends to modify a permit, or intends to hold a public hearing related to the intention to issue or modify a permit. Because Sections 2, 3, 8, and 13 already state the conditions of applicability, WDEQ/WQD will not be adding additional language to Sections 8 and 13 to avoid creating redundancy.

Regarding the request to clarify the reporting period in Section 8, WDEQ/WQD has revised the section, as appropriate, to clarify that the reporting components be submitted for the previous calendar year.

CHAPTER 14

FINANCIAL ASSURANCE REQUIREMENTS

Section 1. In General.

(a) This Chapter is promulgated pursuant to the Wyoming Environmental Quality Act, Wyoming Statutes (W.S.) § 35-11-101 through § 35-11-2005, specifically § 306 and § 307.

(b) This Chapter governs all commercial oil field waste disposal facilities that are required to demonstrate financial assurance under W.S. § 35-11-306(c) and all commercial waste treatment, storage and disposal facilities used for the management of more than ten (10) tons of dried wastewater treatment sludges or the equivalent per operating day that are required to demonstrate financial assurance under W.S. § 35-11-307(a). This chapter does not apply to publicly owned facilities or facilities that receive non-domestic sludges.

(c) The following definitions supplement those contained in W. S. § 35-11-103 of the Wyoming Environmental Quality Act:

(i) “Closure” means the process of securing and stabilizing a regulated facility pursuant to the requirements of this Chapter and a closure plan approved by the Department.

(ii) “Corrective action” means all actions necessary to remedy, abate, and eliminate the public health threat, environmental threat, and damages from a release to the environment of pollutants from a regulated facility or from any violation of a permit, standard, rule, or other requirement established under the Wyoming Environmental Quality Act

(iii) “Monitoring” means all procedures and techniques used to systematically collect, analyze and inspect data on operational parameters of the facility or on the quality of the air, groundwater, surface water, and soil.

(iv) “Operator” means a person who owns or operates a regulated facility or a person who holds a permit to construct, install, modify, or operate a regulated facility.

(v) “Regulated facility” means a commercial sludge facility or a commercial oil field waste disposal facility as specified in Section 1(b) of this chapter.

(vi) “Release” includes, but is not limited to, any spilling, leaking, pumping, pouring, emptying, emitting, discharging, dumping, addition, escaping, leaching, or unauthorized disposal of any pollutant that enters, or threatens to enter, the air, land or waters of the State.

Section 2. Requirements to Demonstrate Financial Assurance.

(a) All regulated facilities shall provide financial assurance for closure, post-closure, and corrective action in compliance with this Chapter.

(b) No new permit shall be issued for any regulated facility unless the applicant provides financial assurance that ensures there are adequate sources of funds to provide for closure, post-closure, and corrective action.

(i) The Department may deny a permit application if the documentation or proposed forms of financial assurance do not ensure that adequate funds will be available to provide for closure, post-closure, and corrective action.

(ii) A permit may be transferred to a new permittee only if the new permittee demonstrates compliance with the financial assurance requirements of this Chapter. Construction permit ownership will be transferred in accordance with Water Quality Rules and Regulations, Chapter 3, Section 12.

(c) Any operator of a regulated facility that violates a permit, standard, rule, or requirement established under the Wyoming Environmental Quality Act that results in a release of pollution or waste to the air, land, or water resources of the state shall provide financial assurance for the costs of completing corrective action to remedy or abate the violation or damages caused by the violation.

(d) An operator shall submit documentation of the financial assurance to the Department as part of any permit application for a regulated facility and shall update documentation of financial assurance as required by Sections 3(d)(iv), 3(e)(iv), 4(d)(iv), 5(c)(ii), and 5(d)(ii) of this Chapter. The Department shall determine whether the documentation and proposed forms of financial assurance are adequate and shall notify the applicant in writing of its determination.

Section 3. Closure and Post-Closure Requirements.

(a) At least one hundred eighty (180) days prior to the anticipated date for initiation of closure of a regulated facility, the operator shall:

(i) Notify the Department in writing of the operator's intention to close a regulated facility;

(ii) Notify the governing body of each locality and adjacent property owners by certified or registered mail of the operator's intention to close a regulated facility;

(iii) Post at least one (1) sign at the regulated facility notifying all persons of the anticipated closing and prohibition against further receipt of waste materials; and

(iv) Install barriers at all access points to prevent new waste from being deposited.

(b) An operator or permit applicant shall submit a closure plan and a post-closure plan with each permit application for a regulated facility. Additionally, a permittee shall submit a revised closure plan and revised post-closure plan to the Department whenever changes to facility operations, conditions, or anticipated closure necessitate changes to the plans.

(c) The closure plan shall:

(i) Describe the work necessary to minimize or eliminate, to the extent necessary to protect human health and the environment, the post-closure escape of leachate, surface runoff, or waste decomposition products to the groundwater, surface water, or the atmosphere;

(ii) Minimize the need for post-closure maintenance and controls; and

(iii) Include a cost estimate.

(d) The closure plan cost estimate shall:

(i) Include an itemized written estimate of the cost of completing all work described in the closure plan;

(ii) Be based on the cost required for a third-party contractor to complete the work described in the closure at the most expensive point in the life of the facility;

(iii) Account for the following factors:

(A) The size and topography of the site;

(B) The total waste material storage capacity at the site;

(C) Availability of cover and fill material needed for site grading;

(D) The type of waste to be received at the site;

(E) Disposal method and sequential disposal plan;

(F) The location of the site and the character of the surrounding area;

(G) Requirements for surface drainage;

(H) Operation and maintenance of the leachate collection and treatment system, and, the off-site disposal of leachate;

(I) Environmental monitoring system;

(J) Structures and other improvements to be dismantled and removed. Salvage values cannot be used to offset demolition costs;

(K) Site storage capacity for solid waste, incinerator residue, and compost material;

(L) Off-site disposal requirements;

(M) Vector control requirements;

(N) A minimum of fifteen percent (15%) variable contingency fee to cover other closure costs as determined appropriate by the Department; and

(O) Any other relevant site-specific factors.

(iv) Be updated, revised, and submitted to the Department by April 1 of each year.

(e) The post-closure plan shall:

(i) Describe the monitoring, maintenance, and controls necessary to confirm that:

(A) Post-closure escape of leachate, surface runoff, or waste decomposition products to the groundwater, surface water, or the atmosphere has been minimized or eliminated to the extent necessary to protect human health and the environment; and

(B) The facility has been stabilized and closed in accordance with the most recent approved closure plan.

(ii) Establish the monitoring period necessary to ensure that the regulated facility has been stabilized and closed in accordance with the most recent approved closure plan. The monitoring period shall continue for a minimum of five (5) years after the date of completing closure of the regulated facility, but the Department may require a longer monitoring period or extend the post-closure monitoring period if the Department determines a longer monitoring period is necessary to protect human health and the environment; and

(iii) Include a cost estimate. However, an incinerator, resource recovery facility, compost facility, or storage surface impoundment may omit the post-closure plan cost estimate from its post-closure plan if onsite disposal of wastes or residues is not planned or required.

(f) The post-closure plan cost estimate shall:

(i) Include a written estimate of the cost of completing all work described in the post-closure plan;

(ii) Be based on the cost required for a third-party contractor to complete the work described in the post-closure plan;

(iii) Account for the following factors :

(A) The size and topography of the site;

(B) The type and quantity of waste that can be received;

(C) Disposal method and sequential disposal plan;

(D) The potential for significant leachate production and the possibility of contaminating water supplies;

(E) Environmental monitoring systems;

(F) Soil conditions;

(G) The location of the site and the character of the surrounding area;

(H) A minimum of fifteen percent (15%) contingency fee to cover other post-closure costs as determined appropriate by the Department; and

(I) Other site-specific factors.

(iv) Be updated, revised, and submitted to the Department by April 1 of each year.

(g) Inspection:

(i) The Department shall inspect all closed regulated facilities to determine if the closure is complete and adequate in accordance with the approved plan after being notified by the operator that closure has been completed. The Department shall provide written inspection

results to the operator of a closed facility after the inspection. If the closure is not satisfactory, the Department shall specify necessary construction or such other steps that may be appropriate to bring unsatisfactory sites into compliance with closure requirements.

(ii) Notification by the Department that the closure is satisfactory does not relieve the operator of responsibility for corrective action in accordance with regulations of the Department to prevent or abate problems caused by the regulated facility that are subsequently discovered.

(h) Within sixty (60) days after receiving certification from the owner or operator that closure has been accomplished in accordance with the closure plan and the provisions of this Chapter, the Director shall verify that proper closure has occurred. Unless the Director has reason to believe that closure has not been in accordance with the closure plan, the Director shall notify the owner or operator in writing that the Director is no longer required to maintain financial assurance for closure of the particular facility. Such notice shall release the owner or operator only from the requirements for financial assurance for closure of the facility; it does not release the Director from legal responsibility for meeting the closure or post-closure standards. If no written notice or termination of financial assurance requirements or failure to properly perform closure is received by the owner or operator within sixty (60) days after certifying proper closure, the owner or operator may petition the Director for an immediate decision, in which case the Director shall respond within ten (10) days after receipt of such petition.

Section 4. Corrective Action Requirements.

(a) The Department shall notify the operator of the need to take corrective action to remedy a violation of a permit condition, standard, rule or requirement relating to a regulated facility. The notification shall describe the nature of the violation.

(i) If deemed necessary by the Department, the operator will be required to close the facility and cease further receipt of waste materials.

(ii) If the facility is closed, the operator shall post one (1) sign notifying all persons of the closing and prohibition against further receipt of waste materials. Further, suitable barriers shall be installed at former accesses to prevent new waste from being deposited.

(b) Remediation Activities: In the event of a release, the operator shall:

(i) Initiate immediate measures to:

(A) Prevent further release to the environment;

(B) Prevent further migration of the released substance into surrounding soils and Waters of the State; and

(C) Identify, monitor and mitigate any safety hazards or health risks associated with the violation.

(ii) Comply with all applicable requirements of Wyoming Water Quality Rules and Regulations, Chapter 4; and

(iii) If more than 10 barrels (420 gallons) of crude oil, petroleum condensate, produced water, or a combination thereof, or more than 25 gallons of refined crude oil products (including but not limited to gasoline; diesel motor fuel; aviation fuel; asphalt; road oil; kerosene; fuel oil; and derivatives of mineral, animal, or vegetable oils) are released:

(A) Prepare a plan to conduct an investigation of the release, the release site and any surrounding area that may be affected by the release. The plan shall include:

(I) A comprehensive subsurface investigation to define the extent and degree of contamination.

(II) A schedule for conducting the investigation.

(III) A cost estimate for a third-party to perform the tasks identified by the plan.

(B) Submit the investigation plan to the Department within thirty (30) days. The extent of contamination study should begin as soon as the plan has been approved and all necessary permits obtained.

(C) Conduct the extent of contamination study in accordance with the approved plan and submit a written report of the findings to the Department.

(D) If required by the Department, develop a comprehensive plan for mitigation and clean-up. The remediation plan shall be submitted to the Department for approval. The remediation plan shall be implemented as soon as the Department has approved the plan and all necessary permits have been obtained. The remediation plan shall contain an estimate of the costs for a third-party to perform the tasks identified by the plan.

(c) Cost Estimate for Corrective Action:

(i) The operator of a commercial oil field disposal system regulated under W.S. § 35-11-306 or a commercial sludge facility regulated under W.S. § 35-11-307 in submitting an application for a construction permit as required by Chapter 3, Wyoming Water Quality Rules and Regulations shall include a written estimate of the cost of corrective actions to remediate a release from the facility. The estimated cost of corrective action and clean-up of a

release shall be determined by the Department on a case-by-case basis considering information submitted by the operator. Such costs shall be based on the work required for a third-party contractor.

(ii) The factors to be considered in estimating the cost of corrective actions and clean-up of a release shall include the following:

- (A) Soils, geologic and hydrogeologic conditions at the site.
- (B) The type and quantity of waste received.
- (C) Disposal method and sequential disposal plan.
- (D) The potential for significant leachate production and the possibility of contaminating groundwater.
- (E) Environmental monitoring systems.
- (F) The location of the site and the character of the surrounding area.
- (G) A minimum of fifteen percent (15%) contingency fee to cover other corrective action and clean-up costs as determined appropriate by the Department.
- (H) The ability of the facility to prevent and detect a release and to facilitate clean-up activities. The criteria used to evaluate this ability shall include design, construction, operation, monitoring, and contingency plans submitted as part of the application package.
- (I) The class, use, value and environmental vulnerability of surface and groundwater resources that may be impacted by a release.
- (J) Other site-specific factors.

Section 5. Establishment of Financial Assurance Requirements.

(a) The Department shall establish the amount of financial assurance required for regulated facilities based on the plans and cost estimates for closure, post-closure, and corrective action. Upon receipt of a cost estimate, the Department shall determine whether the cost estimate meets the requirements of this Chapter and notify the operator in writing of its determination.

(b) If the Department determines that a cost estimate meets the requirements of this Chapter:

(i) The Department shall establish the amount of financial assurance required and notify the operator in writing of the amount established; and

(ii) The operator shall submit documentation of financial assurance in an amount at least equal to the Department's established financial assurance amount within thirty (30) days of the Department's establishment of the financial assurance amount.

(c) If the Department determines that a cost estimate does not meet the requirements of this Chapter:

(i) The Department shall notify the operator of the deficiencies in the cost estimate, and the operator shall revise and resubmit the cost estimate to the Department within thirty (30) days of the Department's determination; or

(ii) The Department shall establish the amount of financial assurance required and notify the operator in writing of the amount established, and the operator shall submit documentation of financial assurance in an amount at least equal to the Department's established financial assurance amount within thirty (30) days of the Department's establishment of the financial assurance amount.

Section 6. Forms of Financial Assurance.

(a) An operator of a regulated facility shall provide financial assurance in an amount at least equal to the established financial assurance amount for closure, post-closure, and corrective action in one (1) or a combination of the following:

- (i) Surety bond;
- (ii) Federally insured certificates of deposit;
- (iii) Government-backed securities;
- (iv) Cash.

(b) Surety Bonds:

(i) A corporate surety shall not be considered good and sufficient for purposes of W.S. § 35-11-307 or W.S. § 35-11-306 unless:

- (A) It is licensed to do business in the State;

(B) The estimated bond amount does not exceed the limit of risk as provided for in W.S. § 26-5-110, nor raise the total of all bonds held by the applicant under that surety above three (3) times the limit of risk; and

(C) The surety agrees:

(I) Not to cancel bond, except as provided for in W.S. § 35-11-307 or W.S. § 35-11-306 or where the Department gives prior written approval of a good and sufficient replacement surety with transfer of the liability that has accrued against the operator on the permit area;

(II) To be jointly and severally liable with the permittee.

(III) To provide immediate written notice to the Department and operator once it becomes unable or may become unable due to any action filed against it to fulfill its obligations under the bond.

(ii) The provisions applicable to cancellation of the surety's license in W.S. § 35-11-307 or W.S. § 35-11-306 shall also apply if for any other reason the surety becomes unable to fulfill its obligations under the bond. Upon such occurrence, the operator shall provide the required notice. Failure to comply with this provision shall result in suspension of the permit.

(c) In lieu of a bond, the facility operator shall deposit federally insured certificates of deposit payable to the Wyoming Department of Environmental Quality, cash, or government securities, or all three (3).

(i) Securities that are unencumbered shall only include those that are United States Government securities or State Government securities that are acceptable to the Director. Government securities must be endorsed to the order of the Department and placed in possession of the Department. Possession shall be in the form of the cash value of the irrevocable trust for the full amount of the reclamation obligation and payable to the Department and federally insured.

(ii) An operator shall satisfy the requirements of this subsection by establishing an irrevocable trust that conforms to the requirements below and submitting an originally signed duplicate of the trust agreement to the Administrator for consideration.

(A) The irrevocable trust must be submitted to the Director on the Wyoming Department of Environmental Quality Irrevocable Trust Form and be signed by the operator or guarantor as principal and the financial institution as Trustee, and made payable to the Department;

(B) The Trustee must be a bank organized to do business in the United States that has the authority to act as a trustee and whose trust operations is regulated and examined by a Federal Agency;

(C) The irrevocable trust must be cash funded for the full amount of the financial assurance obligation to be provided in the irrevocable trust before it may be approved to satisfy the requirements of financial assurance in lieu of a bond. For purposes of this subsection, “the full amount of the financial assurance obligation to be provided” means the amount of coverage for Closure, Post-Closure and Corrective Action required to be provided for the permit/facility, less the amount of financial assurance obligation that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the operator or guarantor;

(D) Cancellation of an irrevocable trust shall follow the same procedures detailed in W.S. §35-11-306(j) for performance bonds; and

(E) Forfeiture proceeding for an irrevocable trust shall follow the same procedures detailed in W.S. §35-11-306(m) for performance bonds.

CHAPTER 14

FINANCIAL ASSURANCE REQUIREMENTS

Section 1. In General.

(a) ~~Authority:~~ This ~~rule~~ Chapter is promulgated pursuant to the Wyoming Environmental Quality Act, Wyoming Statutes (W.S.) § 35-11-101 through § 35-11-2004 5, specifically ~~W.S. 35-11- § 306 and W.S. 35-11- § 307.~~

(b) ~~Applicability:~~ This ~~e~~Chapter governs all commercial oil field waste disposal facilities that are required to demonstrate financial assurance under W.S. § 35-11-306(~~c~~); and all ~~new and existing~~ commercial waste treatment, storage and disposal facilities used for the management of more than ten (10) tons of dried wastewater treatment sludges or the equivalent per operating day, that are required to demonstrate financial assurance under W.S. § 35-11-307(a). This chapter does not apply to publicly owned facilities or facilities that receive non-domestic sludges.

