

DIVISION 95
CONSTRUCTION, OPERATION, AND DECOMMISSIONING RULES
FOR URANIUM MILLS

345-095-0005

Purpose

It is the purpose of these rules to ensure that the construction, operation, and decommissioning of uranium mills and related and supporting facilities are accomplished in a manner consistent with ORS 469.310.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.310, ORS 469.501 & ORS 469.556

345-095-0015

Scope and Construction

(1) The rules in this Division apply to all uranium mills that use conventional alkaline or acid leach technologies, together with their related and supporting facilities, for which the Council has issued a site certificate.

(2) If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose requirements inconsistent with the rules in this Division, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.556, ORS 469.505

345-095-0020

Definitions

All definitions in OAR 345-092-0025 apply to the rules in this Division.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.556

345-095-0040

Rules that Apply to Construction

The following rules apply to any ground disturbance activity on the site of a uranium mill:

(1) The certificate holder shall remove native topsoil before excavation for the mine, mill buildings, ponds and tailings disposal sites and shall stockpile the topsoil for later use in site reclamation. The certificate holder shall contour topsoil storage areas to prevent erosion and shall protect the topsoil to retain nutrients needed for subsequent use of the topsoil as a growth medium.

(2) The certificate holder shall not divert or rechannel any perennial streams.

(3) The site certificate holder shall keep the Council informed of drilling or trenching projects conducted to define hydrologic or geologic parameters related to building foundation designs, tailings retention system design, reclamation planning or environmental monitoring. The certificate holder shall notify the Council if site investigations, drillings, trenchings or construction projects

including mine development reveal geologic conditions different from those described in the site certificate application. The certificate holder shall provide the information described in this rule to the Department of Energy, the Department of Geology and Mineral Industries and the Department of Water Resources on a timely basis so that the Council and other state agencies may inspect the projects.

(4) The certificate holder shall not use radioactive tailings in the construction of tailings dams.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.556

345-095-0045

Construction Reports

(1) Prior to the initial production of yellowcake, the site certificate holder shall submit copies of monthly construction progress reports to the Council. Such reports shall describe the status of mining activities, building construction and tailings dam and pond construction in sufficient detail to allow the Council or its representatives to observe significant construction progress.

(2) The certificate holder shall notify the Council of any major changes in construction schedules and of any significant changes in process equipment, pollution control equipment or facilities or equipment or facilities designed for the protection of workers.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.556

345-095-0060

Standards that Apply to Operation

(1) The certificate holder shall implement a safety and health program covering both occupational and radiological hazards, subject to the approval of the Council and including:

(a) Identification of an onsite occupational safety officer trained and experienced in the recognition and control of the occupational hazards of milling operations including physical and chemical hazards and the use of respiratory protection equipment.

(b) Identification of an onsite radiological safety officer trained and experienced in the recognition and control of the radiological hazards associated with uranium milling operations.

(c) Description of the authority of the safety officers to order immediate correction of safety or health hazards including process modification or cessation if, in the judgment of the safety officer, such action is required to protect workers or the public.

(d) An occupational radiological dose assessment program.

(e) A policy stating that personal protective equipment, including respirators, shall not be used routinely in lieu of process modification in order to meet personnel exposure limits.

(f) An employee training program that includes training in the safety and health hazards of facility operation and the use of personnel protection equipment and procedures.

(2) The site certificate holder shall maintain records of all yellowcake shipments including amounts, routes to be followed, description of packaging, description of labeling and a copy of the information supplied to the shipper, including instructions to be followed in case of an accident. The certificate holder shall make these records available for review by the Council or its representatives. The certificate holder shall submit an emergency plan for transportation accidents to the Council for approval before beginning operation of the facility. The certificate holder shall submit any later changes in the plan to the Council at least 45 days before they are effective, except that the certificate holder may immediately implement any temporary changes the certificate holder believes are necessary immediately for the protection of the public health and safety or the health and safety of facility personnel.

(3) The certificate holder shall have established written procedures for dealing with off-normal and emergency situations including, but not limited to:

- (a) Failure of yellowcake drying and packaging dust control systems.
- (b) Fire.
- (c) Dam or dike failure.
- (d) Slurry pipeline rupture.
- (e) Hazardous process chemical spills.

(4) The certificate holder shall not use underground injection of solutions for the extraction of minerals including uranium (in situ solution mining).

(5) The certificate holder shall not remove uranium mill tailings from the facility for any purpose other than samples for research or analytical purposes. The site certificate holder shall maintain a permanent record of any tailings transfer for such purposes.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.556

345-095-0070

Effluent Release Limits

The certificate holder shall operate the uranium mill to ensure that, during routine operation of the facility, effluent releases to uncontrolled areas do not exceed limits established by rules of the Public Health Division of the Oregon Department of Human Services or rules of the Oregon Department of Environmental Quality.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470, ORS 469.525 & ORS 469.556

345-095-0080

Effluent Monitoring

(1) During construction and operation of a uranium mill, the site certificate holder shall implement an effluent monitoring program to evaluate facility

effluents compared to effluent releases projected in the site certificate application, to regulatory limits of the rules in this Division and to environmental impacts.

