Ohio Administrative Code

Rule 1501:9-4-06 Design and operational requirements of an oil and gas waste facility.

Effective: January 13, 2022

(A) On and after the effective date of this rule, any person who stores, recycles, treats, processes, or disposes of brine or other waste substances at an oil and gas waste facility shall comply with all the operational requirements and standards in this rule, unless specifically exempted in this rule. Compliance with this rule does not eliminate the requirement that a person comply with any other applicable laws.

(B) Oil and gas waste classification.

(1) No brine or other oil and gas waste substances resulting from the exploration, development, well stimulation, production operations, or plugging of oil and gas resources shall be accepted at or removed from an oil and gas waste facility by means other than pipeline unless the brine or other oil and gas waste substance is accompanied by a manifest as described in this rule.

(a) Describe the brine or other waste substances on the manifest using the following terms:

(i) Solid, fluid, or suspension, as defined in this chapter, to describe the consistency of the brine or other waste substances; and

(ii) TENORM or NORM, as defined in this chapter. If the material is identified as TENORM, attach analytical testing results by a laboratory approved to test TENORM by the Ohio Department of Health unless not determined in accordance with division (A) of section 1509.074 of the Revised Code and further describe the material using one of the following terms:

(a) "Minus" is a classification term that identifies the TENORM concentration as less than seven pCi/g combined radium 226 and radium 228; or

(b) "Plus" is a classification term that identifies the TENORM concentration as equal to or greater than seven pCi/g combined radium 226 and radium 228.

(C) Brine and other waste substance storage.

(1) Brine and other waste substance storage systems must be designed, constructed, and operated in a manner to prevent discharge of brine or other waste substances into the groundwater, into or on the land, or into surface waters.

(a) No brine or other waste substances may be stored for a period of more than nine months without removal of brine or other wastes substances from the oil and gas waste facility.

(b) Other waste substances are a waste until such time that the waste leaves the oil and gas waste facility and is lawfully disposed of or used for an approved lawful purpose.

(c) Basins, catchments, sumps or other impoundments designed and constructed solely to store storm water for sediment control are exempt from the requirements outlined in this rule.

(d) Primary containment shall not overflow. Secondary containment shall not be used as primary containment.

(e) If after an inspection and for good cause, the chief may require the person operating the oil and gas waste facility to empty and clean the primary containment. All brine and other waste substances removed during this activity shall be disposed of lawfully.

(2) The containment standards for oil and gas waste facilities include all of the following:

(a) Design by a qualified professional engineer.

(b) Design, install, operate, and maintain to prevent a release of brine or other waste substances from the containment.

(c) Install, test, operate, and maintain in accordance with the manufacturers recommendations and specifications.

(d) Capable of storing brine or other waste substances without collapse, rupture, or failure.

(e) Compatible with the substance that it contains and the physical and climatic conditions to which the containment will be exposed.

(f) Protect all metallic storage containment from corrosion by cathodic protection, appropriately designed coating systems, or other means approved by the chief.

(g) Protect all above ground metal storage tanks from lightning in accordance with industry standards.

(h) Design, install, test, operate, and maintain geomembrane liner systems in accordance with the manufacturers recommendations and specifications. Utilize testing methods in accordance with ASTM standards, International Association of Geosynthetic Installers standards, or other standards as approved by the chief.

(i) Provide foundation or base support for the containment that is resistant to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift.

(j) Design, install, and maintain containment to prevent physical damage from equipment due to excessive stress, settlement, vibration, expansion, or contraction.

(k) Repair or replace any containment or containment component such as liners, gaskets, piping, pumps, valves, cathodic protection system, rivets, and bolts immediately upon detection of failure or imminent failure.

(l) Inspect and assess by a qualified person containments or containment system components that were utilized previously in a different service or at a different location. At a minimum, investigate and disclose the following in the assessment:

(i) Design standard(s), if available, to which the containment or containment components is constructed;

(ii) Compatibility of substance to be stored in the containment;

(iii) Existing condition of the containment or containment components; and

(iv) Age of the containment or containment components.