(~~e~~)~~—Objective:~~ The objective of these rules and regulations is to provide financial assurance for the purposes specified in ~~W.S. 35-11-306(d), and W.S. 35-11-307(e).~~

(~~d~~)~~—Severability:~~ If any section or provision of this chapter, or the application of that section or provision to any person, situation, or circumstance is adjudged invalid for any reason, the adjudication does not affect any other section or provision of these regulations or the application of the adjudicated section or provision to any other person, situation, or circumstance. The Environmental Quality Council declares that it would have adopted the valid portions and application of this chapter without the invalid part, and to this end the provisions of this chapter are declared to be severable.

(~~e~~)(c) ~~Definitions:~~ The following definitions supplement those contained in W. S. § 35-11-103 of the Wyoming Environmental Quality Act:

(i)~~—“Closed facility” means a regulated facility at which operations have been properly terminated in accord with an approved facility closure plan on file with the Water Quality Division and complying with all applicable regulations and requirements concerning its stabilization.~~

(ii)(i) “Closure” means the ~~aet~~ process of securing and stabilizing a regulated facility pursuant to the requirements of ~~these regulations~~ this Chapter and a closure plan approved by the Department.

(iii) “Collateral” means ~~the actual or constructive deposit, as appropriate, with the Department of one (1) or more of the following kinds of property to support a self bond:~~

~~_____ (A) — A perfected, first lien security interest in real property located within the State of Wyoming, in favor of the Wyoming Department of Environmental Quality that meets the requirements of this chapter.~~

~~_____ (B) — Securities backed by the full faith and credit of the United States government or state government securities acceptable to the Department. These securities must be endorsed to the order of, and placed in the possession of the Department.~~

~~_____ (C) — Personal property located within the state, owned by the operator, that in market value exceeds \$1 million per property unit.~~

~~(iv) — “Comparative balance sheet” means item amounts from a number of the operator’s successive yearly balance sheets arranged side by side in a single statement.~~

~~(v) — “Comparative income statement” means an operator’s income statement amounts for a number of successive yearly periods arranged side by side in a single statement.~~

~~(vi)(ii) “Corrective action” means all actions necessary to remedy, abate, and eliminate the public health threat, or environmental threat, and damages from a release to the environment of pollutants from an operating or closed regulated facility or from any violation of a permit, standard, rule, or other requirement established under the Wyoming Environmental Quality Act and to restore the environmental conditions as required.~~

~~(vii) — “Cost effective” means the selection of alternative responses taking into account total short term and long term costs of those responses including the costs of operation and maintenance for the entire activity, the presence of naturally occurring hazardous or toxic substances and current or potential uses of the natural resources impacted, as determined by the Department.~~

~~(viii) — “Current assets” means cash and assets that are reasonably expected to be realized in cash or sold or consumed within one (1) year or within the normal identified operating cycle of the business.~~

~~(ix) — “Current liabilities” means debts or other obligations that must be paid or liquidated within one (1) year or within the normal identified operating cycle of the business. This shall also include dividends payable on preferred stock within one (1) quarter if declared, or one (1) year if a pattern of declaring dividends each quarter is apparent from the business’ past practices.~~

~~(x) — “Fixed assets” means plants and equipment.~~

~~(xi) —“Liabilities” means obligations to transfer assets or provide services to other entities in the future as a result of past transactions.~~

~~(xii)~~(iii) “Monitoring” means all procedures and techniques used to systematically collect, analyze and inspect data on operational parameters of the facility or on the quality of the air, ground-water, surface water, and soil.

~~(xiii) —“Net worth” means total assets minus total liabilities and is equivalent to owners’ equity.~~

~~(xiv)~~(iv) “Operator” means a person who owns or operates a regulated facility or a person who holds a permit to construct, install, modify, or operate a regulated facility. ~~that person responsible for the proper design, operation, and maintenance, closure, and post closure care of a regulated facility. The “operator” means the permit holder. For commercial oil field waste disposal facilities and commercial wastewater sludge treatment, storage and disposal facilities permitted by the Water Quality Division, the permit holder must also be the owner of the facility in accordance with Wyoming Water Quality Rules and Regulations, Chapter 3, Section 12(b).~~

~~(xv) —“Parent corporation” means a United States corporation that owns or controls the applicant.~~

~~(xvi)~~(v) “Regulated facility” ~~includes~~ means a commercial sludge facilities facility or a ~~and commercial oil field waste disposal facilities~~ facility as specified in Section 1(b) of this chapter.

~~(xvii)~~(vi) “Release” includes, but is not limited to, any spilling, leaking, pumping, pouring, emptying, emitting, discharging, dumping, addition, escaping, leaching, or unauthorized disposal of any ~~oil or hazardous substance~~ pollutant that enters, or threatens to enter, ~~Waters~~ the air, land or waters of the State.

~~(xviii) —“Self bond” means an indemnity agreement in a sum certain executed by the permittee and/or the parent company or federal agency guarantor and made payable to the State, with or without separate surety.~~

~~(xix) —“Tangible net worth” means net worth minus intangibles such as goodwill, patents or royalties.~~

Section 2. Requirements to Demonstrate Financial Assurance.

(a) ~~Financial assurance will be required for a~~All new and existing commercial oil field waste disposal regulated facilities as specified by Section 1(b) of this chapter shall provide

financial assurance for closure, post-closure, and corrective action in compliance with this Chapter no later than ninety (90) days after promulgation of this chapter.

~~(b) Financial assurance requirement for all new and existing commercial sludge facilities: Financial assurance will be required of all new commercial facilities as specified by Section 1(b) of this chapter prior to the issuance of a construction permit. Compliance with these financial assurance rules and regulations will be required of all existing facilities no later than ninety (90) days after promulgation of this chapter. No new permit shall be issued for any regulated facility unless the applicant provides financial assurance that ensures there are adequate sources of funds to provide for closure, post-closure, and corrective action.~~

(i) The Department may deny a permit application if the documentation or proposed forms of financial assurance do not ensure that adequate funds will be available to provide for closure, post-closure, and corrective action.

(ii) A permit may be transferred to a new permittee only if the new permittee demonstrates compliance with the financial assurance requirements of this Chapter. Construction permit ownership will be transferred in accordance with Water Quality Rules and Regulations, Chapter 3, Section 12.

(c) Any operator of a regulated facility that violates a permit, standard, rule, or requirement established under the Wyoming Environmental Quality Act that results in a release of pollution or waste to the air, land, or water resources of the state shall provide financial assurance for the costs of completing corrective action to remedy or abate the violation or damages caused by the violation.

(d) An operator shall submit documentation of the financial assurance to the Department as part of any permit application for a regulated facility and shall update documentation of financial assurance as required by Sections 3(d)(iv), 3(e)(iv), 4(d)(iv), 5(c)(ii), and 5(d)(ii) of this Chapter. The Department shall determine whether the documentation and proposed forms of financial assurance are adequate and shall notify the applicant in writing of its determination.

Section 3. Coverage Closure and Post-Closure Requirements.

~~(a) General Purpose and Scope: Permits for regulated facilities require closure, post-closure, and corrective action financial assurance plans as prescribed in this chapter for the purpose of assuring that operators of these facilities are financially responsible for protection of public health and the environment. This chapter contains general requirements governing closure, post-closure, care and corrective action for violations of a permit, standard, rule or requirement. These requirements may be supplemented by site-specific closure, post-closure care, and corrective action permit conditions. Together with the factors used to produce cost~~

estimates, these maintenance requirements form the basis of the financial assurance standards included in this chapter.

~~(b) Closure and Post-Closure Requirements:~~

~~(i) Notification:~~

(a) At least one hundred eighty (180) days prior to the anticipated date for initiation of closure of a regulated facility, the operator shall:

~~(A)(i) An operator intending to close a regulated facility shall notify the Department in writing of the operator's intention to do so at least 180 days prior to the anticipated date for initiation of closure. Simultaneous notice shall be made by the operator to the governing body of each locality and adjacent property owners by certified or registered mail.~~
close a regulated facility;

(ii) Notify the governing body of each locality and adjacent property owners by certified or registered mail of the operator's intention to close a regulated facility;

~~(B)(iii) The operator shall post at least one (1) sign at the regulated facility notifying all persons of the anticipated closing and prohibition against further receipt of waste materials. Further, suitable barriers shall be installed at former accesses to prevent new waste from being deposited.; and~~

(iv) Install barriers at all access points to prevent new waste from being deposited.

~~(ii) Closure and Post-Closure Standards:~~

~~(A) Closure and post-closure maintenance shall occur in accord with approved plans. A closure plan and a post-closure plan shall be submitted with the permit application. The operator shall submit a revised closure plan and post-closure plan to the Department for review and approval as necessary to describe any plan changes.~~

(b) An operator or permit applicant shall submit a closure plan and a post-closure plan with each permit application for a regulated facility. Additionally, a permittee shall submit a revised closure plan and revised post-closure plan to the Department whenever changes to facility operations, conditions, or anticipated closure necessitate changes to the plans.

(c) The closure plan shall:

~~(B)(i) The operator shall close the facility in a manner that minimizes the need for post-closure maintenance and controls; Describe the work necessary to minimize or~~

eliminates, to the extent necessary to protect human health and the environment, the post-closure escape of leachate, surface runoff, or waste decomposition products to the ground-water, surface water, or the atmosphere; ~~The post-closure monitoring period shall continue for a minimum of five (5) years after the date of completing closure of the regulated facility. The minimum post-closure monitoring period shall be extended if the Department determines it is needed to protect human health and the environment.~~

(ii) Minimize the need for post-closure maintenance and controls; and

(iii) Include a cost estimate.

~~(iii) Inspection:~~

~~(A) The Department shall inspect all closed regulated facilities to determine if the closure is complete and adequate in accordance with the approved plan after being notified by the operator that closure has been completed. The Department shall provide written inspection results to the operator of a closed facility after the inspection. If the closure is not satisfactory, the Department shall specify necessary construction or such other steps as may be appropriate to bring unsatisfactory sites into compliance with closure requirements.~~

~~(B) Notification by the Department that the closure is satisfactory does not relieve the operator of responsibility for corrective action in accordance with regulations of the Department to prevent or abate problems caused by the regulated facility that are subsequently discovered.~~

~~(c) Corrective Action Requirements:~~

~~(i) Notification:~~

~~(A) The Department shall notify the operator of the need to take corrective action to remedy a violation of a permit condition, standard, rule or requirement relating to a regulated facility. The notification shall describe the nature of the violation.~~

~~(B) If deemed necessary by the Department, the operator will be required to close the facility and cease further receipt of waste materials.~~

~~(C) If the facility is closed, the operator shall post one (1) sign notifying all persons of the closing and prohibition against further receipt of waste materials. Further, suitable barriers shall be installed at former accesses to prevent new waste from being deposited.~~

~~(ii) Remediation Activities: In the event of a release, the operator shall:~~

(A) — Initiate immediate measures to:

(I) — Prevent further release to the environment.

(II) — Prevent further migration of the released substance into surrounding soils and Waters of the State.

(III) — Identify, monitor and mitigate any safety hazards or health risks associated with the violation.

(B) — Prepare a plan to conduct an investigation of the release, the release site and any surrounding area that may be affected by the release. The plan shall include:

(I) — A comprehensive subsurface investigation to define the extent and degree of contamination.

(II) — A schedule for conducting the investigation.

(III) — A cost estimate for a third party to perform the tasks identified by the plan.

(C) — Submit the investigation plan to the Department within thirty (30) days. The extent of contamination study should begin as soon as the plan has been approved and all necessary permits obtained.

(D) — Conduct the extent of contamination study in accordance with the approved plan and submit a written report of the findings to the Department.

(E) — If required by the Department, develop a comprehensive plan for mitigation and clean-up. The remediation plan shall be submitted to the Department for approval. The remediation plan shall be implemented as soon as the Department has approved the plan and all necessary permits have been obtained. The remediation plan shall contain an estimate of the costs for a third party to perform the tasks identified by the plan.

(d) — Financial Assurance: In order to assure that the costs associated with protecting the public health and safety from the consequences of an abandonment, or a failure to properly execute closure, post-closure care or required corrective action and clean-up of a regulated facility are recovered from the operator of such a facility, the operator shall provide financial assurance in one, or a combination of the forms described in this chapter including a self bond, a surety bond, a federally insured certificate of deposit, government backed securities, or cash. Such financial assurance shall be in the amount calculated as the cost estimate using the procedures set forth in Sections 3(e)(i), 3(e)(ii) and 3(e)(iii) of this chapter. Evidence of the selected forms of financial assurance shall be filed with the Department as part of the permit

application procedures and prior to the issuance of an operating permit. The Department may reject the proposed forms of assurance of financial responsibility if the evidence submitted does not adequately assure that funds will be available as required by these rules. The operator shall be notified in writing within sixty (60) days of receipt of the evidence of financial assurance of the decision to accept or reject the proposed forms of financial assurance.

(e) — Cost Estimates:

(i) — Cost Estimate for Facility Closure:

(d) The closure plan cost estimate shall:

~~(formerly located at Section 3(e)(i)(A))(i) In submitting a closure plan as required by these regulations, the operator of a regulated facility shall include therein an itemized written estimate of the cost of closing the facility completing all work described in the closure plan. The estimated closing cost shall be determined by the Department on a case-by-case basis, considering information supplied by the operator.~~

~~(formerly located at Section 3(e)(i)(B))(ii) The estimated closing cost shall be based on the work cost required for a third-party contractor to effect proper closure complete the work described in the closure at the most expensive point in the life of the facility. Those factors to be considered in estimating the closure cost shall include:~~

(iii) Account for the following factors:

- | | |
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| (formerly located at Section 3(e)(i)(B)(I))(A)
topography of the site.; | The size and |
| (formerly located at Section 3(e)(i)(B)(II))(B)
volume of <u>total</u> waste <u>material storage capacity</u> to be received at the site.; | The daily or weekly |
| (formerly located at Section 3(e)(i)(B)(III))(C)
and fill material needed for site grading.; | Availability of cover |
| (formerly located at Section 3(e)(i)(B)(IV))(D)
be received at the site.; | The type of waste to |
| (formerly located at Section 3(e)(i)(B)(V))(E)
sequential disposal plan.; | Disposal method and |
| (formerly located at Section 3(e)(i)(B)(VI))(F)
site and the character of the surrounding area.; | The location of the |

- (formerly located at Section 3(e)(i)(B)(VII))(G) Requirements for surface drainage;
- (formerly located at Section 3(e)(i)(B)(VIII))(H) Operation and maintenance of the leachate collection and treatment system, and, the off-site disposal of leachate;
- (formerly located at Section 3(e)(i)(B)(IX))(I) Environmental quality monitoring system;
- (formerly located at Section 3(e)(i)(B))(X)(J) Structures and other improvements to be dismantled and removed. Salvage values cannot be used to offset demolition costs;
- (formerly located at Section 3(e)(i)(B)(XI))(K) Site storage capacity for solid waste, incinerator residue, and compost material;
- (formerly located at Section 3(e)(i)(B)(XII))(L) Off-site disposal requirements;
- (formerly located at Section 3(e)(i)(B)(XIII))(M) Vector control requirements;
- (formerly located at Section 3(e)(i)(B)(XIV))(N) A minimum of fifteen percent (15%) variable contingency fee to cover other closure costs as determined appropriate by the Department; and
- (formerly located at Section 3(e)(i)(B)(XV))(O) Any Other relevant site-specific factors.

~~(formerly located at Section 3(e)(i)(C))(iv) Revised closure cost estimates will be submitted to the Department on an annual basis. Be updated, revised, and submitted to the Department by April 1 of each year. When the revised estimates are approved by the Department, the operator shall submit revised financial assurance for the revised closure costs.~~

(e) The post-closure plan shall:

(i) Describe the monitoring, maintenance, and controls necessary to confirm that:

(A) Post-closure escape of leachate, surface runoff, or waste decomposition products to the groundwater, surface water, or the atmosphere has been

minimized or eliminated to the extent necessary to protect human health and the environment; and

(B) The facility has been stabilized and closed in accordance with the most recent approved closure plan.

(ii) Establish the monitoring period necessary to ensure that the regulated facility has been stabilized and closed in accordance with the most recent approved closure plan. The monitoring period shall continue for a minimum of five (5) years after the date of completing closure of the regulated facility, but the Department may require a longer monitoring period or extend the post-closure monitoring period if the Department determines a longer monitoring period is necessary to protect human health and the environment; and

(iii) Include a cost estimate. However, an incinerator, resource recovery facility, compost facility, or storage surface impoundment may omit the post-closure plan cost estimate from its post-closure plan if onsite disposal of wastes or residues is not planned or required.

(ii)(f)–Cost Estimate for Facility Post-Closure: The post-closure plan cost estimate shall:

~~(A)(i) In submitting a closure plan as required by these regulations, the operator of a regulated facility shall include therein a written estimate of the cost of completing all work described in the post-closure plan; post-closure care, monitoring, and maintenance. Unless onsite disposal of wastes or residues from the treatment or storage of wastes is planned or required, an incinerator, resource recovery facility, compost facility or storage surface impoundment will not be required to include a post-closure cost estimate in its closure plan. The estimated post-closure cost shall be determined by the Department on a case-by-case basis considering information supplied by the operator. Such costs shall be based on the work required for a third party contractor.~~

(ii) Be based on the cost required for a third-party contractor to complete the work described in the post-closure plan;

~~(B)(iii) Account for the following. Those factors to be considered in estimating post-closure maintenance costs shall include:~~

~~(A) The size and topography of the site;~~

~~(B) The type and quantity of waste that can be received;~~

~~(C) Disposal method and sequential disposal plan;~~

~~(IV)(D)~~ The potential for significant leachate production and the possibility of contaminating water supplies;

~~(V)(E)~~ Environmental quality monitoring systems;

~~(VI)(F)~~ Soil conditions;

~~(VII)(G)~~ The location of the site and the character of the surrounding area;

~~(VIII)(H)~~ A minimum of fifteen percent (15%) contingency fee to cover other post-closure costs as determined appropriate by the Department; and

~~(IX)(I)~~ Other site-specific factors.