(2) The certificate holder shall submit the effluent monitoring program to the Council for approval. The Council may consult with affected state agencies before approving the program.

(3) In the effluent monitoring program, the certificate holder shall describe the methods for ensuring the adequacy of control procedures for each point of routine or potential effluent release. The certificate holder shall include in the program a method of determining average release rates, maximum release rates and total releases as well as the physical, chemical and radiological characteristics of the release.

(4) The certificate holder shall submit annual reports to the Council within 90 days of the end of each reporting year and shall include data on all effluent releases, comparison of these releases to those projected in the site certificate application and to regulatory limits, review of the adequacy of the monitoring program and recommendations and justification for any improvements in the program. For the purpose of this rule, reporting year begins upon the initiation of construction at the site and subsequent reporting years begin upon the anniversary of that date.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.507

345-095-0090

Public Health Impacts

The certificate holder shall operate the uranium mill to ensure that, during operation of the uranium mill, public health impacts do not exceed the following limits:

(1) Annual dose equivalent not exceeding 25 millirems to the whole body, 75 millirems to the thyroid and 25 millirems to any other organ of any member of the public as the result of exposures to planned discharges of radioactive materials except radon and its daughters.

(2) Concentrations of total suspended particulates resulting from facility operation at any location that is routinely inhabited or visited by members of the public not exceeding 19 ug/m³ annual geometric means. The 24-hour concentration at these locations must not exceed 37 ug/m³ more frequently than once per year. In any case where measurable impacts might occur in wilderness areas designated by federal or state agencies or in designated national or state parks, the site certificate holder shall determine the concentration of total suspended particulates at the wilderness or park boundary nearest the facility. The concentration limit at that location must not exceed 5 ug/m³ annual geometric mean nor 10 ug/m³ on a 24-hour average more frequently than once per year.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.501

345-095-0100

Environmental Monitoring

(1) During construction and operation of a uranium mill, the site certificate holder shall implement an environmental monitoring program to evaluate all aspects of the environment and to analyze the environment of the site compared to the baseline environmental data presented in the site certificate application and to the projected environmental impacts of facility operation.

(2) The certificate holder shall submit the environmental monitoring program to the Council for approval. The Council may consult with affected state agencies before approving the program.

(3) In the environmental monitoring program, the certificate holder shall address each item discussed in the environmental assessment, including but not limited to the following:

(a) Geography: The site certificate holder shall determine, evaluate and summarize any changes in land ownership and land use within 5 miles of the mill.

(b) Demography, Sociology and Economics: The site certificate holder shall evaluate any changes in population and nearest residences and the effects of facility operation on public services, demographic characteristics and economic status of the affected communities.

(c) Historic and Cultural Resources: The site certificate holder shall determine any changes, attributable to facility operation, in the status of any resources described in the application.

(d) Meteorology: The site certificate holder shall monitor those parameters necessary to evaluate environmental impacts of mill operation including, but not limited to wind speed and direction.

(e) Hydrology: The site certificate holder shall monitor ground water and surface water sources to determine impacts of the facility on water sources.

(f) Geology: The site certificate holder shall identify any significant geological discoveries and their potential impacts on operation of the facility.

(g) Seismology: The site certificate holder shall identify nearby earthquakes by location and intensity.

(h) Ecology: The site certificate holder shall maintain a program to identify changes in the ecological baseline and determine the extent to which mill operation is responsible for those changes.

(i) Radiological: The site certificate holder shall conduct an operational monitoring program designed to identify impacts on the environment and to allow dose assessments of any affected populations.

(j) Chemical: The site certificate holder shall maintain a monitoring program to assess project related impacts of non-radiological materials on the environment including bioaccumulation or biological effects.

(4) The site certificate holder shall prepare an annual environmental report including data on all parts of the monitoring programs described in section (3),

except that the certificate holder may include the information in parts (a), (b), (c), (f) and (g) in the annual report at intervals not to exceed 5 years. The certificate holder shall submit the report to the Council within 90 days after the end of each reporting year, as defined in OAR 345-095-0080(4). The certificate holder shall include in the report: data on each part of the program; analysis of that data compared to baseline monitoring, effluent releases and projected impacts; calculated radiological impacts upon the maximum exposed member of the public and the population; review of the adequacy of the program based on experience gained; and recommendations and justification for any improvements to the monitoring program.

