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 X 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 X 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, S*tandard 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 Liner*s, 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";

(xxxi) 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";

(xxxii) 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";

(xxxiii)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";

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

(xxxv) 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)";

(xxxvi)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";

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

(xxxviii) 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.