~~(C)(iv)~~ Estimated costs of post-closure activities shall be determined on a case-by-case basis. Revised post-closure cost estimates will be Be updated, revised, and submitted to the Department on an annual basis by April 1 of each year. ~~When the revised estimates are approved, the operator shall submit revised financial assurance for the revised post-closure costs.~~

~~(iii) — Cost Estimate for Corrective Action:~~

~~(A) — The operator of a commercial oil field disposal system regulated under W.S. 35-11-306 or a commercial sludge facility regulated under W.S. 35-11-307 in submitting an application for a construction permit as required by Chapter 3, Wyoming Water Quality Rules and Regulations shall include a written estimate of the cost of corrective actions to remediate a release from the facility. The estimated cost of corrective action and clean-up of a release shall be determined by the Department on a case-by-case basis considering information submitted by the operator. Such costs shall be based on the work required for a third party contractor.~~

~~(B) — The factors to be considered in estimating the cost of corrective actions and clean-up of a release shall include the following:~~

~~(I) — Soils, geologic and hydrogeologic conditions at the site.~~

~~(II) — The type and quantity of waste received.~~

~~(III) — Disposal method and sequential disposal plan.~~

~~(IV) — The potential for significant leachate production and the possibility of contaminating groundwater.~~

~~(V) — Environmental quality monitoring systems.~~

~~(VI) — The location of the site and the character of the surrounding area.~~

~~(VII) — A minimum of fifteen percent (15%) contingency fee to cover other corrective action and clean-up costs as determined appropriate by the Department.~~

~~(VIII) — The ability of the facility to prevent and detect a release and to facilitate clean-up activities. The criteria used to evaluate this ability shall include design, construction, operation, monitoring, and contingency plans submitted as part of the application package.~~

~~(IX) — The class, use, value and environmental vulnerability of surface and groundwater resources that may be impacted by a release.~~

~~(X) — Other site-specific factors.~~

~~(f) — Financial Assurance for Facility Closure, Post-Closure, and Corrective Action:~~

~~(i) — General:~~

~~(A) — For each regulated facility for which a permit is applied, financial assurance shall be provided for closure and post-closure activities, and for corrective action if required under Section 3(e)(iii) of this chapter.~~

~~(B) — Determination of the financial assurance requirements for corrective action and clean-up of commercial oil field waste disposal and commercial sludge facilities will be made by the Water Quality Division when the construction permit application is evaluated.~~

~~(C) — All existing commercial oilfield waste disposal facilities shall provide financial assurance for closure and post-closure activities, and for corrective action within ninety (90) days after promulgation of this chapter.~~

~~(ii) — Forms of Financial Assurance: Financial assurance may be provided in one (1) or a combination of the following forms executed in the amount calculated as the estimated closure and post-closure costs in accordance with W.S. 35-11-307(a) or W.S. 35-11-306(d) of the Act. These forms may also be available for financial assurance for corrective actions at a regulated facility.~~

~~(A) — Self bond;~~

~~(B) — Surety bond;~~

~~(C) — Federally insured certificates of deposit;~~

~~(D) — Government backed securities;~~

~~(E) — Cash.~~

~~(g) — Transfer of Permits: Permits may be transferred from one operator to another only if the new operator can demonstrate compliance with the financial assurance requirements of this chapter. Construction permit ownership will be transferred in accordance with Wyoming Water Quality Rules and Regulations, Chapter 3, Section 12.~~

~~(h) — Financial assurance amounts will be recalculated on a yearly basis.~~

~~(formerly located at Section 3(e)(iii))(g) Inspection:~~

(i) The Department shall inspect all closed regulated facilities to determine if the closure is complete and adequate in accordance with the approved plan after being notified by the operator that closure has been completed. The Department shall provide written inspection results to the operator of a closed facility after the inspection. If the closure is not satisfactory, the Department shall specify necessary construction or such other steps that may be appropriate to bring unsatisfactory sites into compliance with closure requirements.

(ii) Notification by the Department that the closure is satisfactory does not relieve the operator of responsibility for corrective action in accordance with regulations of the Department to prevent or abate problems caused by the regulated facility that are subsequently discovered.

~~(formerly located at Section 4(e)(i))(h) Within sixty (60) days after receiving certification from the owner or operator that closure has been accomplished in accordance with the closure plan and the provisions of this Chapter, the Director shall verify that proper closure has occurred. Unless the Director has reason to believe that closure has not been in accordance with the closure plan, the Director shall notify the owner or operator in writing that the Director is no longer required to maintain financial assurance for closure of the particular facility. Such notice shall release the owner or operator only from the requirements for financial assurance for closure of the facility; it does not release the Director from legal responsibility for meeting the closure or post-closure standards. If no written notice or termination of financial assurance requirements or failure to properly perform closure is received by the owner or operator within sixty (60) days after certifying proper closure, the owner or operator may petition the Director for an immediate decision, in which case the Director shall respond within ten (10) days after receipt of such petition.~~

Section 4. Corrective Action Requirements.

(formerly located at Section 3(e))(a) The Department shall notify the operator of the need to take corrective action to remedy a violation of a permit condition, standard, rule or requirement relating to a regulated facility. The notification shall describe the nature of the violation.

(i) If deemed necessary by the Department, the operator will be required to close the facility and cease further receipt of waste materials.

(ii) If the facility is closed, the operator shall post one (1) sign notifying all persons of the closing and prohibition against further receipt of waste materials. Further, suitable barriers shall be installed at former accesses to prevent new waste from being deposited.

(b) Remediation Activities: In the event of a release, the operator shall:

(i) Initiate immediate measures to:

(A) Prevent further release to the environment;

(B) Prevent further migration of the released substance into surrounding soils and Waters of the State; and

(C) Identify, monitor and mitigate any safety hazards or health risks associated with the violation.

(ii) Comply with all applicable requirements of Wyoming Water Quality Rules and Regulations, Chapter 4; and

(iii) If more than 10 barrels (420 gallons) of crude oil, petroleum condensate, produced water, or a combination thereof, or more than 25 gallons of refined crude oil products (including but not limited to gasoline; diesel motor fuel; aviation fuel; asphalt; road oil; kerosene; fuel oil; and derivatives of mineral, animal, or vegetable oils) are released:

(A) Prepare a plan to conduct an investigation of the release, the release site and any surrounding area that may be affected by the release. The plan shall include:

(I) A comprehensive subsurface investigation to define the extent and degree of contamination.

(II) A schedule for conducting the investigation.

(III) A cost estimate for a third-party to perform the tasks identified by the plan.

(B) Submit the investigation plan to the Department within thirty (30) days. The extent of contamination study should begin as soon as the plan has been approved and all necessary permits obtained.

(C) Conduct the extent of contamination study in accordance with the approved plan and submit a written report of the findings to the Department.

(D) If required by the Department, develop a comprehensive plan for mitigation and clean-up. The remediation plan shall be submitted to the Department for approval. The remediation plan shall be implemented as soon as the Department has approved the plan and all necessary permits have been obtained. The remediation plan shall contain an estimate of the costs for a third-party to perform the tasks identified by the plan.

~~(formerly located at Section 3(e)(iii))(c)~~ Cost Estimate for Corrective Action:

(i) The operator of a commercial oil field disposal system regulated under W.S. § 35-11-306 or a commercial sludge facility regulated under W.S. § 35-11-307 in submitting an application for a construction permit as required by Chapter 3, Wyoming Water Quality Rules and Regulations shall include a written estimate of the cost of corrective actions to remediate a release from the facility. The estimated cost of corrective action and clean-up of a release shall be determined by the Department on a case-by-case basis considering information submitted by the operator. Such costs shall be based on the work required for a third-party contractor.

(ii) The factors to be considered in estimating the cost of corrective actions and clean-up of a release shall include the following:

(A) Soils, geologic and hydrogeologic conditions at the site.

(B) The type and quantity of waste received.

(C) Disposal method and sequential disposal plan.

(D) The potential for significant leachate production and the possibility of contaminating groundwater.

(E) Environmental monitoring systems.

(F) The location of the site and the character of the surrounding area.

(G) A minimum of fifteen percent (15%) contingency fee to cover other corrective action and clean-up costs as determined appropriate by the Department.

(H) The ability of the facility to prevent and detect a release and to facilitate clean-up activities. The criteria used to evaluate this ability shall include design, construction, operation, monitoring, and contingency plans submitted as part of the application package.

(I) The class, use, value and environmental vulnerability of surface and groundwater resources that may be impacted by a release.

(J) Other site-specific factors.

Section 5. Establishment of Financial Assurance Requirements.

~~(formerly located at Section 3(e))(a)~~ The Department shall establish the amount of financial assurance required for regulated facilities based on the plans and cost estimates for closure, post-closure, and corrective action. Upon receipt of a cost estimate, the Department shall determine whether the cost estimate meets the requirements of this Chapter and notify the operator in writing of its determination.

(b) If the Department determines that a cost estimate meets the requirements of this Chapter:

(i) The Department shall establish the amount of financial assurance required and notify the operator in writing of the amount established; and

(ii) The operator shall submit documentation of financial assurance in an amount at least equal to the Department's established financial assurance amount within thirty (30) days of the Department's establishment of the financial assurance amount.

(c) If the Department determines that a cost estimate does not meet the requirements of this Chapter:

(i) The Department shall notify the operator of the deficiencies in the cost estimate, and the operator shall revise and resubmit the cost estimate to the Department within thirty (30) days of the Department's determination; or

(ii) The Department shall establish the amount of financial assurance required and notify the operator in writing of the amount established, and the operator shall submit documentation of financial assurance in an amount at least equal to the Department's established financial assurance amount within thirty (30) days of the Department's establishment of the financial assurance amount.

Section 4 6. Forms of Financial Assurance.

~~(formerly Section 3(f)(ii))(a) Forms of Financial Assurance: Financial assurance. An operator of a regulated facility shall may be provided provide financial assurance in an amount at least equal to the established financial assurance amount for closure, post-closure, and corrective action in one (1) or a combination of the following forms executed in the amount calculated as the estimated closure and post-closure costs in accordance with W.S. 35-11-307(a) or W.S. 35-11-306(d) of the Act. These forms may also be available for financial assurance for corrective actions at a regulated facility.:~~

~~(A) Self bond;~~

~~(B)(i) Surety bond;~~

~~(C)(ii) Federally insured certificates of deposit;~~

~~(D)(iii) Government-backed securities;~~

~~(E)(iv) Cash.~~

~~(a) Self Bonding:~~

~~(i) Initial Application to self bond: Initial application to self bond shall be made at the time the operator makes written application to the Department to construct, operate or modify a regulated facility. The application shall be on forms furnished by the Department and shall contain:~~

~~_____ (A) Identification of operator by:~~

~~_____ (I) For corporations, name, address, telephone number, state of incorporation, principal place of business and name, title and authority of person signing application, a corporate resolution authorizing the application, and statement of authority to do business in the State of Wyoming; or~~

~~_____ (II) For all other forms of business enterprises, name, address and telephone number, and statement of how the enterprise is organized, law of the state under which it is formed, place of business, and relationship and authority of the person signing the application.~~

~~_____ (B) Amount of bond required, to be determined in accordance with W.S. 35-11-307 or W.S. 35-11-306(d). If the self bond amount is proposed to be less than the full bond amount, the amount proposed under a self bond is the bond required.~~

~~_____ (C) Type of operation and anticipated dates performance is to be commenced and completed.~~

~~_____ (D) — Brief chronological history of business operations conducted within the last five (5) years that would illustrate a continuous operation for five (5) years immediately preceding the time of application.~~

~~_____ (I) — The Department may allow a joint venture or partnership with less than five (5) years of continuous operation to qualify under this requirement, if each member of the joint venture or partnership has been in continuous operation for at least five (5) years immediately preceding the time of application.~~

~~_____ (II) — When calculating the period of continuous operation, the Department may exclude past periods of interruption to the operation of the business entity that were beyond the applicant's control and that do not affect the applicant's likelihood of remaining in business during the proposed operation of the regulated facility.~~

~~_____ (E) — Information in sufficient detail to show good faith performance of past operation and closure/post-closure obligations.~~

~~(F) — A statement, in detail, to show a history of financial solvency. For an initial bond, each operator must provide audited financial statements supporting the following comparative documents, prepared and certified by an independent Certified Public Accountant who, by reason of education, experience or special training, and disinterest, is competent to analyze and interpret the operator's financial solvency. All statements shall be prepared following generally accepted principles of accounting.:~~

~~(I) — A comparative balance sheet that shows assets, liabilities, and owner equity for five (5) years. The operator may provide common size documents for confidentiality.;~~

~~(II) — A comparative income statement that shows all revenues and expenses for five (5) years. The operator may provide common size documents for confidentiality.;~~

~~(III) — A report for the most recently completed fiscal year containing the accountant's audit opinion or review opinion of the balance sheet and income statement with no adverse opinion.;~~

~~(IV) — Notwithstanding the language in (F) above, unaudited financial statements may be submitted to support the comparative documents where current fiscal year quarters have ended but a CPA opinion has not yet been obtained because the fiscal year has not yet ended.~~

~~(G) — Financial information in sufficient detail to show that the operator meets one (1) of the following criteria (the specific criterion relied upon shall be identified):~~

~~_____ (I) — The operator has a rating for all bond issuance actions over the past five (5) years of “A” or higher as issued by either Moody’s Investor Service or Standard and Poor’s Corporation, (the rating service should be identified together with any further breakdown of specific ratings):~~

~~_____ (II) — The operator has a tangible net worth of at least \$10 million, and a ratio of total liabilities to net worth of 2.5 times or less, and a ratio of current assets to current liabilities of 1.2 times or greater. The two ratio requirements must be met for the past year, and documented for the four (4) years preceding the past year. Explanations should be included for any year where the ratios fall below the stated limits.~~

~~_____ (III) — The operator’s fixed assets in the United States total at least \$20 million, and the operator has a ratio of total liabilities to net worth of 2.5 times or less, and a ratio of current assets to current liabilities of 1.2 times or greater. The two ratio requirements must be met for the past year and documented for the four (4) years preceding the past year. Explanations should be included for any year where the ratios fall below the stated limits.~~

~~(IV) — If the operator chooses (II) or (III), the two ratios shall be calculated with the proposed self bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for reclamation that appear on the balance sheet.~~

~~(H) — A statement listing any notices issued by the Securities and Exchange Commission or proceedings initiated by any party alleging a failure to comply with any disclosure or reporting requirements under the securities laws of the United States. Such statement shall include a summary of each such allegation, including the date, the requirement alleged to be violated, the party making the allegation, and the disposition or current status thereof.~~

~~(I) — A statement that:~~

~~_____ (I) — Identifies by name, address and telephone number, a registered office, which may be but need not be, the same as the operator’s place of business.~~

~~_____ (II) — Identifies by name, address and telephone number, an agent registered with the Wyoming Secretary of State’s Office to transact business in the State. The agent’s business office shall be identical to the registered office. or The agent may be an individual resident in this state, a domestic corporation, or a foreign corporation. The registered agent so appointed by the operator shall be an agent to such operator upon whom any process, notice or demand required or permitted by law to be served upon the operator may be served.;~~

_____ (III) — Acknowledges that if the operator fails to appoint or maintain a registered agent in this state, or whenever any such registered agent cannot be reasonably found at the registered office, then the Wyoming Secretary of State shall be an agent for such operator upon whom any process, notice or demand may be served. In the event of any such process, the Wyoming Secretary of State shall immediately cause one (1) copy of such process, notice or demand to be forwarded, by registered or certified mail, to the operator at his principle place of business. The Wyoming Secretary of State shall keep a record of all processes, notices, or demands served upon him under this paragraph, and shall record therein the time of such service and his action with reference thereto.

_____ (IV) — Acknowledges that should the operator change the registered office or registered agent, or both, a statement indicating such change shall be filed immediately with the Solid Waste Management Program or the Water Quality Division.;

_____ (V) — Acknowledges that nothing herein contained shall limit or affect the right to serve any process, notice or demand required or permitted by law to be served upon an operator in any other manner now or hereafter permitted by law.;

_____ (J) — The Department may accept a written guarantee for an operator's self bond from a parent corporation guarantor or from a federal agency, if the guarantor or federal agency satisfies the financial criteria of this chapter as if it were the operator. The operator must only supply information addressing requirements not met by the parent corporation guarantor. The terms of the parent corporate or federal agency guarantee shall provide for the following:

_____ (I) — If the operator fails to complete the closure/post closure plan the guarantor shall do so or the guarantor shall be liable under the indemnity agreement to provide funds to the State sufficient to complete the reclamation plan, but not to exceed the bond amount.

_____ (II) — The parent corporate or federal agency guarantee shall remain in force unless the guarantor sends notice of cancellation by registered or certified mail to the operator and to the Department at least ninety (90) days in advance of the cancellation date, and the Department accepts the cancellation. The cancellation shall be accepted by the Department if the operator obtains a suitable replacement bond before the cancellation date, if the lands for which the self bond, or portion thereof, was accepted have not been disturbed, or if the lands have been released under W.S. 35-11-306.