(3) Primary containment standards are as follows:

(a) Provide failsafe mechanisms, such as overfill protection, shut-off valves, and leak detection systems.

(b) Affix and maintain an outward visible label to or provide signage for all primary containment, as applicable, which identifies the contents. If the primary containment is a tank, the label or sign will also identify the maximum volume.

(c) Maintain a minimum of six inches of freeboard within all primary containment that is exposed to precipitation. A larger freeboard may be required by the chief.

(d) Provide appropriate air release and vacuum release on all primary containment, as applicable, and install filters on any air release system to control odors when necessary.

(e) In addition to all other remedies provided by law, the chief may prohibit the use or require the repair of any pit or tank which fails to conform to any of the requirements of this rule. The chief may limit the amount of brine and other waste substances stored at an oil and gas waste facility.

(f) Burial of any tank is prohibited.

(g) The chief may require additional containment standards other than those listed in this rule for a long-term oil and gas waste facility.

(h) A liner may only be used as primary containment at an oil and gas waste facility authorized under a short-term permit.

(4) Secondary containment standards are as follows:

(a) Provide one hundred ten per cent of the capacity of the largest single primary containment or the total capacity of multiple primary containments that are piped together to function as a single containment, whichever is greater. Provide an additional six inch freeboard if the secondary containment is exposed to precipitation.

(i) If the multiple primary containments that are piped together are designed and operated with an isolation system to prevent release of the total volume of the piped system during a primary containment failure, then it may be considered as separate containment volumes.

(b) Design and maintain as a means to capture an incidental spill or release from a primary containment and a catastrophic failure of a primary containment.

(c) Remove any accumulation of storm water in the secondary containment within thirty-six hours after the accumulation. For facilities connected to a class II disposal well, the chief may require the installation of a pumping system to keep the secondary containment free of storm water.

(d) Provide secondary containment for all pumps and other appurtenances that are associated with the storage, processing, or conveyance of brine or other waste substances.

(e) Disclose allowable leak rates for geomembrane systems.

(5) Conveyance systems standards are as follows:

(a) Process piping.

(i) Design, install, operate, and maintain dedicated process piping and any supporting structures for flow of all brine, other waste substances, and other materials used in the storing, processing, treating, recycling, or disposal of the brine or other waste substances.

(ii) Design and install process piping systems in a manner that minimizes abrasion and corrosion in

the piping system and allows for expansion and contraction of the conveyance system.

(iii) Design process piping systems to be compatible with the substance that they carry and the physical and climatic conditions to which the piping system will be exposed.

(iv) Design, install, and maintain a secondary containment system for all process piping systems.

(v) Affix and maintain a label on all process piping to identify the contents and flow direction of the pipe contents.

(b) Pipelines.

(i) Design, install, operate, and maintain pipelines and any supporting structures to prevent a release of brine or other waste substances and to have a working pressure rating equal to or greater than the highest anticipated operating pressure to which the pipeline might be exposed to. Pipelines used to transport brine to a class II disposal well shall have a working pressure rating equal to or greater than the maximum allowable injection pressure prescribed in rule 1501:9-6-09 of the Administrative Code.

(ii) Design, install, operate, and maintain dedicated and controlled pipelines for flow of all brine and other waste substances.

(iii) Design and install pipelines in a manner that minimizes abrasion and corrosion in the pipeline and allows for expansion and contraction of the pipeline.

(iv) Design pipelines to be compatible with the substance that they carry and the physical and climatic conditions to which the pipeline will be exposed.

(v) Design, install, and maintain a means to detect, and capture a leak from the pipeline.

(vi) Design, install, and maintain a means to detect and locate a pipeline.

(vii) Design, install, operate, and maintain pipelines in a manner to protect public water intakes,

ponds, developed springs, water wells, wetlands, or any water of the state as defined in section 1509.01 of the Revised Code and the chief may require a means to isolate pipeline segments near these areas, or for the protection of human health, safety, or the environment.

(viii) Design, install, operate and maintain pipelines with fittings that are accessible from ground level, approved by the chief that allow for installation of gauges or other equipment for monitoring by the division.