(5) During construction and operation of the facility, the certificate holder shall obtain and maintain control (through ownership, long term lease or other legal means) over all environmental monitoring and sampling sites sufficient to preclude the direct impact on such site of any non-facility related activities (such as logging, plowing, grazing, etc.) that could destroy the usefulness of the monitoring program. If loss of control or destruction of a sampling site occurs through no fault of the certificate holder, the certificate holder shall select a replacement sampling site and shall provide to the Council a thorough evaluation of the replacement site compared to the lost or destroyed sampling site. The certificate holder shall use the replacement site subject to Council approval.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.507

345-095-0115

Violations

If air or water pollution control mechanisms malfunction or other factors result in emissions or discharges in violation of applicable standards, the certificate holder shall take the following actions:

(1) For a violation of an emission standard or discharge limit administered by an agency other than the Council, the certificate holder shall submit to the Council copies of all notifications required by the agency at the same time the notifications are submitted to the agency.

(2) For a violation of an emission or discharge standard imposed by the Council, the site certificate holder shall:

(a) Notify the Department of Energy of the violation as soon as reasonably possible after the occurrence, giving all pertinent facts including the estimated duration of the breakdown.

(b) Promptly initiate and complete appropriate actions to correct the conditions that resulted in the violation.

(c) Cease or discontinue operations of those portions of facility operation contributing to the violation, if the violation is not otherwise corrected within 48 hours after it began, except as required under sections (3) and (4).

(d) Submit to the Council an initial written report of the failure or breakdown within ten days after the occurrence. When the condition has been corrected, the certificate holder shall submit a final written report to the Council describing the causes and the actions taken to prevent similar upsets or breakdown conditions. If more than 45 days elapse between the initial and final reports, the certificate holder shall submit monthly status reports.

(3) The certificate holder shall cease yellowcake drying and packaging operations immediately upon the failure of affected emission control equipment unless alternative licensed emission control equipment, adequate to provide equivalent control of releases, is available and operational.

(4) The certificate holder shall cease the generation of tailings as soon as possible following any dam failure or threatened failure to avoid uncontrolled tailings release inside or outside of the facility and, in the meantime, shall use an unaffected impoundment of sufficient size to contain all tailings generated in that period. The certificate holder shall not restart the generation of tailings without approval by the Council.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470

345-095-0117

Mill Decommissioning

Following the operational life of the facility, the certificate holder shall decontaminate the site, except for the tailings disposal area, to permit unrestricted use of the site. Reclamation of the tailings disposal area is subject to the requirements of OAR 345-095-0120.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.501

345-095-0118

Mine Reclamation

Following the operational life of the facility, the certificate holder shall reclaim the mine site by modifying overburden and waste dump slopes to grades favorable to reclamation and by implementing surface water management measures to prevent water collection or erosion in the area and to aid in revegetating the site.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470

345-095-0120

Tailings Disposal

The certificate holder shall reclaim the final disposal site for uranium mill tailings to meet the following requirements:

(1) Above grade tailings disposal systems must be constructed to include a secondary dam or dike capable of, and designed to, contain the maximum quantity of tailings which could be released in the case of primary containment failure. Where a multiple dam or dike system is used, secondary dams or dikes

must be provided to retain any tailings released in the failure of any section of the primary containment.

(2) Following abandonment and sufficient drying time to permit satisfactory reclamation, tailings must be covered by sufficient capping material and/or overburden, not less than three meters in thickness, to ensure that radon flux from the surface of the disposal area does not exceed two picocuries per square meter per second above background.

(3) External gamma radiation levels above background must not be statistically significant.

(4) The site must be covered with riprap and must be revegetated with plant life compatible with projected site uses.

(5) Following reclamation, the site certificate holder shall develop and maintain an environmental surveillance program, approved by the Council, to verify the adequacy of reclamation and revegetation methods in complying with requirements of this rule. The certificate holder shall continue to implement the surveillance program until the state or federal government has accepted title to the property and until the certificate holder has completed its financial obligations as required by OAR 345-095-0150.

(6) All tailings disposal sites must be lined with natural materials selected for their impermeability.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470

345-095-0150

Financial Assurance

(1) Before beginning construction of the uranium mill, the site certificate holder shall provide financial assurance, in a form and amount acceptable to the Council, sufficient to cover the cost of decommissioning the uranium mill and its associated facilities in accordance with OAR 345-095-0117, 345-095-0118, and 345-095-0120 and to provide long term monitoring and maintenance in an amount specified in the site certificate.

(2) When the site certificate holder has completed the decommissioning required in OAR 345-095-0117, OAR 345-095-0118 and OAR 345-095-0120 and the state or federal government has accepted title to the site, the site certificate may be terminated as described in OAR 345-027-0110.

(3) The adequacy of bonding or other funds shall be reviewed and adjusted by the Council annually following receipt of the site certificate holder's financial report described in OAR 345-095-0160.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.501

345-095-0160

Financial Report

The site certificate holder and any parties owning a controlling interest in the site certificate holder and having the power to control the activities of the site

certificate holder or successors in ownership shall provide to the Council an annual financial report that demonstrates financial qualifications to construct and operate the facility and that includes a discussion of the adequacy of, and any changes in, the financial assurance required under OAR 345-095-0150.

Stat. Auth.: ORS 469.556

Stats. Implemented: ORS 469.470 & ORS 469.501