_____ (K) — For the Department to accept a regulated facility operator's self bond, the total amount of the outstanding and proposed self bond of the operator shall not exceed twenty five percent (25%) of the operator's tangible net worth in the United States. For the Department to accept a corporate guarantee, the total amount of the parent corporation guarantor's present and proposed self bonds and guaranteed self bonds shall not exceed twenty five percent (25%) of the guarantor's tangible net worth in the United States.;

~~_____ (ii) Approval or denial of operator's, self bond application:~~

~~_____ (A) The Department, within sixty (60) days of the operator's submission of all materials necessary to base a decision on the application shall:~~

~~(I) Approve or reject such application and declare in writing its reasons for such action to the operator or his registered agent. The decision shall be based on the information submitted and shall be sufficient to meet the demonstrations required by W.S. 35-11-306(d).~~

~~_____ (II) If a rejection is based on inadequate information or failure of the operator to supply all necessary material, the Department shall allow the operator thirty (30) days to remedy the deficiencies. Such corrections shall be made to the satisfaction of the Department. The Department shall have an additional sixty (60) days to approve or reject the corrected application.~~

~~_____ (B) If the Department accepts an uncollateralized self bond, an indemnity agreement shall be submitted subject to the following requirements:~~

~~_____ (I) The indemnity agreement shall be executed by all persons and parties who are to be bound by it, including the parent corporation or federal agency guarantor, and shall bind each jointly and severally.~~

~~_____ (II) Corporations applying for a self bond or parent corporation guaranteeing a subsidiary's self bond shall, submit an indemnity agreement signed by two (2) corporate officers who are authorized to bind the corporation. A copy of such authorization shall be provided to the Department. A federal agency guaranteeing an operator's self bond shall submit an indemnity agreement signed by two (2) officers of the agency who are authorized to bind the agency and a copy of their authorization. The agency shall also submit documents supporting the availability of a cause of action against the federal agency for performance under the indemnity agreement.~~

~~_____ (III) If the applicant is a partnership or joint venture, the agreement shall bind each partner or party who has a beneficial interest directly or indirectly, to the operator.~~

~~_____ (IV) The indemnity agreement shall provide that the persons or parties bound shall pay all litigation costs including reasonable attorney fees incurred by the State in any successful, effort, to enforce the agreement against the operator.~~

~~_____ (C) If the application is rejected based on the information required in Section 4(a)(i), or based on the limitation set in Section 4(a)(i)(K) then the operator may offer~~

collateral and an indemnity agreement to support the self bond application. The indemnity agreement shall be subject to the requirements of (B) above.

~~(1) For any collateral offered to support a self bond, the following information shall be provided.~~

~~(1.) The value of the property. The property shall be valued at the difference between seventy five percent (75%) of the fair market value and any reasonable expense anticipated by the Department in selling the property. The fair market value shall be determined by an appraiser or appraisers appointed by the Department and mutually acceptable to both the Department and the operator. The appraisal shall be expeditiously made, and copies thereof furnished to the Department and the operator. The expense of the appraisal shall be borne by the operator.~~

~~(2.) A description of the property satisfactory for deposit to further assure that the operator shall faithfully perform all requirements of the Act. The Department shall have full discretion in accepting any such offer.~~

~~a. Real property shall not include any lands in the process of being used for the transfer, treatment, processing, storage or disposal of solid wastes, reclaimed or subject to this application. The operator may offer any lands the bonds for which have been released or lands within a permit area that will not be affected. In addition, any land used as a security shall not be used for disposal, treatment, processing or storage while it is a security.~~

~~b. Securities shall only include those that are United States government securities or those state government securities acceptable to the Department. Securities shall meet the requirements specified in the definition of "Securities" found in Section 1(e)(iii)(B).~~

~~e. Personal property shall be in possession of the operator, shall be unencumbered, and shall not include:~~

~~1. Property that is already being used as collateral, or~~

~~2. Goods that the operator sells in the ordinary course of his business, or~~

~~3. Fixtures, or~~

~~4. Certificates of deposit that are not federally insured or where the depository is unacceptable to the Department.~~

~~(3.)—Evidence of ownership submitted in one of the following forms:~~

~~a.—If the property offered for deposit is real property, the operator’s interest must be evidenced by:~~

~~1.—In the case of a federal or state lease, a status report prepared by an attorney, satisfactory to the Department as disinterested and competent to so evaluate the asset, and an affidavit from the owner in fee establishing that the leasehold could be transferred upon default.~~

~~2.—In the case of a fee simple interest, a title certificate or similar evidence of title and encumbrances prepared by an abstract office authorized to transact business within the State and satisfactory to the Department.~~

~~b.—If the property offered for deposit is a security, the operator’s interest must be evidenced by possession of the original or a notarized copy of the certificate or a certified statement of account from a brokerage house.~~

~~c.—If the property offered for deposit is personal property as defined in Section 1(e)(iii) (C), evidence of ownership shall be submitted in the form satisfactory to the Department to establish unquestionable title to the property to the operator.~~

~~(H)—In addition to submitting the above information, if the operator offers personal property as collateral to support a self bond, the operator must meet the financial criteria contained in (1.) or (2.) of the following:~~

~~(1.)—The operator must have a tangible net worth of at least \$10 million, a ratio of total liabilities to new worth of, 3.0 times or less, and a ratio of current assets to current liabilities of 1.0 times or greater. The two ratios shall be calculated with the proposed self bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for reclamation that appear on the balance sheet.~~

~~(2.)—The operator must have fixed assets in the United States that total at least \$20 million, a ratio of total liabilities to net worth of 3.0 times or less, and a ratio of current assets to current liabilities of 1.0 times or greater. The two ratios shall be calculated with the proposed self bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for closure/post closure that appear on the balance sheet.~~

~~(III) — If the Department accepts personal property as collateral to support a self-bond, the Department shall require:~~

~~(1.) — Quarterly maintenance reports prepared by the operator, and~~

~~(2.) — A perfected, first-lien security interest in the property used, in favor of the Wyoming Department of Environmental Quality. This security interest shall be perfected by filing a financial statement or taking possession of the collateral in accordance with (IV)(1.) below.~~

~~(3.) — In addition, the Department may also require quarterly inspections of the personal property by a qualified representative of the Department.~~

~~(IV) — If the Department accepts any property as collateral to support a self-bond, the Department shall, as applicable, require possession by the Department of the personal property, or a mortgage or security agreement executed by the operator in favor of the Department of Environmental Quality. The requirement shall be that which is sufficient to vest such interest in the property in the Department to secure the right and power to sell or otherwise dispose of the property by public or private proceedings so as to insure reclamation of the affected lands in accordance with the Act. Personal property collateral to support a self-bond shall be secured under the provisions of the Uniform Commercial Code as required by (2.) below.~~

~~(1.) — Any mortgage shall be executed and duly recorded as required by law so as to be superior to all other liens, mortgages or encumbrances pertaining to the real property in question.~~

~~(2.) — Any security interest created by a security agreement shall be perfected by filing a financing statement or taking possession of the collateral in accordance with W.S. 34.1-9-310 through 34.1-9-314, W.S. 34.1-9-501 through 34.1-9-504, and W.S. 34.1-9-515 through 34.1-9-516.~~

~~(V) — The operator may, with written consent from the Department, substitute for any of the property held hereunder other property upon submittal of all information required under this subsection and compliance with all requirements of this subsection so as to secure all obligations under all periods of time as they relate to disposal operations.~~

~~(VI) — For collateral posted to support a self-bond, all persons with an interest in the collateral shall be notified by the operator of the posting, and of all other actions affecting the collateral.~~

(iii) — Renewal bonds:

_____ (A) — Information for the renewal bond under the self-bonding program, which shall accompany the annual report, shall include:

_____ (I) — Amount of bond required, which shall be determined in accordance with W.S. 35-11-307 or W.S. 35-11-306. If the self-bond amount is proposed to be less than the full bond amount, the amount that is proposed to be under a self-bond is the bond required.

_____ (II) — Financial information in sufficient detail to show that the operator and guarantor still meets one (1) of the criteria in Section 4(a)(i)(G), and the limitations in Section 4(a)(i)(K). The Department requires financial statements for the most recently completed fiscal year together with an independent certified public accountant's audit opinion or review opinion of the financial statements with no adverse opinion. Additional unaudited information may be required by the Department.

_____ (III) — If the Department has accepted a mortgage, any evidence of change in value, title and possession of the property shall be submitted.

_____ (IV) — If the Department deems it necessary to revalue any asset, it may appoint the appraiser or appraisers mutually acceptable to the department and the operator. Any such reappraisal shall be expeditiously made, and copies thereof furnished to the Department and the operator. The expense of the appraisal shall be borne by the operator. The findings of the appraisal shall be final and binding unless both parties agree to a reappraisal.

_____ (V) — For regulated facility operators using personal property as collateral to support a self-bond, the operator's current financial information showing continuing compliance with Section 4(a)(ii)(C)(II) of this chapter.

_____ (B) — If the Department has authorized a parent corporate guarantee, the parent corporation shall supply all information required under subsection (iii)(A)(II) of this section.

(C) — Any valid initial self-bond shall carry the right of successive renewal as long as the above listed information is submitted, which demonstrates that the guarantor remains qualified under W.S. 35-11-307 or W.S. 35-11-306.

(iv) — Substitution of the operator's self-bond:

_____ (A) — The Department may require the operator to substitute a good and sufficient corporate surety licensed to do business in the State if the Department determines in writing that the self-bond of the operator fails to provide this protection consistent with the

objectives and purposes of W.S. 35-11-307 or W.S. 35-11-306. The Department shall require this substitution if the financial information submitted or requested under Section (4)(a)(ii)(A)(II) indicates that the operator no longer qualifies under the self-bonding program. Substitution of an alternate bond shall be made within thirty (30) days. The operator may also request substitution. This request is contingent upon the operator meeting all the requirements of the bond provisions, W.S. 35-11-307 or W.S. 35-11-306 of the Act. If these requirements are met, the Department shall accept substitution.

~~_____ (B) If the operator fails within sixty (60) days to make a substitution for the revoked self-bond with a corporate surety, cash, governmental securities, or federally insured certificates of deposit, or irrevocable letters of credit, the Department shall suspend or revoke the permit until such substitution is made.~~

~~_____ (C) All methods of substitution shall be made in accordance with the bonding provisions W.S. 35-11-504 or W.S. 35-11-306 of the act. The Department shall either:~~

~~_____ (I) Require substitution of a good and sufficient corporate surety licensed to do business in the State that will stand as surety so as to cover all periods of time as they relate to disposal operations, or~~

~~_____ (II) Retain from the operator sufficient assets within the Department so as to cover the period of time of the disposal operation that is not covered by the substituted surety. Those assets not retained shall be returned to the operator within sixty (60) days free from the Department's encumbrances, liens, mortgages or security interests.~~

~~_____ (v) Requirements for forfeiture and release:~~

~~_____ (A) All requirements as to bond forfeiture proceedings and the release of bonds shall be consistent with W.S. 35-11-307 or W.S. 35-11-306 of the Act, excepting the requirements as to notification to the surety. When the Department has required a mortgage, and the bond has been forfeited, foreclosure procedures shall be in accordance with W.S. 34-4-101 through 34-4-113.~~

~~_____ (B) For self-bonds supported by collateral, upon bond release property return shall be of that form sufficient for the Department to release that portion of the interest or mortgage commensurate with the amount of the bond released less any disposed of in accordance with the mortgage or indemnity agreement.~~

(b) Surety Bonds:

(i) A corporate surety shall not be considered good and sufficient for purposes of W.S. § 35-11-307 or W.S. § 35-11-306 unless:

(A) It is licensed to do business in the State;

(B) The estimated bond amount does not exceed the limit of risk as provided for in W.S. § 26-5-110, nor raise the total of all bonds held by the applicant under that surety above three (3) times the limit of risk; and

(C) The surety agrees:

(I) Not to cancel bond, except as provided for in W.S. § 35-11-307 or W.S. § 35-11-306 or where the Department gives prior written approval of a good and sufficient replacement surety with transfer of the liability that has accrued against the operator on the permit area;

(II) To be jointly and severally liable with the permittee.

(III) To provide immediate written notice to the Department and operator once it becomes unable or may become unable due to any action filed against it to fulfill its obligations under the bond.

(ii) The provisions applicable to cancellation of the surety's license in W.S. § 35-11-307 or W.S. § 35-11-306 shall also apply if for any other reason the surety becomes unable to fulfill its obligations under the bond. Upon such occurrence, the operator shall provide the required notice. Failure to comply with this provision shall result in suspension of the permit.

~~(e) — Federally Insured Certificate of Deposit: The Department shall not accept an individual certificate of deposit in an amount in excess of \$100,000 or the maximum insurable amount as determined by the FDIC or the Federal Savings and Loan Insurance Corporation.; Such certificates of deposit shall be made payable to the Department both in writing and upon the records of the bank issuing these certificates. The Department shall require the banks issuing these certificates to waive all rights of setoff or liens against the certificates. The bond amount may be calculated to include any amount that would be deducted as a penalty for payment before maturity.~~

~~(i) Release of the Owner or Operator from the Requirements of this Chapter: Within sixty (60) days after receiving certification from the owner or operator that closure has been accomplished in accordance with the closure plan and the provisions of these regulations, the Director shall verify that proper closure has occurred. Unless the Director has reason to believe that closure has not been in accordance with the closure plan, he shall notify the owner or operator in writing that he is no longer required to maintain financial assurance for closure of the particular facility. Such notice shall release the owner or operator only from the requirements for financial assurance for closure of the facility; it does not release him from legal responsibility for meeting the closure or post-closure standards. If no written notice or termination of financial assurance requirements or failure to properly perform closure is received by the owner or~~

operator within sixty (60) days after certifying proper closure, the owner or operator may petition the Director for an immediate decision, in which case the Director shall respond within ten (10) days after receipt of such petition.

~~_____ (A) Incapacity of Institution Issuing Financial Assurance: An owner or operator who fulfills the requirements of Section 3(c)(i) of this chapter by obtaining a surety bond or a certificate of deposit will be deemed to be without the required financial assurance in the event of bankruptcy, insolvency or a suspension or revocation of the license or charter of the issuing institution. The owner or operator must establish other financial assurance within sixty (60) days of such event.~~

(c) In lieu of a bond, the facility operator shall deposit federally insured certificates of deposit payable to the Wyoming Department of Environmental Quality, cash, or government securities, or all three (3).

(i) Securities that are unencumbered shall only include those that are United States Government securities or State Government securities that are acceptable to the Director. Government securities must be endorsed to the order of the Department and placed in possession of the Department. Possession shall be in the form of the cash value of the irrevocable trust for the full amount of the reclamation obligation and payable to the Department and federally insured.

(ii) An operator shall satisfy the requirements of this subsection by establishing an irrevocable trust that conforms to the requirements below and submitting an originally signed duplicate of the trust agreement to the Administrator for consideration.

(A) The irrevocable trust must be submitted to the Director on the Wyoming Department of Environmental Quality Irrevocable Trust Form and be signed by the operator or guarantor as principal and the financial institution as Trustee, and made payable to the Department;

(B) The Trustee must be a bank organized to do business in the United States that has the authority to act as a trustee and whose trust operations is regulated and examined by a Federal Agency;

(C) The irrevocable trust must be cash funded for the full amount of the financial assurance obligation to be provided in the irrevocable trust before it may be approved to satisfy the requirements of financial assurance in lieu of a bond. For purposes of this subsection, “the full amount of the financial assurance obligation to be provided” means the amount of coverage for Closure, Post-Closure and Corrective Action required to be provided for the permit/facility, less the amount of financial assurance obligation that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the operator or guarantor;

(D) Cancellation of an irrevocable trust shall follow the same procedures detailed in W.S. §35-11-306(j) for performance bonds; and

(E) Forfeiture proceeding for an irrevocable trust shall follow the same procedures detailed in W.S. §35-11-306(m) for performance bonds.

~~(d) Government Backed Securities: In lieu of a bond, the operator or its principal may deposit government securities registered solely in the Department's name and backed by the full faith and credit of the United States.~~

~~(e) Cash: In lieu of a bond, the operator or its principal may deposit cash in a bank account in the Department's name.~~

CHAPTER 28

STANDARDS FOR ISSUING PERMITS FOR COMMERCIAL OILFIELD WASTE DISPOSAL FACILITIES

Section 1. Authority.

This rule is promulgated pursuant to the Wyoming Environmental Quality Act, Wyoming Statutes (W.S.) § 35-11-101 through § 35-11-2005, specifically W.S. § 35-11-301(a) (i), W.S. § 35-11-301(a)(iii), W.S. § 35-11-302(a)(iii), W.S. § 35-11-306, and W.S. § 35-11-307.

Section 2. Applicability.

(a) This Chapter contains the minimum standards for the design and construction of commercial oilfield waste disposal facilities that are required to obtain a permit under W.S. § 35-11-301(a)(iii), W.S. § 35-11-306, and Water Quality Rules and Regulations Chapter 3. In addition, this Chapter contains operation, monitoring, and reporting requirements for commercial oilfield waste disposal facilities.

(i) All applicants for a Water Quality Rules and Regulations Chapter 3 permit to construct, install, modify, or operate a commercial oilfield waste disposal facility shall meet all minimum standards of this Chapter.

(ii) No permit to construct, install, modify, or operate a commercial oilfield waste disposal facility shall be issued to a facility that does not meet the minimum standards of this Chapter.

(iii) All commercial oilfield waste disposal facilities shall be constructed, installed, and operated in accordance with permits issued pursuant to this Chapter.

(b) The installation of any component of a commercial oilfield waste disposal facility requires a permit to construct.

(c) Commercial oilfield waste disposal facilities are authorized to accept exempt exploration and production (E&P) wastes.

(i) Non-exempt, non-hazardous waste may be approved on a case-by-case basis, at the permittee's request.