(c) On-site storm water management standards are as follows:

(i) Discharge all storm water from secondary containment through controlled conveyance systems.

(ii) Maintain all valves, pipe, or other equipment designed to discharge storm water outside of the secondary containment closed and affix and maintain a tamper-proof seal or lock.

(iii) Screen or test prior to discharge all storm water from secondary containment to ensure that the storm water has not been contaminated with brine or other waste substances.

(iv) Include estimated volume, screening and testing results, date of discharge, and the person responsible for authorizing the discharge in records for all storm water discharged from secondary containment.

(D) Solids and stabilization standards are as follows:

(1) Store all solids within primary and secondary containment.

(2) Perform all stabilization operations within primary and secondary containment.

(3) Store all solids in a manner that prevents contact with storm water. Clearly mark and identify all solid storage areas with signage.

(4) Capture and lawfully manage or dispose of any liquid that comes in contact with solids.

(5) Other waste substances shall be stabilized with a stabilization agent if disposed of in this state at a licensed solid waste landfill. If the waste substance is to be transported or disposed of out of state, the permittee shall comply with all applicable state and federal laws.

(E) Site security and safety controls. Provide and maintain site security controls at an oil and gas waste facility that prevent accidental or unauthorized entry into the facility or areas of the facility not intended for access by the public, wildlife, and domestic animals. A fence or barrier that completely surrounds the facility or portions of the facility may be required by the chief. The site security controls may include any or all of the following:

(1) A sign that is legible from the public right-of-way and includes: oil and gas waste facility name, oil and gas waste facility permit number, twenty-four-hour emergency contact telephone number, and 911 address of the oil and gas waste facility;

(2) Signs or other means that clearly identify portions of the oil and gas waste facility that are intended to be accessible only to authorized personnel;

(3) Lighting that illuminates the oil and gas waste facility sufficiently to discourage acts of vandalism, but will not create a lighting nuisance to adjacent properties;

(4) Signs or other means that clearly identify ingress, egress, and traffic flow patterns;

(5) Mesh, screening or other controls to prevent access by migratory birds on open top containments, as necessary; and

(6) A wind-sock for wind direction determination.

(F) Monitoring and inspection procedure. An oil and gas waste facility shall have an employee present onsite during all times of offloading, loading, treating, processing, or recycling of other waste substances.

(1) Permittee conducted inspections.

(a) Develop and implement an inspection procedure and schedule for all equipment, containment systems, pipelines, and other appurtenances at the oil and gas waste facility. The chief may require a permittee to conduct such inspections on a schedule that is different than a permittees schedule, if there is just cause.

(b) The inspection procedure is to ensure all equipment and other appurtenances associated with the oil and gas waste facility are maintained in a safe and functional manner.

(c) Inspections may include, but not be limited to, containment tanks, liner systems, pumps, process piping, pipelines, monitoring equipment, monitoring wells, and other inspections recommended by equipment manufacturers or others experienced with the operation and maintenance of the equipment and other appurtenances.

(d) Document on a log all inspections performed, name of the person performing the inspection, date of the inspection, findings of the inspection, and actions taken as a result of the inspection.

(2) A person may only operate a pipeline that transports brine or other waste substances if it has been tested in accordance with the standards of either ANSI/ASME B31.4 "pipeline transportation systems for liquids and slurries" or ASTM F2164 "standard practice for field leak testing of polyethylene piping systems using hydrostatic pressure" during the verification of integrity, at least once every year, after repair of the pipe and any connections, or at the request of the chief.

(a) Each oil and gas waste facility permittee shall give the chief two business days direct notice in advance of any activity performed under paragraph (F)(2) of this rule.

(b) Any test of a pipelines used to transport brine or other waste shall be witnessed by a division representative.

(3) The chief may require the owner of an oil and gas waste facility to install ground water monitoring wells when contamination of the ground water is suspected. All ground water monitoring well installation and sampling shall be conducted in accordance with the U.S. Environmental Protection Agency "RCRA Ground Water Technical Enforcement Guidance Document OSWER-9950.1".