(ii) The Division requires hazardous waste characteristic analysis of all non-exempt wastes proposed to be disposed of at a commercial oilfield waste disposal facility. Additional or reduced sampling may be required by the Division based on the type of waste to be disposed and the generator's knowledge of the waste, including waste origin, composition, the process producing the waste, feedstock, and other reliable and relevant information. If any of the hazardous waste regulatory levels are exceeded, the wastes shall be disposed at a facility approved to accept hazardous wastes.

(d) Pursuant to the provisions of W.S. § 35-11-109 (a)(ii) and W.S. § 35-11-1104(a)(iii), while subject to the requirements of the Wyoming Environmental Quality Act, noncommercial oilfield waste disposal facilities permitted by the Wyoming Oil and Gas Conservation Commission, are exempt from the requirements of this Chapter.

Section 3. Timing of Compliance with These Regulations.

Any facility covered by an individual permit issued pursuant to Water Quality Rules and Regulations, Chapter 3, prior to the effective date of this chapter shall remain covered under that permit. New construction or modification of existing permitted facilities must obtain authorization under a new permit, in accordance with Water Quality Rules and Regulations Chapter 3, Section 9(a)(iii), subject to the requirements of this Chapter.

Section 4. Definitions.

(a) The definitions in this Section supplement those definitions contained in W.S. § 35-11-103 of the Wyoming Environmental Quality Act.

(b) "Commercial oilfield waste disposal facility" (COWDF) means a facility that:

(i) Receives or has received produced water, exempt exploration and production waste, or non-hazardous non-exempt wastes approved by the Department, for treatment, storage, or disposal in pits, evaporation ponds, or surface impoundments; and

(ii) Receives or has received produced water, exploration and production waste, or other approved wastes from persons other than the owners and operators of the facility.

(c) "Exempt exploration and production (E&P) waste(s)" means drilling fluids, produced waters, and other wastewater associated with the exploration, development, or production of crude oil, natural gas or geothermal energy that are solid wastes but that are not identified as hazardous wastes under 40 CFR § 261.4(b)(5).

(d) “Groundwater” means subsurface water that fills available openings in rock or soil materials such that they may be considered water saturated under hydrostatic pressure.

Section 5. Facilities and Systems not Specifically Covered by these Standards.

(a) Each application for a permit to construct a facility under this section shall be evaluated on a case-by-case basis using the best available technology. The Water Quality Division (Division) may approve applications demonstrating the constructed facility can meet the purpose of the Act and this Chapter.

(b) The following information shall be included with the application for a permit to construct, install, modify, or operate a commercial oilfield waste disposal facility not specifically covered by these standards:

(i) Data obtained from a full scale, comparable installation that demonstrates the acceptability of the design; or

(ii) Data obtained from a pilot plant operated under the design condition for a sufficient length of time to demonstrate the acceptability of the design; or

(iii) Data obtained from a theoretical evaluation of the design demonstrates a reasonable probability that the facility will meet the design objectives.

(iv) An evaluation of the flexibility of making corrective changes to the constructed facility in the event it does not function as planned.

(c) If an applicant wishes to construct a pilot plant to provide the data necessary to meet the requirements of this Section, then the applicant must obtain a permit to construct.

Section 6. Site Suitability.

(a) The applicant shall demonstrate that the proposed facility location complies with W.S. § 35-11-306(a)(i)-(ii).

(b) Additionally, the applicant shall demonstrate that the proposed facility location:

(i) Is positioned so that the depth to highest seasonal groundwater is at least five (5) feet below the secondary liner;

(ii) Is outside of the 100-year floodplain of surface waters of the State; and

(iii) Is not within ephemeral drainages into which natural runoff may flow or enter.

Section 7. Permits, Permit Application, and Recordkeeping Requirements.

(a) Applications for a permit to construct, install, modify, or operate a commercial oilfield waste disposal facility shall meet the requirements of Water Quality Rules and Regulations Chapter 3, Section 6.

(b) The application shall:

(i) Include signatures of:

(A) The surface estate owner of record or legal designee authorizing legal access, or documentation of right of way in cases of state or federal land ownership; and

(B) The operator.

(ii) Include the following components:

(A) An engineering design report that meets the requirements of Section 9 of this Chapter;

(B) A construction plan that meets the requirements of Section 10 of this Chapter;

(C) Monitoring and reporting that meet the requirements of Section 11 of this Chapter;

(D) An operation and maintenance plan that meets the requirements of Section 12 of this Chapter; and

(E) Closure and post-closure plans that meet the requirements of Water Quality Rules and Regulations Chapter 14, Section 3 and a corrective action plan that meets the requirements of Water Quality Rules and Regulations Chapter 14, Section 4.

(iii) Be submitted to the Division in a format required by the Administrator, including plans, specifications, design data, or other pertinent information covering the project, and any additional information required by the Administrator.

(iv) Include certification under penalty of perjury that the applicant has secured and will maintain permission for Department personnel and their invitees to access the facility, including permission to:

(A) Access the land where the facility is located;

(B) Collect resource data as defined by W. S. § 6-3-414; and

(C) Enter and cross all properties necessary to access the facility if the facility cannot be directly accessed from a public road.

Section 8. Annual Reporting Requirements.

(a) The permittee shall submit to the Division by April 1 of each year an annual report that includes:

(i) The name of the facility, the Division issued COWDF identification number, the name of the owner, the reporting contact, and permit numbers for the facility;

(ii) Description of any modification and operation details of the facility from the previous calendar year, any anticipated construction, modification, or operational changes for the upcoming calendar year;

(iii) A discussion and analysis of the groundwater monitoring results, including a graph of the last five (5) years of data in a format approved by the Administrator;

(iv) A discussion and analysis of the leak detection monitoring results from the previous calendar year and any corrective actions taken;

(v) Annual sampling results of evaporation ponds from the previous calendar year;

(vi) The annual revised cost estimates for closure, post-closure, and corrective action, and the financial assurance instruments that are required in Water Quality Rules and Regulations Chapter 14, Sections 3 and 4; and

(vii) Wastewater transfer records from the previous calendar year, as required by Section 11(f)(i) of this Chapter.

(b) Reporting requirements are subject to modification by the Administrator.

Section 9. Engineering Design Report.

- (a) An engineering design report is required for each permit application and shall include:
- (i) A description of the facility site and location including:
 - (A) The legal description of the present and projected facility property boundary, including existing and proposed buildings and facilities; and
 - (B) The surface and mineral owner(s) of record.
 - (ii) A geotechnical report for the proposed site that includes:
 - (A) Groundwater information, including the depth to groundwater;
 - (B) A summary of all subsurface investigations;
 - (C) A subsurface soil profile;
 - (D) Exploration logs;
 - (E) Laboratory or in-situ test results;
 - (F) Interpretation and analysis of subsurface investigations;
 - (G) Specific engineering recommendations for design; and
 - (H) Solutions or discussion of anticipated problems.
 - (iii) A detailed description of the types of waste(s) to be accepted at the facility that includes, but is not limited to, the following:
 - (A) Produced water;
 - (B) Well completion and stimulation products;
 - (C) Wastes from production separators;
 - (D) Gas plant dehydration wastes;
 - (E) Gas plant sweetening wastes; and
 - (F) A list of anticipated generators of the waste(s);

- (iv) A description of design conditions that includes:
 - (A) Identification of required performance characteristics of all construction materials;
 - (B) The type, size, strength, operating characteristics, rating or requirements for all:
 - (I) Mechanical and electrical equipment;
 - (II) Laboratory fixtures and equipment;
 - (III) Operating tools; and
 - (IV) Chemicals (where used).
 - (C) Construction and installation procedures;
 - (D) Testing requirements to ensure materials and equipment meet design standards;
 - (E) Waste treatment, storage, and disposal methods; and
 - (F) Summary of operation procedures.
- (v) A geologic report, signed and sealed by a Wyoming Professional Geologist in accordance with W.S. § 33-41-115(c), that includes:
 - (A) A stratigraphic column that illustrates the thickness and geologic names of alluvial materials and geologic formations that comprise the unsaturated, or vadose, zone;
 - (B) A description of the lithology and hydraulic conductivity of materials and geologic formations comprising the unsaturated zone, the first encountered groundwater, and the uppermost aquifer underlying the proposed facility;
 - (C) A potentiometric map of the uppermost water bearing zone beneath the facility that:
 - (I) Illustrates the locations and use of all wells within one (1) mile of the proposed facility, clearly identifying those wells producing in whole, or in part, from the uppermost water bearing zone, and including project borings or wells; and
 - (II) Includes a description of the uppermost aquifer in terms of its relative confinement, permeability, and porosity.

(vi) Documentation that the proposed facility will comply with Water Quality Rules and Regulations Chapter 3, Section 18;

(vii) A sampling and analysis plan that satisfies the monitoring requirements of Section 11 of this Chapter; and

(viii) Details of the leak detection system that satisfies the requirements of Section 11 of this Chapter.

(b) Engineering design drawings are required for each permit application and shall include:

(i) On each page:

(A) A suitable title block that includes the applicant's name, facility name, and Division assigned COWDF identification number, and the revision date and number; and

(B) The seal and signature of the Wyoming Professional Engineer.

(ii) A plan set that includes:

(A) A scaled site plan; and

(B) A cover sheet with an index as the first page of each plan set.

(iii) The following components:

(A) North arrow and drawing scale;

(B) Legend;

(C) Fencing and security;

(D) Topographic features and contours with indicated datum;

(E) Soil and subsurface geological characteristics;

(F) Location of soil borings, bedrock elevations, and seasonal high groundwater elevations;

(G) Locations and dimensions of piping, including those in and under buildings;

(H) The location of all cross-sections and profiles, which shall be identified in the plan views;

(I) Locations of buildings, evaporation ponds, pits, tanks, utilities, and roads;

(J) Scaled geologic cross-sections with the evaporation ponds' geometry, monitoring wells, borings, and groundwater observations (if present) superimposed on the geologic cross-sections;

(K) Present and proposed access, including a map of the access route(s) to the facility from the nearest public road;

(L) The distances to occupied dwelling buildings or school buildings; and

(M) Prevailing wind direction.

Section 10. Minimum Design and Construction Standards.

(a) Receiving facility and phase separation facility designs shall meet the following standards:

(i) Liquid hydrocarbons shall be removed from wastewater before it is discharged to the evaporation ponds.

(ii) All open-topped tanks in the receiving facility and the phase separation facility shall be covered with netting, screen, or other approved method to prevent the entry of birds and other wildlife. The netting, screen, or approved covering shall be constructed to remain intact and above the surface of the liquid in the tank even during winds up to eighty (80) mph, or when weighted with snow, ice, or rain.

(b) To protect birds and other wildlife, evaporation ponds shall be kept virtually oil free at all times or shall be completely netted or screened to the standards required for open-topped tanks. Hydrocarbon sheen on any part of the evaporation ponds shall be removed immediately.

(c) The facility design shall meet the following earthwork standards:

(i) For evaporation ponds specified to be lined with a geomembrane liner:

(A) Rocks larger than six (6) inches in length shall not be placed within five (5) feet of the interior slope of any evaporation pond embankment. All rocks and other material that could damage the geomembrane shall be removed from the surface to be covered with the geomembrane;

(B) Material containing by volume less than twenty-five (25%) percent of rock larger than six (6) inches and less than twelve (12) inches in length may be placed in the remainder of the embankment.

(ii) Outer dike slopes shall not be steeper than a ratio of one (1) vertical to three (3) horizontal in order to prevent surface runoff from entering the evaporation ponds. The Administrator may require flatter slopes to maintain slope stability.

(iii) Inner dike slopes shall be between a ratio of one (1) vertical to four (4) horizontal and one (1) vertical to three (3) horizontal.

(iv) The minimum top dike width shall be twelve (12) feet to allow access to maintenance vehicles. Top dikes wider than twelve (12) feet shall be required when necessary to ensure structural stability.

(v) Freeboard design shall comply with the following requirements:

(A) The minimum freeboard at the maximum operating level shall be three (3) feet.

(B) In order to prevent unauthorized discharges to the air, land or Waters of the State, the Administrator may require increased freeboard, on a case-by-case basis, in order to compensate for wave action due to evaporation pond design, meteorological, or topographic conditions that may exceed the proposed freeboard.

(d) The facility design shall meet the following liner base, primary and secondary liner, and leak detection system standards:

(i) All evaporation ponds shall be constructed with a compacted clay secondary liner base or a geosynthetic clay secondary liner base that is contoured to include individual sub-cells that can be isolated if a leak is detected, as required in Section 10(d)(iv)(C)(I).

(A) Compacted clay secondary liner bases shall be a minimum of one (1) foot thick with a maximum permeability of 1×10^{-5} cm/sec and shall be constructed with maximum compacted lifts of one-half (1/2) foot.

(I) Tests for water content and density shall be taken during the placement of each lift of the liner base.

1. Either permeability testing of undisturbed core samples from the in-place seal or detailed tests such as particle size distribution and Atterberg limits shall be conducted.

2. Detailed tests shall confirm that the soil specified was used for liner construction. One (1) test shall be conducted per acre per lift. For core sampling of the in-place liner, one (1) core of the completed liner shall be tested per acre.

3. The permittee shall provide the Division a written certification by a Wyoming Professional Engineer that the base was constructed according to the permit and that final testing indicated results within the allowable limits established by the permit.

(II) For compacted clay secondary liner bases, a method of maintaining the seal at or above optimum moisture conditions is required.

(B) Geosynthetic clay secondary liner bases installed according to the manufacturer's instructions are acceptable, provided that:

(I) Geosynthetic clay liner bases shall have a maximum hydraulic conductivity of 1×10^{-8} cm/sec;

(II) The manufacturer of the geosynthetic clay liner base shall have more than ten million square feet of their product installed;

(III) The geosynthetic clay liner base installation contractor shall be approved by the manufacturer; and

(IV) Geosynthetic clay liners that are used as secondary liner bases require surface erosion and abrasion protection and shall be protected during installation consistent with the manufacturer's requirements. If interior pond slopes steeper than 3:1 horizontal to vertical are proposed, the factor of safety for slope failure on the composite liner shall be shown to be at least 1.5:1.

(C) Handling, installation, and testing of geosynthetic clay liners shall be in accordance with the following specifications:

(I) ASTM D5887/D5887M-16;

- (II) ASTM D5888-19;
- (III) ASTM D5889/D5889M-18;
- (IV) ASTM D5890-19;
- (V) ASTM D5891/D5891M-19;
- (VI) ASTM D5993-18;
- (VII) ASTM D6072/D6072M-19;
- (VIII) ASTM D6102-15;
- (IX) ASTM D6243/D6243M-16;
- (X) ASTM D6788-02(2017);
- (XI) ASTM D6495/D6495M-18;
- (XII) ASTM D6768/D6768M-19;
- (XIII) ASTM D6496/D6496M-19;
- (XIV) ASTM D6243; and
- (XV) GRI GCL3.

(ii) All evaporation ponds shall be constructed with a high-density polyethylene (HDPE) geomembrane secondary liner that shall have a minimum thickness of 40 mils.

(A) HDPE geomembrane liners that conform to Geosynthetic Research Institute Standard Specification GRI-GM13, are acceptable.

(B) Handling, installation, and testing of HDPE liners shall be in accordance with the following specifications:

- (I) GRI GM13;

- (II) GRI GM9;
- (III) ASTM D751-19;
- (IV) ASTM D792-13;
- (V) ASTM D814-95(2020);
- (VI) ASTM D882-18;
- (VII) ASTM D1004-13;
- (VIII) ASTM D1203-16;
- (IX) ASTM D1204-14;
- (X) ASTM D1505-18;
- (XI) ASTM D1593-19;
- (XII) ASTM D1603-14;
- (XIII) ASTM D1790-14;
- (XIV) ASTM D3895-19;
- (XV) ASTM D4218-15;
- (XVI) ASTM D4833/D4833M-07(2013);
- (XVII) ASTM D5199-12(2019);
- (XVIII) ASTM D5321/D5321M-20;
- (XIX) ASTM D5397-19a;
- (XX) ASTM D5596-03(2016);
- (XXI) ASTM D5721-08(2018);

(XXII) ASTM D5885/D5885M-17;

(XXIII) ASTM D5994/D5994M-10(2015)e1;

(XXIV) ASTM D6392-12(2018);

(XXV) ASTM D6497/D6497M-02(2015)e1;

(XXVI) ASTM D6693/D6693M-04(2015)e1;

(XXVII) ASTM D7466/D7466M-10(2015)e1; and

(XXVIII) ASTM D7238-06(2017)07/01/2017.

(C) The liner manufacturer shall have more than ten million square feet of their product installed.

(D) Geomembrane liners installed and operated according to this Section shall not allow a discharge to groundwater by direct or indirect discharge, percolation or infiltration.

(iii) All evaporation ponds shall be constructed with a leak detection system that when installed, shall allow monitoring as required in Section 11(b) of this Chapter.

(iv) The leak detection system shall include drainage layers between the primary and secondary liners that shall have a minimum hydraulic transmissivity of one (1) gpm/foot.

(A) Synthetic drainage media may be used.

(B) The drainage layer shall have a minimum grade of four-tenths of one percent (0.4 %).

(C) Perforated or slotted collection lines shall be installed in the drainage layer arranged to create sub-cells with a maximum area of two (2) acres or less.

(I) Collection lines shall be configured to isolate sub-cells in the collection system for the purpose of locating leaks.

(II) No portion of the drainage layer shall be more than 140 feet from a collection line.

(D) The collection lines shall drain to a sump contained by the secondary liner.

(I) The sump shall be designed so that the maximum high liquid level during operating conditions is below the invert of any collection line discharging to the sump.

(II) The sump shall be large enough to allow a pump to be installed to remove all fluid from the sump.

(v) All evaporation ponds shall be constructed with a primary liner that shall be an HDPE geomembrane liner with a minimum thickness of sixty (60) mils.

(A) HDPE geomembrane liners shall conform to Geosynthetic Research Institute Standard Specification GRI-GM13;

(B) Handling, installation, and testing of HDPE liners shall meet the requirements of paragraph (d)(ii)(B) of this Section;

(C) The liner manufacturer shall have more than ten million square feet of their product installed;

(D) Geomembrane liners installed and operated according to this subparagraph shall not allow a discharge to groundwater by direct or indirect discharge, percolation, or filtration.

Section 11. Monitoring and Reporting Requirements.

(a) All applications for a permit to construct shall include:

(i) Documentation that demonstrates the groundwater monitoring wells comply with the construction standards of Water Quality Rules and Regulations Chapter 26;

(ii) Either the information required by Water Quality Rules and Regulations Chapter 3, Section 17(a) or the information required by Water Quality Rules and Regulations Chapter 3, Section 17(b)(ii) through (viii);

(iii) The ambient groundwater quality information for all monitoring wells for the Department to use to determine the groundwater class of use;

(A) The monitoring wells shall be sampled and tested prior to any wastewater disposal into the evaporation ponds; and

(B) The monitoring wells shall be sampled and tested one (1) time for the parameters listed in Water Quality Rules and Regulations, Chapter 8, Table 1.

(iv) A groundwater monitoring program as required by Water Quality Rules and Regulations Chapter 3, Section 17(d) and (e), and plans for record-keeping and reporting.

(v) The operational monitoring plan shall include a sampling and analysis plan for each evaporation pond.

(A) The sampling and analysis plan shall identify the evaporation pond locations and the methodology to be used to conduct monitoring at the evaporation ponds; and

(B) The analyte list and monitoring frequency are subject to revision as required by the Administrator.

(b) After approval by the Administrator, the monitoring program shall be incorporated as a permit condition to ensure compliance with Water Quality Rules and Regulations Chapter 8, Section 4(d)(v)(A) and Section 4(d)(vi)(A).

(c) All monitoring shall be conducted in accordance with an Administrator-approved sampling and analysis plan. The sampling and analysis plans shall be included as part of the operation and maintenance (O&M) Plan.

(d) Leak detection system monitoring.

(i) The leak detection system's inspection pipes shall be inspected weekly for the first month and monthly thereafter.

(ii) The permittee shall keep a log of the inspection results. If fluid is found:

(A) The permittee shall notify the Administrator within twenty-four (24) hours of discovery.

(B) The operator shall obtain samples from the inspection pipes and the evaporation cell(s) that have been tested, in accordance with US EPA SW-846, for total petroleum hydrocarbons (TPH) (modified for gasoline and diesel range hydrocarbons), chlorides, total dissolved solids (TDS) and sulfates.

(C) The permittee shall report the sample results to the Administrator as soon as they are available.

(e) Within ten (10) days of discovering a leak or fluid in the leak detection system, the permittee shall submit a plan and schedule to investigate the leak and repair the liner.

(f) Facilities that transfer wastewater shall:

(i) Maintain written records of all wastewater transfers that include:

(A) The date(s) of transfer;

(B) The volume of wastewater to be transferred;

(C) A description of the method of transfer;

(D) A copy of the written agreement(s) between the facility and the receiving parties that will be accepting the wastewater for reuse that identifies:

(I) The name, address, legal description by latitude and longitude, and telephone number for the receiving party;

(II) The receiving party's intended use of the transferred wastewater; and

(III) The location(s) where the wastewater will be applied or reused.

(ii) Maintain onsite all records required in this section and make the records available to Division representatives upon request. All records shall be compiled in an approved format and shall be included in the annual report, as required by Section 8(a)(vii) of this Chapter;

Section 12. Operation and Maintenance Plan.

(a) An operation and maintenance (O&M) plan is required for each new or modified facility and shall include the following information:

(i) An introduction that includes an overview of the facility and operational processes;

(ii) Process flow diagram;

(iii) Wastewater receiving procedures, including procedures for refusing loads that may not conform to permit requirements or facility policies;

(iv) Copies of all state and federal permits associated with the facility;

- (v) Record keeping and reporting procedures;
- (vi) Planned work and facility operation schedules;
- (vii) Staffing and management structure;
- (viii) Maintenance and inspection procedures;
- (ix) Sampling and analysis plans for groundwater monitoring, evaporation pond monitoring, and leak detection system monitoring; and
- (ix) A contingency plan that includes:
 - (A) A discussion of how hazards to human health and the environment will be minimized in case of fires, explosions, or unplanned sudden or non-sudden release of waste or waste constituents to soil, surface water, or groundwater;
 - (B) Procedures for notifying appropriate State or local agencies with designated response roles; and
 - (C) Reporting thresholds, response procedures, and recordkeeping requirements for spills, fires, explosions, and other possible failures.
- (b) The O&M plan shall be submitted to the Division prior to fifty (50 %) percent completion of construction. Administrator approval of the final O&M plan is required prior to any water disposal into evaporation ponds.

Section 13. Public Participation, Public Notice, and Public Hearing Requirements.

- (a) The Administrator shall give public notice for any of the following actions:
 - (i) The Administrator has prepared a draft permit that is intended for issuance.
 - (ii) The Administrator intends to modify a permit.
 - (iii) The Department intends to schedule a hearing.

(b) The Administrator shall include a thirty (30) day public comment period for any action on items (a)(i), or (a)(ii) of this Section, and shall provide at least thirty (30) days' public notice before any hearing held pursuant to paragraph (a)(iii) of this Section.

(c) Public notice shall be given by:

(i) Mailing a copy of the notice to the applicant, by certified or registered mail.

(ii) Mailing a copy of the notice to the following:

(A) Bureau of Land Management;

(B) Wyoming Oil and Gas Conservation Commission;

(C) Wyoming Game and Fish Department;

(D) Wyoming State Engineer; and

(E) Any unit of local government having jurisdiction over the area where the facility is proposed to be located.

(iii) Electronic notification of the notice to those individuals that subscribe to the Division's electronic notification list;

(iv) Publication of the notice in a newspaper of general circulation in the location of the facility or operation.

(d) All public notices issued under this Chapter shall contain the following minimum information:

(i) Name and address of the Department;

(ii) Name and address of the permittee or permit applicant, and, if different, of the facility or activity regulated by the permit;

(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit;

(iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including, where applicable, copies of the draft permit, statement of basis, fact sheet, and the application;

(v) A brief description of comment procedures, procedures to request a hearing; and

(vi) Any additional information required by the Administrator.

(e) In addition to the information required in paragraph (d) of this Section, any notice for a public hearing shall contain the following:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time and place of the hearing; and

(iii) A brief description of the nature and purpose of the hearing.

(f) The Department shall provide an opportunity for the applicant, permittee, or any interested person to submit written comments regarding permit issuance, modification, or to request a public hearing.

(g) During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, in writing to the Administrator and shall state the reasons for the request.

(h) The Director shall render a decision on the draft permit within thirty (30) days after completion of the comment period if no hearing is requested. If a hearing is held, the Director shall make a decision on any Department hearing as soon as practicable after receipt of the transcript or after the expiration of the time set to receive written comments.

(i) At the time a final decision is issued, the Department shall respond, in writing, to those comments received during the public comment period and comments received during the allotted time for a hearing held by the Department. This response shall:

(i) Specify any changes that have been made to the permit; and

(ii) Briefly describe and respond to all comments that express a regulatory concern within the authority of the Department to regulate.

(j) The response to comments shall be available to the public.

Section 14. Incorporation by Reference.

(a) The following codes, standards, rules, and regulations referenced in this Chapter are incorporated by reference:

(i) ASTM International Standard D1004-13, *Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting*, April 1, 2013, referred to as “ASTM D1004-13”;

(ii) ASTM International Standard D1203-16, *Standard Test Methods for Volatile Loss from Plastics Using Activated Carbon Methods*, April 1, 2016, referred to as “ASTM D1203-16”;

(iii) ASTM International Standard D1204-14, *Standard Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature*, March 1, 2014, referred to as “ASTM 1204-14”;

(iv) ASTM International Standard D1505-18, *Standard Test Method for Density of Plastics by the Density-Gradient Technique*, May 10, 2018, referred to as “ASTM D1505-18”;

(v) ASTM International Standard D1593-19, *Standard Specification for Nonrigid Vinyl Chloride Plastic Film and Sheeting*, December 11, 2019, referred to as “ASTM D1593-19”;

(vi) ASTM International Standard D1603-14, *Standard Test Method for Carbon Black Content in Olefin Plastics*, August 1, 2014, referred to as “ASTM D1603-14”;

(vii) ASTM International Standard D1790-14, *Standard Test Method for Brittleness Temperature of Plastic Sheeting by Impact*, October 1, 2014, referred to as “ASTM D1790-14”;

(viii) ASTM International Standard D3895-19, *Standard Test Method for Oxidative-Induction Time of Polyolefins by Differential Scanning Calorimetry*, June 25, 2019, referred to as “ASTM D3895-19”;

(ix) ASTM International Standard D4218-15, *Standard Test Method for Determination of Carbon Black Content in Polyethylene Compounds By the Muffle-Furnace Technique*, December 1, 2015, referred to as “ASTM D4218-15”;

(x) ASTM International Standard D4833/D4833M-07(2013), *Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products*, May 1, 2013, referred to as “ASTM D4833/D4833M-07(2013)”;

(xi) ASTM International Standard D5199-12(2019), *Standard Test Method for Measuring the Nominal Thickness of Geosynthetics*, June 21, 2019, referred to as “ASTM D5199-12(2019)”;

(xii) ASTM International Standard D5321/D5321M-20, *Standard Test Method for Determining the Shear Strength of Soil-Geosynthetic and Geosynthetic-Geosynthetic Interfaces by Direct Shear*, March 3, 2020, referred to as “ASTM D5321/D5321M-20”;

(xiii) ASTM International Standard D5397-19a, *Standard Test Method for Evaluation of Stress Crack Resistance of Polyolefin Geomembranes Using Notched Constant Tensile Load Test*, October 18, 2019, referred to as “ASTM D5397-19a”;

(xiv) ASTM International Standard D5596-03(2016), *Standard Test Method For Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics*, June 1, 2016, referred to as “ASTM D5596-03(2016)”;

(xv) ASTM International Standard D5721-08(2018), *Standard Practice for Air-Oven Aging of Polyolefin Geomembranes*, June 8, 2018, referred to as “ASTM D5721-08(2018)”;

(xvi) ASTM International Standard D5885/D5885M-17, *Standard Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by High-Pressure Differential Scanning Calorimetry*, June 1, 2017, referred to as “ASTM D5885/D5885M-17”;

(xvii) ASTM International Standard D5887/D5887M-16, *Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter*, September 1, 2016, referred to as “ASTM D5887/D5887M-16”;

(xviii) ASTM International Standard D5888-19, *Standard Guide for Storage and Handling of Geosynthetic Clay Liners*, May 19, 2019, referred to as “ASTM D5888-19”;

(xix) ASTM International Standard D5889/D5889M-18, *Standard Practice for Quality Control of Geosynthetic Clay Liners*, March 9, 2018, referred to as “ASTM D5889/D5889M-18”;

(xx) ASTM International Standard D5890-19, *Standard Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners*, May 30, 2019, referred to as “ASTM D5890-19”;

(xxi) ASTM International Standard D5891/D5891M-19, *Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners*, August 23, 2019, referred to as “ASTM D5891/D5891M-19”;

(xxii) ASTM International Standard D5993-18, *Standard Test Method for Measuring Mass per Unit Area of Geosynthetic Clay Liners*, June 15, 2018, referred to as “ASTM D5993-18”;

(xxiii) ASTM International Standard D5994/D5994M-10(2015)e1, *Standard Test Method for Measuring Core Thickness of Textured Geomembranes*, May 1, 2015, referred to as “ASTM D5994/D5994M-10(2015)e1”;

(xxiv) ASTM International Standard D6072/D6072M-19, *Standard Practice for Obtaining Samples of Geosynthetic Clay Liners*, January 8, 2019, referred to as “ASTM D6072/D6072M-19”;

(xxv) ASTM International Standard D6102-15, *Standard Guide for Installation of Geosynthetic Clay Liners*, May 1, 2015, referred to as “ASTM D6102-15”;

(xxvi) ASTM International Standard D6243 Standard, *Test Method for Determining the Internal and Interface Shear Strength of Geosynthetic Clay Liner by the Direct Shear Method*, January 1, 2016, referred to as “ASTM D6243”;

(xxvii) ASTM International Standard D6243/D6243M-16, *Standard Test Method for Determining the Internal and Interface Shear Strength of Geosynthetic Clay Liner by the Direct Shear Method*, January 1, 2016, referred to as “ASTM D6243/D6243M-16”;

(xxviii) ASTM International Standard D6392-12(2018), *Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods*, February 15, 2018, referred to as “ASTM D6392-12(2018)”;

(xxix) ASTM International Standard D6495/D6495M-18, *Standard Guide for Acceptance Testing Requirements for Geosynthetic Clay Liners*, March 9, 2018, referred to as “ASTM D6495/D6495M-18”;

(xxx) ASTM International Standard D6496/D6496M-19, *Standard Test Method for Determining Average Bonding Peel Strength Between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners*, May 9, 2019, referred to as “ASTM D6496/D6496M-19”;

(xxxix) ASTM International Standard D6497/D6497M-02(2015)e1, *Standard Guide for Mechanical Attachment of Geomembrane to Penetrations or Structures*, May 1, 2015, referred to as “ASTM D6497/D6497M-02(2015)e1”;

(xxxix) ASTM International Standard D6693/D6693M-04(2015)e1, *Standard Test Method for Determining Tensile Properties of Nonreinforced Polyethylene and Nonreinforced Flexible Polypropylene Geomembranes*, May 1, 2015, referred to as “ASTM D6693/D6693M-04(2015)e1”;

(xxxix) ASTM International Standard D6768/D6768M-19, *Standard Test Method for Tensile Strength of Geosynthetic Clay Liners*, May 9, 2019, referred to as “ASTM D6768/D6768M-19”;

(xxxix) ASTM International Standard D6788-02(2017), *Standard Specification for Repositionable Pressure-Sensitive Flags*, September 1, 2017, referred to as “ASTM D6788-02(2017)”;

(xxxix) ASTM International Standard D7238-06(2017), *Standard Test Method for Effect of Exposure of Unreinforced Polyolefin Geomembrane Using Fluorescent UV Condensation Apparatus*, July 1, 2017, referred to as “ASTM D7238-06(2017)”;

(xxxix) ASTM International Standard D7466/D7466M-10(2015)e1, *Standard Test Method for Measuring Asperity Height of Textured Geomembranes*, May 1, 2015, referred to as “ASTM D7466/D7466M-10(2015)e1”;

(xxxix) ASTM International Standard D751-19, *Standard Test Methods for Coated Fabrics*, May 22, 2019, referred to as “ASTM D751-19”;

(xxxix) ASTM International Standard D792-13, *Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement*, November 1, 2013, referred to as “ASTM D792-13”;

(xxxix) ASTM International Standard D814-95(2020), *Standard Test Method for Rubber Property-Vapor Transmission of Volatile Liquids*, February 26, 2020, referred to as “ASTM D814-95(2020)”;

(xxxx) ASTM International Standard D882-18, *Standard Test Method for Tensile Properties of Thin Plastic Sheeting*, August 16, 2018, referred to as “ASTM D882-18”;

(xxxxi) Code of Federal Regulations 40 CFR § 261.4(b)(5), in effect as of July 28, 1994, available at: <http://www.ecfr.gov>;

(xxxxii) Geosynthetic Research Institute Standard Specification GRI-GCL3, Test Methods, Required Properties, and Testing Frequencies of Geosynthetic Clay Liners (GCLs), as revised on July 26, 2010, referred to as “GRI-GCL3”;

(xxxxiii) Geosynthetic Research Institute Standard Specification GRI-GM9, *Cold Weather Seaming of Geomembranes*, as revised on January 10, 2013, referred to as “GRI-GM9”;

(xxxxiv) Geosynthetic Research Institute Standard Specification GRI-GM13, *Test Methods, Test Properties and Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes*, as revised on January 6, 2016, referred to as “GRI-GM13”;

(xxxxv) *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium (SW-846)*, published by the United States Environmental Protection Agency, as revised July 2014, referred to as “US EPA SW-846”.

(b) For these rules incorporated by reference:

(i) The Environmental Quality Council has determined that incorporation of the full text in these rules would be cumbersome or inefficient given the length or nature of the rules.

(ii) This Chapter does not incorporate later amendments or editions of incorporated codes, standards, rules, and regulations.

(iii) All incorporated codes, standards, rules, and regulations are available for public inspection at the Department’s Cheyenne office. Contact information for the Cheyenne office may be obtained at <http://deq.wyoming.gov> or from (307) 777-7937.

CHAPTER 28

STANDARDS FOR ISSUING PERMITS FOR COMMERCIAL OILFIELD WASTE DISPOSAL FACILITIES

Section 1. Authority.

This rule is promulgated pursuant to the Wyoming Environmental Quality Act, Wyoming Statutes (W.S.) § 35-11-101 through § 35-11-2005, specifically W.S. § 35-11-301(a) (i), W.S. § 35-11-301(a)(iii), W.S. § 35-11-302(a)(iii), W.S. § 35-11-306, and W.S. § 35-11-307.

Section 2. Applicability.

(a) This Chapter contains the minimum standards for the design and construction of commercial oilfield waste disposal facilities that are required to obtain a permit under W.S. § 35-11-301(a)(iii), W.S. § 35-11-306, and Water Quality Rules and Regulations Chapter 3. In addition, this Chapter contains operation, monitoring, and reporting requirements for commercial oilfield waste disposal facilities.