(G) Reporting.

(1) A permittee for a long-term oil and gas waste facility shall submit a report on a form prescribed by the chief summarizing activities during the previous calendar year, by the fifteenth day of April of each calendar year. A permittee for a short-term oil and gas waste facility shall submit a report summarizing activities under the permit within thirty calendar days of termination of the permit. The report consists of the following:

(a) Identification of any minor changes to the operation that differs from the approved permit;

(b) Total volume of brine and other waste substances accepted for storage, treatment, processing, recycling, or disposal at the facility;

(i) The origin of all shipments of brine and other waste substances shall be tracked for the previous year and made available to the chief upon request.

(c) Total volume and final disposition location of brine removed from the facility for disposal or recycling and summarized based on the regulatory district of origin specified in section 1509.22 of the Revised Code;

(d) Total volume and final disposition location of waste removed from the facility for in state disposal or recycling;

(e) Total amount and location of waste removed from the facility for out of state disposal or recycling; and

(f) A statement that reads "As owner or operator of this facility, I attest that- the information contained within this report is accurate and true to the best of my knowledge."

(H) Oil and gas waste facility record keeping. Records are to be maintained for a minimum period of three years after the date the record is generated and are to be submitted to the chief upon request or as required in Chapter 1509 of the Revised Code or division 1501:9 of the Administrative Code.

(I) Emergency release notification. Provide and maintain in a visible location at an oil and gas waste facility a contact list with phone numbers for notification purposes in the event of a release of brine, other waste substances, or reagents. Include in the contact list the permittees designated incident response coordinator, applicable federal, state, and local authorities with responsibilities related to a release, and contractors who could respond to the release. Any release at an oil and gas waste facility shall be managed by the permittee in accordance with Chapter 1501:9-8 of the Administrative Code.

(J) The division may sample brine or other waste substances at any time.

(K) Enforcement.

(1) The chief may immediately suspend operations at an oil and gas waste facility if any of the following apply:

(a) The oil and gas waste facility is operated in a manner different than the approved permit and any approved modifications or amendments;

(b) The operation of the oil and gas waste facility does not perform or is likely not to perform as designed;

(c) The oil and gas waste facility does not or is likely not to perform in a manner that supports safe production operations;

(d) The operation of the oil and gas waste facility fails or could reasonably be anticipated to fail to protect public health and safety;

(e) The operation of the oil and gas waste facility causes or could reasonably be anticipated to cause damage to the environment;

(f) The oil and gas waste facility is operated outside of the designated oil and gas waste facility boundary;

(g) Any violation of a term or condition of an approved permit, Chapter 1509 of the Revised Code or division 1501:9 of the Administrative Code.; and

(h) Operations at the class II disposal well associated with the oil and gas waste facility are suspended under rule 1501:9-3-07 of the Administrative Code or the class II disposal well associated with the oil and gas waste facility is ordered to be plugged by the chief.

(L) Resuming operations after suspension.

(1) If the chief suspends operations for an oil and gas waste facility, the oil and gas waste facility permittee shall develop a written plan that describes any testing to be performed, any actions to correct the conditions that caused the suspension, and estimated length of time to complete the plan. Within ten business days of receipt, the chief will review the plan and either accept it, require modifications, or reject the plan and order necessary corrective action.

(M) Revocation of a permit.

(1) If the oil and gas waste facility has not accepted any brine or other waste substances for a period of two consecutive years, the person operating the oil and gas waste facility shall close and reclaim the oil and gas facility pursuant to rule 1501:9-4-07 of the Administrative Code.

(2) If an accepted plan developed under paragraph (L) of this rule is not completed in the time frame established in the plan, the person operating the oil and gas waste facility shall close and reclaim the oil and gas facility pursuant to rule 1501:9-4-07 of the Administrative Code.

(3) If a plan required under paragraph (L) of this rule is not submitted within 120 days of the suspension of activity, the person operating the oil and gas waste facility shall close and reclaim the oil and gas facility pursuant to rule 1501:9-4-07 of the Administrative Code.