(i) All applicants for a Water Quality Rules and Regulations Chapter 3 permit to construct, install, modify, or operate a commercial oilfield waste disposal facility shall meet all minimum standards of this Chapter.

(ii) No permit to construct, install, modify, or operate a commercial oilfield waste disposal facility shall be issued to a facility that does not meet the minimum standards of this Chapter.

(iii) All commercial oilfield waste disposal facilities shall be constructed, installed, and operated in accordance with permits issued pursuant to this Chapter.

(b) The installation of any component of a commercial oilfield waste disposal facility requires a permit to construct.

(c) Commercial oilfield waste disposal facilities are authorized to accept exempt exploration and production (E&P) wastes.

(i) Non-exempt, non-hazardous waste may be approved on a case-by-case basis, at the permittee's request.

(ii) The Division requires hazardous waste characteristic analysis of all non-exempt wastes proposed to be disposed of at a commercial oilfield waste disposal facility. Additional or reduced sampling may be required by the Division based on the type of waste to be disposed and the generator's knowledge of the waste, including waste origin, composition, the process producing the waste, feedstock, and other reliable and relevant information. If any of the hazardous waste regulatory levels are exceeded, the wastes shall be disposed at a facility approved to accept hazardous wastes.

(d) Pursuant to the provisions of W.S. § 35-11-109 (a)(ii) and W.S. § 35-11-1104(a)(iii), while subject to the requirements of the Wyoming Environmental Quality Act, noncommercial oilfield waste disposal facilities permitted by the Wyoming Oil and Gas Conservation Commission, are exempt from the requirements of this Chapter.

Section 3. Timing of Compliance with These Regulations.

Any facility covered by an individual permit issued pursuant to Water Quality Rules and Regulations, Chapter 3, prior to the effective date of this chapter shall remain covered under that permit. New construction or modification of existing permitted facilities must obtain authorization under a new permit, in accordance with Water Quality Rules and Regulations Chapter 3, Section 9(a)(iii), subject to the requirements of this Chapter.

Section 4. Definitions.

(a) The definitions in this Section supplement those definitions contained in W.S. § 35-11-103 of the Wyoming Environmental Quality Act.

(b) "Commercial oilfield waste disposal facility" (COWDF) means a facility that:

(i) Receives or has received produced water, exempt exploration and production waste, or non-hazardous non-exempt wastes approved by the Department, for treatment, storage, or disposal in pits, evaporation ponds, or surface impoundments; and

(ii) Receives or has received produced water, exploration and production waste, or other approved wastes from persons other than the owners and operators of the facility.

(c) "Exempt exploration and production (E&P) waste(s)" means drilling fluids, produced waters, and other wastewater associated with the exploration, development, or production of crude oil, natural gas or geothermal energy that are solid wastes but that are not identified as hazardous wastes under 40 CFR § 261.4(b)(5).

(d) “Groundwater” means subsurface water that fills available openings in rock or soil materials such that they may be considered water saturated under hydrostatic pressure.

Section 5. Facilities and Systems not Specifically Covered by these Standards.

(a) Each application for a permit to construct a facility under this section shall be evaluated on a case-by-case basis using the best available technology. The Water Quality Division (Division) may approve applications demonstrating the constructed facility can meet the purpose of the Act and this Chapter.

(b) The following information shall be included with the application for a permit to construct, install, modify, or operate a commercial oilfield waste disposal facility not specifically covered by these standards:

(i) Data obtained from a full scale, comparable installation that demonstrates the acceptability of the design; or

(ii) Data obtained from a pilot plant operated under the design condition for a sufficient length of time to demonstrate the acceptability of the design; or

(iii) Data obtained from a theoretical evaluation of the design demonstrates a reasonable probability that the facility will meet the design objectives.

(iv) An evaluation of the flexibility of making corrective changes to the constructed facility in the event it does not function as planned.

(c) If an applicant wishes to construct a pilot plant to provide the data necessary to meet the requirements of this Section, then the applicant must obtain a permit to construct.

Section 6. Site Suitability.

(a) The applicant shall demonstrate that the proposed facility location complies with W.S. § 35-11-306(a)(i)-(ii).

(b) Additionally, the applicant shall demonstrate that the proposed facility location:

(i) Is positioned so that the depth to highest seasonal groundwater is at least five (5) feet below the secondary liner;

(ii) Is outside of the 100-year floodplain of surface waters of the State; and

(iii) Is not within ephemeral drainages into which natural runoff may flow or enter.

Section 7. Permits, Permit Application, and Recordkeeping Requirements.

(a) Applications for a permit to construct, install, modify, or operate a commercial oilfield waste disposal facility shall meet the requirements of Water Quality Rules and Regulations Chapter 3, Section 6.

(b) The application shall:

(i) Include signatures of:

(A) The surface estate owner of record or legal designee authorizing legal access, or documentation of right of way in cases of state or federal land ownership; and

(B) The operator.

(ii) Include the following components:

(A) An engineering design report that meets the requirements of Section 9 of this Chapter;

(B) A construction plan that meets the requirements of Section 10 of this Chapter;

(C) Monitoring and reporting that meet the requirements of Section 11 of this Chapter;

(D) An operation and maintenance plan that meets the requirements of Section 12 of this Chapter; and

(E) Closure and post-closure plans that meet the requirements of Water Quality Rules and Regulations Chapter 14, Section 3 and a corrective action plan that meets the requirements of Water Quality Rules and Regulations Chapter 14, Section 4.

(iii) Be submitted to the Division in a format required by the Administrator, including plans, specifications, design data, or other pertinent information covering the project, and any additional information required by the Administrator.

(iv) Include certification under penalty of perjury that the applicant has secured and will maintain permission for Department personnel and their invitees to access the facility, including permission to:

(A) Access the land where the facility is located;

(B) Collect resource data as defined by W. S. § 6-3-414; and

(C) Enter and cross all properties necessary to access the facility if the facility cannot be directly accessed from a public road.

Section 8. Annual Reporting Requirements.

(a) The permittee shall submit to the Division by April 1 of each year an annual report that includes:

(i) The name of the facility, the Division issued COWDF identification number, the name of the owner, the reporting contact, and permit numbers for the facility;

(ii) Description of any modification and operation details of the facility from the previous calendar year, any anticipated construction, modification, or operational changes for the upcoming calendar year;

(iii) A discussion and analysis of the groundwater monitoring results, including a graph of the last five (5) years of data in a format approved by the Administrator;

(iv) A discussion and analysis of the leak detection monitoring results from the previous calendar year and any corrective actions taken;

(v) Annual sampling results of evaporation ponds from the previous calendar year;

(vi) The annual revised cost estimates for closure, post-closure, and corrective action, and the financial assurance instruments that are required in Water Quality Rules and Regulations Chapter 14, Sections 3 and 4; and

(vii) Wastewater transfer records from the previous calendar year, as required by Section 11(f)(i) of this Chapter.

(b) Reporting requirements are subject to modification by the Administrator.

Section 9. Engineering Design Report.

(a) An engineering design report is required for each permit application and shall include:

(i) A description of the facility site and location including:

(A) The legal description of the present and projected facility property boundary, including existing and proposed buildings and facilities; and

(B) The surface and mineral owner(s) of record.

(ii) A geotechnical report for the proposed site that includes:

(A) Groundwater information, including the depth to groundwater;

(B) A summary of all subsurface investigations;

(C) A subsurface soil profile;

(D) Exploration logs;

(E) Laboratory or in-situ test results;

(F) Interpretation and analysis of subsurface investigations;

(G) Specific engineering recommendations for design; and

(H) Solutions or discussion of anticipated problems.

(iii) A detailed description of the types of waste(s) to be accepted at the facility that includes, but is not limited to, the following:

(A) Produced water;

(B) Well completion and stimulation products;

(C) Wastes from production separators;

(D) Gas plant dehydration wastes;

(E) Gas plant sweetening wastes; and

(F) A list of anticipated generators of the waste(s);

- (iv) A description of design conditions that includes:
- (A) Identification of required performance characteristics of all construction materials;
 - (B) The type, size, strength, operating characteristics, rating or requirements for all:
 - (I) Mechanical and electrical equipment;
 - (II) Laboratory fixtures and equipment;
 - (III) Operating tools; and
 - (IV) Chemicals (where used).
 - (C) Construction and installation procedures;
 - (D) Testing requirements to ensure materials and equipment meet design standards;
 - (E) Waste treatment, storage, and disposal methods; and
 - (F) Summary of operation procedures.
- (v) A geologic report, signed and sealed by a Wyoming Professional Geologist in accordance with W.S. § 33-41-115(c), that includes:
- (A) A stratigraphic column that illustrates the thickness and geologic names of alluvial materials and geologic formations that comprise the unsaturated, or vadose, zone;
 - (B) A description of the lithology and hydraulic conductivity of materials and geologic formations comprising the unsaturated zone, the first encountered groundwater, and the uppermost aquifer underlying the proposed facility;
 - (C) A potentiometric map of the uppermost water bearing zone beneath the facility that:
 - (I) Illustrates the locations and use of all wells within one (1) mile of the proposed facility, clearly identifying those wells producing in whole, or in part, from the uppermost water bearing zone, and including project borings or wells; and
 - (II) Includes a description of the uppermost aquifer in terms of its relative confinement, permeability, and porosity.

(vi) Documentation that the proposed facility will comply with Water Quality Rules and Regulations Chapter 3, Section 18;

(vii) A sampling and analysis plan that satisfies the monitoring requirements of Section 11 of this Chapter; and

(viii) Details of the leak detection system that satisfies the requirements of Section 11 of this Chapter.

(b) Engineering design drawings are required for each permit application and shall include:

(i) On each page:

(A) A suitable title block that includes the applicant's name, facility name, and Division assigned COWDF identification number, and the revision date and number; and

(B) The seal and signature of the Wyoming Professional Engineer.

(ii) A plan set that includes:

(A) A scaled site plan; and

(B) A cover sheet with an index as the first page of each plan set.

(iii) The following components:

(A) North arrow and drawing scale;

(B) Legend;

(C) Fencing and security;

(D) Topographic features and contours with indicated datum;

(E) Soil and subsurface geological characteristics;

(F) Location of soil borings, bedrock elevations, and seasonal high groundwater elevations;

(G) Locations and dimensions of piping, including those in and under buildings;

(H) The location of all cross-sections and profiles, which shall be identified in the plan views;

(I) Locations of buildings, evaporation ponds, pits, tanks, utilities, and roads;

(J) Scaled geologic cross-sections with the evaporation ponds' geometry, monitoring wells, borings, and groundwater observations (if present) superimposed on the geologic cross-sections;

(K) Present and proposed access, including a map of the access route(s) to the facility from the nearest public road;

(L) The distances to occupied dwelling buildings or school buildings; and

(M) Prevailing wind direction.

Section 10. Minimum Design and Construction Standards.

(a) Receiving facility and phase separation facility designs shall meet the following standards:

(i) Liquid hydrocarbons shall be removed from wastewater before it is discharged to the evaporation ponds.

(ii) All open-topped tanks in the receiving facility and the phase separation facility shall be covered with netting, screen, or other approved method to prevent the entry of birds and other wildlife. The netting, screen, or approved covering shall be constructed to remain intact and above the surface of the liquid in the tank even during winds up to eighty (80) mph, or when weighted with snow, ice, or rain.

(b) To protect birds and other wildlife, evaporation ponds shall be kept virtually oil free at all times or shall be completely netted or screened to the standards required for open-topped tanks. Hydrocarbon sheen on any part of the evaporation ponds shall be removed immediately.

(c) The facility design shall meet the following earthwork standards:

(i) For evaporation ponds specified to be lined with a geomembrane liner:

(A) Rocks larger than six (6) inches in length shall not be placed within five (5) feet of the interior slope of any evaporation pond embankment. All rocks and other material that could damage the geomembrane shall be removed from the surface to be covered with the geomembrane;

(B) Material containing by volume less than twenty-five (25%) percent of rock larger than six (6) inches and less than twelve (12) inches in length may be placed in the remainder of the embankment.

(ii) Outer dike slopes shall not be steeper than a ratio of one (1) vertical to three (3) horizontal in order to prevent surface runoff from entering the evaporation ponds. The Administrator may require flatter slopes to maintain slope stability.

(iii) Inner dike slopes shall be between a ratio of one (1) vertical to four (4) horizontal and one (1) vertical to three (3) horizontal.

(iv) The minimum top dike width shall be twelve (12) feet to allow access to maintenance vehicles. Top dikes wider than twelve (12) feet shall be required when necessary to ensure structural stability.

(v) Freeboard design shall comply with the following requirements:

(A) The minimum freeboard at the maximum operating level shall be three (3) feet.

(B) In order to prevent unauthorized discharges to the air, land or Waters of the State, the Administrator may require increased freeboard, on a case-by-case basis, in order to compensate for wave action due to evaporation pond design, meteorological, or topographic conditions that may exceed the proposed freeboard.

(d) The facility design shall meet the following liner base, primary and secondary liner, and leak detection system standards:

(i) All evaporation ponds shall be constructed with a compacted clay secondary liner base or a geosynthetic clay secondary liner base that is contoured to include individual sub-cells that can be isolated if a leak is detected, as required in Section 10(d)(iv)(C)(I).

(A) Compacted clay secondary liner bases shall be a minimum of one (1) foot thick with a maximum permeability of 1×10^{-5} cm/sec and shall be constructed with maximum compacted lifts of one-half (1/2) foot.

(I) Tests for water content and density shall be taken during the placement of each lift of the liner base.

1. Either permeability testing of undisturbed core samples from the in-place seal or detailed tests such as particle size distribution and Atterberg limits shall be conducted.

2. Detailed tests shall confirm that the soil specified was used for liner construction. One (1) test shall be conducted per acre per lift. For core sampling of the in-place liner, one (1) core of the completed liner shall be tested per acre.

3. The permittee shall provide the Division a written certification by a Wyoming Professional Engineer that the base was constructed according to the permit and that final testing indicated results within the allowable limits established by the permit.

(II) For compacted clay secondary liner bases, a method of maintaining the seal at or above optimum moisture conditions is required.

(B) Geosynthetic clay secondary liner bases installed according to the manufacturer's instructions are acceptable, provided that:

(I) Geosynthetic clay liner bases shall have a maximum hydraulic conductivity of 1×10^{-8} cm/sec;

(II) The manufacturer of the geosynthetic clay liner base shall have more than ten million square feet of their product installed;

(III) The geosynthetic clay liner base installation contractor shall be approved by the manufacturer; and

(IV) Geosynthetic clay liners that are used as secondary liner bases require surface erosion and abrasion protection and shall be protected during installation consistent with the manufacturer's requirements. If interior pond slopes steeper than 3:1 horizontal to vertical are proposed, the factor of safety for slope failure on the composite liner shall be shown to be at least 1.5:1.

(C) Handling, installation, and testing of geosynthetic clay liners shall be in accordance with the following specifications:

(I) ASTM D5887/D5887M-16;

(II) ASTM D5888-19;

(III) ASTM D5889/D5889M-18;

(IV) ASTM D5890-19;

(V) ASTM D5891/D5891M-19;

(VI) ASTM D5993-18;

(VII) ASTM D6072/D6072M-19;

(VIII) ASTM D6102-15;

(IX) ASTM D6243/D6243M-16;

(X) ASTM D6788-02(2017);

(XI) ASTM D6495/D6495M-18;

(XII) ASTM D6768/D6768M-19;

(XIII) ASTM D6496/D6496M-19;

(XIV) ASTM D6243; and

(XV) GRI GCL3.

(ii) All evaporation ponds shall be constructed with a high-density polyethylene (HDPE) geomembrane secondary liner that shall have a minimum thickness of 40 mils.

(A) HDPE geomembrane liners that conform to Geosynthetic Research Institute Standard Specification GRI-GM13, are acceptable.

(B) Handling, installation, and testing of HDPE liners shall be in accordance with the following specifications:

(I) GRI GM13;

- (II) GRI GM9;
- (III) ASTM D751-19;
- (IV) ASTM D792-13;
- (V) ASTM D814-95(2020);
- (VI) ASTM D882-18;
- (VII) ASTM D1004-13;
- (VIII) ASTM D1203-16;
- (IX) ASTM D1204-14;
- (X) ASTM D1505-18;
- (XI) ASTM D1593-19;
- (XII) ASTM D1603-14;
- (XIII) ASTM D1790-14;
- (XIV) ASTM D3895-19;
- (XV) ASTM D4218-15;
- (XVI) ASTM D4833/D4833M-07(2013);
- (XVII) ASTM D5199-12(2019);
- (XVIII) ASTM D5321/D5321M-20;
- (XIX) ASTM D5397-19a;
- (XX) ASTM D5596-03(2016);
- (XXI) ASTM D5721-08(2018);

(XXII) ASTM D5885/D5885M-17;

(XXIII) ASTM D5994/D5994M-10(2015)e1;

(XXIV) ASTM D6392-12(2018);

(XXV) ASTM D6497/D6497M-02(2015)e1;

(XXVI) ASTM D6693/D6693M-04(2015)e1;

(XXVII) ASTM D7466/D7466M-10(2015)e1; and

(XXVIII) ASTM D7238-06(2017)07/01/2017.

(C) The liner manufacturer shall have more than ten million square feet of their product installed.

(D) Geomembrane liners installed and operated according to this Section shall not allow a discharge to groundwater by direct or indirect discharge, percolation or infiltration.

(iii) All evaporation ponds shall be constructed with a leak detection system that when installed, shall allow monitoring as required in Section 11(b) of this Chapter.

(iv) The leak detection system shall include drainage layers between the primary and secondary liners that shall have a minimum hydraulic transmissivity of one (1) gpm/foot.

(A) Synthetic drainage media may be used.

(B) The drainage layer shall have a minimum grade of four-tenths of one percent (0.4 %).

(C) Perforated or slotted collection lines shall be installed in the drainage layer arranged to create sub-cells with a maximum area of two (2) acres or less.

(I) Collection lines shall be configured to isolate sub-cells in the collection system for the purpose of locating leaks.

(II) No portion of the drainage layer shall be more than 140 feet from a collection line.

(D) The collection lines shall drain to a sump contained by the secondary liner.

(I) The sump shall be designed so that the maximum high liquid level during operating conditions is below the invert of any collection line discharging to the sump.

(II) The sump shall be large enough to allow a pump to be installed to remove all fluid from the sump.

(v) All evaporation ponds shall be constructed with a primary liner that shall be an HDPE geomembrane liner with a minimum thickness of sixty (60) mils.

(A) HDPE geomembrane liners shall conform to Geosynthetic Research Institute Standard Specification GRI-GM13;

(B) Handling, installation, and testing of HDPE liners shall meet the requirements of paragraph (d)(ii)(B) of this Section;

(C) The liner manufacturer shall have more than ten million square feet of their product installed;

(D) Geomembrane liners installed and operated according to this subparagraph shall not allow a discharge to groundwater by direct or indirect discharge, percolation, or filtration.

Section 11. Monitoring and Reporting Requirements.

(a) All applications for a permit to construct shall include:

(i) Documentation that demonstrates the groundwater monitoring wells comply with the construction standards of Water Quality Rules and Regulations Chapter 26;

(ii) Either the information required by Water Quality Rules and Regulations Chapter 3, Section 17(a) or the information required by Water Quality Rules and Regulations Chapter 3, Section 17(b)(ii) through (viii);

(iii) The ambient groundwater quality information for all monitoring wells for the Department to use to determine the groundwater class of use;

(A) The monitoring wells shall be sampled and tested prior to any wastewater disposal into the evaporation ponds; and

(B) The monitoring wells shall be sampled and tested one (1) time for the parameters listed in Water Quality Rules and Regulations, Chapter 8, Table 1.

(iv) A groundwater monitoring program as required by Water Quality Rules and Regulations Chapter 3, Section 17(d) and (e), and plans for record-keeping and reporting.

(v) The operational monitoring plan shall include a sampling and analysis plan for each evaporation pond.

(A) The sampling and analysis plan shall identify the evaporation pond locations and the methodology to be used to conduct monitoring at the evaporation ponds; and

(B) The analyte list and monitoring frequency are subject to revision as required by the Administrator.

(b) After approval by the Administrator, the monitoring program shall be incorporated as a permit condition to ensure compliance with Water Quality Rules and Regulations Chapter 8, Section 4(d)(v)(A) and Section 4(d)(vi)(A).

(c) All monitoring shall be conducted in accordance with an Administrator-approved sampling and analysis plan. The sampling and analysis plans shall be included as part of the operation and maintenance (O&M) Plan.

(d) Leak detection system monitoring.

(i) The leak detection system's inspection pipes shall be inspected weekly for the first month and monthly thereafter.

(ii) The permittee shall keep a log of the inspection results. If fluid is found:

(A) The permittee shall notify the Administrator within twenty-four (24) hours of discovery.

(B) The operator shall obtain samples from the inspection pipes and the evaporation cell(s) that have been tested, in accordance with US EPA SW-846, for total petroleum hydrocarbons (TPH) (modified for gasoline and diesel range hydrocarbons), chlorides, total dissolved solids (TDS) and sulfates.

(C) The permittee shall report the sample results to the Administrator as soon as they are available.

(e) Within ten (10) days of discovering a leak or fluid in the leak detection system, the permittee shall submit a plan and schedule to investigate the leak and repair the liner.

(f) Facilities that transfer wastewater shall:

(i) Maintain written records of all wastewater transfers that include:

(A) The date(s) of transfer;

(B) The volume of wastewater to be transferred;

(C) A description of the method of transfer;

(D) A copy of the written agreement(s) between the facility and the receiving parties that will be accepting the wastewater for reuse that identifies:

(I) The name, address, legal description by latitude and longitude, and telephone number for the receiving party;

(II) The receiving party's intended use of the transferred wastewater; and

(III) The location(s) where the wastewater will be applied or reused.

(ii) Maintain onsite all records required in this section and make the records available to Division representatives upon request. All records shall be compiled in an approved format and shall be included in the annual report, as required by Section 8(a)(vii) of this Chapter;

Section 12. Operation and Maintenance Plan.

(a) An operation and maintenance (O&M) plan is required for each new or modified facility and shall include the following information:

(i) An introduction that includes an overview of the facility and operational processes;

(ii) Process flow diagram;

(iii) Wastewater receiving procedures, including procedures for refusing loads that may not conform to permit requirements or facility policies;

(iv) Copies of all state and federal permits associated with the facility;

- _____ (v) Record keeping and reporting procedures;
- _____ (vi) Planned work and facility operation schedules;
- _____ (vii) Staffing and management structure;
- _____ (viii) Maintenance and inspection procedures;
- _____ (ix) Sampling and analysis plans for groundwater monitoring, evaporation pond monitoring, and leak detection system monitoring; and
- _____ (ix) A contingency plan that includes:
 - _____ (A) A discussion of how hazards to human health and the environment will be minimized in case of fires, explosions, or unplanned sudden or non-sudden release of waste or waste constituents to soil, surface water, or groundwater;
 - _____ (B) Procedures for notifying appropriate State or local agencies with designated response roles; and
 - _____ (C) Reporting thresholds, response procedures, and recordkeeping requirements for spills, fires, explosions, and other possible failures.
- _____ (b) The O&M plan shall be submitted to the Division prior to fifty (50 %) percent completion of construction. Administrator approval of the final O&M plan is required prior to any water disposal into evaporation ponds.

Section 13. Public Participation, Public Notice, and Public Hearing Requirements.

- _____ (a) The Administrator shall give public notice for any of the following actions:
 - _____ (i) The Administrator has prepared a draft permit that is intended for issuance.
 - _____ (ii) The Administrator intends to modify a permit.
 - _____ (iii) The Department intends to schedule a hearing.

(b) The Administrator shall include a thirty (30) day public comment period for any action on items (a)(i), or (a)(ii) of this Section, and shall provide at least thirty (30) days' public notice before any hearing held pursuant to paragraph (a)(iii) of this Section.

(c) Public notice shall be given by:

(i) Mailing a copy of the notice to the applicant, by certified or registered mail.

(ii) Mailing a copy of the notice to the following:

(A) Bureau of Land Management;

(B) Wyoming Oil and Gas Conservation Commission;

(C) Wyoming Game and Fish Department;

(D) Wyoming State Engineer; and

(E) Any unit of local government having jurisdiction over the area where the facility is proposed to be located.

(iii) Electronic notification of the notice to those individuals that subscribe to the Division's electronic notification list;

(iv) Publication of the notice in a newspaper of general circulation in the location of the facility or operation.

(d) All public notices issued under this Chapter shall contain the following minimum information:

(i) Name and address of the Department;

(ii) Name and address of the permittee or permit applicant, and, if different, of the facility or activity regulated by the permit;

(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit;

(iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including, where applicable, copies of the draft permit, statement of basis, fact sheet, and the application;

(v) A brief description of comment procedures, procedures to request a hearing; and

(vi) Any additional information required by the Administrator.

(e) In addition to the information required in paragraph (d) of this Section, any notice for a public hearing shall contain the following:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time and place of the hearing; and

(iii) A brief description of the nature and purpose of the hearing.

(f) The Department shall provide an opportunity for the applicant, permittee, or any interested person to submit written comments regarding permit issuance, modification, or to request a public hearing.

(g) During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, in writing to the Administrator and shall state the reasons for the request.

(h) The Director shall render a decision on the draft permit within thirty (30) days after completion of the comment period if no hearing is requested. If a hearing is held, the Director shall make a decision on any Department hearing as soon as practicable after receipt of the transcript or after the expiration of the time set to receive written comments.

(i) At the time a final decision is issued, the Department shall respond, in writing, to those comments received during the public comment period and comments received during the allotted time for a hearing held by the Department. This response shall:

(i) Specify any changes that have been made to the permit; and

(ii) Briefly describe and respond to all comments that express a regulatory concern within the authority of the Department to regulate.

(j) The response to comments shall be available to the public.

Section 14. Incorporation by Reference.

(a) The following codes, standards, rules, and regulations referenced in this Chapter are incorporated by reference:

(i) ASTM International Standard D1004-13, *Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting*, April 1, 2013, referred to as “ASTM D1004-13”;

(ii) ASTM International Standard D1203-16, *Standard Test Methods for Volatile Loss from Plastics Using Activated Carbon Methods*, April 1, 2016, referred to as “ASTM D1203-16”;

(iii) ASTM International Standard D1204-14, *Standard Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature*, March 1, 2014, referred to as “ASTM 1204-14”;

(iv) ASTM International Standard D1505-18, *Standard Test Method for Density of Plastics by the Density-Gradient Technique*, May 10, 2018, referred to as “ASTM D1505-18”;

(v) ASTM International Standard D1593-19, *Standard Specification for Nonrigid Vinyl Chloride Plastic Film and Sheeting*, December 11, 2019, referred to as “ASTM D1593-19”;

(vi) ASTM International Standard D1603-14, *Standard Test Method for Carbon Black Content in Olefin Plastics*, August 1, 2014, referred to as “ASTM D1603-14”;

(vii) ASTM International Standard D1790-14, *Standard Test Method for Brittleness Temperature of Plastic Sheeting by Impact*, October 1, 2014, referred to as “ASTM D1790-14”;

(viii) ASTM International Standard D3895-19, *Standard Test Method for Oxidative-Induction Time of Polyolefins by Differential Scanning Calorimetry*, June 25, 2019, referred to as “ASTM D3895-19”;

(ix) ASTM International Standard D4218-15, *Standard Test Method for Determination of Carbon Black Content in Polyethylene Compounds By the Muffle-Furnace Technique*, December 1, 2015, referred to as “ASTM D4218-15”;

(x) ASTM International Standard D4833/D4833M-07(2013), *Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products*, May 1, 2013, referred to as “ASTM D4833/D4833M-07(2013)”;

(xi) ASTM International Standard D5199-12(2019), *Standard Test Method for Measuring the Nominal Thickness of Geosynthetics*, June 21, 2019, referred to as “ASTM D5199-12(2019)”;

(xii) ASTM International Standard D5321/D5321M-20, *Standard Test Method for Determining the Shear Strength of Soil-Geosynthetic and Geosynthetic-Geosynthetic Interfaces by Direct Shear*, March 3, 2020, referred to as “ASTM D5321/D5321M-20”;

(xiii) ASTM International Standard D5397-19a, *Standard Test Method for Evaluation of Stress Crack Resistance of Polyolefin Geomembranes Using Notched Constant Tensile Load Test*, October 18, 2019, referred to as “ASTM D5397-19a”;

(xiv) ASTM International Standard D5596-03(2016), *Standard Test Method For Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics*, June 1, 2016, referred to as “ASTM D5596-03(2016)”;

(xv) ASTM International Standard D5721-08(2018), *Standard Practice for Air-Oven Aging of Polyolefin Geomembranes*, June 8, 2018, referred to as “ASTM D5721-08(2018)”;

(xvi) ASTM International Standard D5885/D5885M-17, *Standard Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by High-Pressure Differential Scanning Calorimetry*, June 1, 2017, referred to as “ASTM D5885/D5885M-17”;

(xvii) ASTM International Standard D5887/D5887M-16, *Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter*, September 1, 2016, referred to as “ASTM D5887/D5887M-16”;

(xviii) ASTM International Standard D5888-19, *Standard Guide for Storage and Handling of Geosynthetic Clay Liners*, May 19, 2019, referred to as “ASTM D5888-19”;

(xix) ASTM International Standard D5889/D5889M-18, *Standard Practice for Quality Control of Geosynthetic Clay Liners*, March 9, 2018, referred to as “ASTM D5889/D5889M-18”;

(xx) ASTM International Standard D5890-19, *Standard Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners*, May 30, 2019, referred to as “ASTM D5890-19”;

(xxi) ASTM International Standard D5891/D5891M-19, *Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners*, August 23, 2019, referred to as “ASTM D5891/D5891M-19”;

(xxii) ASTM International Standard D5993-18, *Standard Test Method for Measuring Mass per Unit Area of Geosynthetic Clay Liners*, June 15, 2018, referred to as “ASTM D5993-18”;

(xxiii) ASTM International Standard D5994/D5994M-10(2015)e1, *Standard Test Method for Measuring Core Thickness of Textured Geomembranes*, May 1, 2015, referred to as “ASTM D5994/D5994M-10(2015)e1”;

(xxiv) ASTM International Standard D6072/D6072M-19, *Standard Practice for Obtaining Samples of Geosynthetic Clay Liners*, January 8, 2019, referred to as “ASTM D6072/D6072M-19”;

(xxv) ASTM International Standard D6102-15, *Standard Guide for Installation of Geosynthetic Clay Liners*, May 1, 2015, referred to as “ASTM D6102-15”;

(xxvi) ASTM International Standard D6243 Standard, *Test Method for Determining the Internal and Interface Shear Strength of Geosynthetic Clay Liner by the Direct Shear Method*, January 1, 2016, referred to as “ASTM D6243”;

(xxvii) ASTM International Standard D6243/D6243M-16, *Standard Test Method for Determining the Internal and Interface Shear Strength of Geosynthetic Clay Liner by the Direct Shear Method*, January 1, 2016, referred to as “ASTM D6243/D6243M-16”;

(xxviii) ASTM International Standard D6392-12(2018), *Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods*, February 15, 2018, referred to as “ASTM D6392-12(2018)”;

(xxix) ASTM International Standard D6495/D6495M-18, *Standard Guide for Acceptance Testing Requirements for Geosynthetic Clay Liners*, March 9, 2018, referred to as “ASTM D6495/D6495M-18”;

(xxx) ASTM International Standard D6496/D6496M-19, *Standard Test Method for Determining Average Bonding Peel Strength Between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners*, May 9, 2019, referred to as “ASTM D6496/D6496M-19”;

(xxxii) ASTM International Standard D6497/D6497M-02(2015)e1, *Standard Guide for Mechanical Attachment of Geomembrane to Penetrations or Structures*, May 1, 2015, referred to as “ASTM D6497/D6497M-02(2015)e1”;

(xxxiii) ASTM International Standard D6693/D6693M-04(2015)e1, *Standard Test Method for Determining Tensile Properties of Nonreinforced Polyethylene and Nonreinforced Flexible Polypropylene Geomembranes*, May 1, 2015, referred to as “ASTM D6693/D6693M-04(2015)e1”;

(xxxiv) ASTM International Standard D6768/D6768M-19, *Standard Test Method for Tensile Strength of Geosynthetic Clay Liners*, May 9, 2019, referred to as “ASTM D6768/D6768M-19”;

(xxxv) ASTM International Standard D6788-02(2017), *Standard Specification for Repositionable Pressure-Sensitive Flags*, September 1, 2017, referred to as “ASTM D6788-02(2017)”;

(xxxvi) ASTM International Standard D7238-06(2017), *Standard Test Method for Effect of Exposure of Unreinforced Polyolefin Geomembrane Using Fluorescent UV Condensation Apparatus*, July 1, 2017, referred to as “ASTM D7238-06(2017)”;

(xxxvii) ASTM International Standard D7466/D7466M-10(2015)e1, *Standard Test Method for Measuring Asperity Height of Textured Geomembranes*, May 1, 2015, referred to as “ASTM D7466/D7466M-10(2015)e1”;

(xxxviii) ASTM International Standard D751-19, *Standard Test Methods for Coated Fabrics*, May 22, 2019, referred to as “ASTM D751-19”;

(xxxix) ASTM International Standard D792-13, *Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement*, November 1, 2013, referred to as “ASTM D792-13”;

(xl) ASTM International Standard D814-95(2020), *Standard Test Method for Rubber Property-Vapor Transmission of Volatile Liquids*, February 26, 2020, referred to as “ASTM D814-95(2020)”;

(xxxx) ASTM International Standard D882-18, *Standard Test Method for Tensile Properties of Thin Plastic Sheeting*, August 16, 2018, referred to as “ASTM D882-18”;

(xxxxi) Code of Federal Regulations 40 CFR § 261.4(b)(5), in effect as of July 28, 1994, available at: <http://www.ecfr.gov>;

(xxxxii) Geosynthetic Research Institute Standard Specification GRI-GCL3, *Test Methods, Required Properties, and Testing Frequencies of Geosynthetic Clay Liners (GCLs)*, as revised on July 26, 2010, referred to as “GRI-GCL3”;

(xxxxiii) Geosynthetic Research Institute Standard Specification GRI-GM9, *Cold Weather Seaming of Geomembranes*, as revised on January 10, 2013, referred to as “GRI-GM9”;

(xxxxiv) Geosynthetic Research Institute Standard Specification GRI-GM13, *Test Methods, Test Properties and Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes*, as revised on January 6, 2016, referred to as “GRI-GM13”;

(xxxxv) *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium (SW-846)*, published by the United States Environmental Protection Agency, as revised July 2014, referred to as “US EPA SW-846”.

(b) For these rules incorporated by reference:

(i) The Environmental Quality Council has determined that incorporation of the full text in these rules would be cumbersome or inefficient given the length or nature of the rules.

(ii) This Chapter does not incorporate later amendments or editions of incorporated codes, standards, rules, and regulations.

(iii) All incorporated codes, standards, rules, and regulations are available for public inspection at the Department’s Cheyenne office. Contact information for the Cheyenne office may be obtained at <http://deq.wyoming.gov> or from (307) 777-7937.