ARTICLE 74:29

MINED LAND RECLAMATION

Chapter

CHAPTER 74:29:01

PERMIT APPLICATIONS -- FILING AND REVIEW

Section

74:29:01:01. Definitions. Terms defined in SDCL 45-6B-3 have the same meaning when used in this article. In addition, terms used in this article are defined as follows:

(1) "Abandoned well," a well whose use has been permanently discontinued or which is in such a state of disrepair that it cannot be used for its intended purpose or for observation purposes, or which is abandoned pursuant to SDCL 46-6-27;

(2) "Angle of repose," the maximum angle of slope, measured from the horizontal plane, at which loose cohesionless material will come to rest on a pile of similar material. The angle of repose commonly ranges between 33° and 37° on natural slopes and is rarely less than 30° or more than 39°;

(3) "Average commodity price," a price statistically representative of the prices quoted on a major recognized market over a specified period of time for a given commodity;

(4) "Background," the ambient radiation condition that exists as part of the natural environment at a particular location;

(5) "Bankfull," the mean average high-water stage;

(6) "Baseline," a premining condition, concentration, quantity, or quality that is set as a specific value or guideline against which future values are compared;

(7) "Baseline well," a well from which ground water is analyzed to define baseline water quality in the permit area (a regional baseline well) or in the production area (a production area baseline well);

(8) "Becquerel," a unit of radioactivity based on disintegrations (transformations) per unit of time. One becquerel (Bq) equals one disintegration per second. One curie equals $3.7x10^{10}$ disintegrations per second, which equals $3.7x10^{10}$ becquerels. A megabecquerel (MBq) is one million becquerels;

(9) "Beneficial use," a practical use of land which has economic or social value and which allows other sustainable uses;

(10) "Best practicable technology," a technology-based process justifiable in terms of existing performance and achievability in relation to health and safety which minimizes, to the extent safe and practicable, disturbances and adverse impacts of the operation on human or animal life, fish, wildlife, plant life, and related environmental values;

(11) "Buffer," a means used to separate, shield, screen, or lessen the effect of the mine operation on the surrounding area by reducing noise or dust, improving aesthetics, and protecting the public health, safety, and welfare;

(12) "Byproduct material," surface wastes produced by or resulting from uranium in situ leach mining extraction and concentration processes. Underground ore bodies deployed by in situ leach mining do not constitute byproduct material within this definition;

(13) "Carrying capacity," the maximum animal stocking rate possible without inducing damage to vegetation or related resources;

(14) "Casing," a tubular structure, generally of metal, concrete, or thermoplastic, which is installed in a well bore to maintain the well opening;

(15) "Catastrophic collapse," the sudden and utter failure of overlying strata caused by removal of underlying materials;

(16) "Cementing," the process of mixing and placing cement grout in a hole to prevent the vertical movement of fluids in the hole or the annulus;

(17) "Class III well," under the federal Underground Injection Control (UIC) program promulgated under Part C of the Safe Drinking Water Act, 42 U.S.C. 300 et seq (2003), a well that injects fluids for extraction of minerals, including solution mining of minerals. The term includes any well used in:

(a) Mining of sulfur by the Frasch process;

(b) In situ leach mining of uranium or other metals. This category includes only in situ production from ore bodies that have not been conventionally mined. Wells used for solution mining, such as stope leaching, are classified as Class V wells; or

(c) In situ mining of salts, trona, or potash;

(18) "Class V well," under the federal UIC program promulgated under Part C of the Safe Drinking Water Act, 42 U.S.C. 300 et seq (2003), a well not included in Class I, II, III, or IV. This includes a well not used to inject hazardous or radioactive waste, other industrial and municipal waste below the lowermost underground source of drinking water, fluids for the enhanced recovery of oil or natural gas, or for the storage of hydrocarbons;

(19) "Composite liner," a liner made of two components, typically a geomembrane in conjunction with a soil liner;

(20) "Concurrent reclamation," reclamation conducted during the course of mining;

(21) "Confining zone," a geological unit that is stratigraphically adjacent to one or more aquifers and that restricts the movement of ground water into and out of the aquifer or aquifers it confines;

(22) "Contaminant," any physical, chemical, biological, or radiological substance or matter in water, soil, or air that is potentially harmful to human health or the health of animals or plants;

(23) "Contiguous land," any land in immediate contact with and bounding the affected land within the permit area;

(24) "Control parameter," a chemical constituent of ground water monitored on a routine basis and used to detect or confirm the presence of recovery fluids in a designated monitor well;

(25) "Critical habitat," habitat that is present in minimal amounts and is the limiting factor that determines the potential for animal population maintenance or growth. The determination of "critical" is related to a specific animal population unit and is not related to the density of species compared to another population unit;

(26) "Curie," a special unit of radioactivity based on disintegrations (transformations) per unit of time. One curie (Ci) equals 3.7×10^{10} disintegrations per second, which equals 3.7×10^{10} becquerels. A microcurie is one-millionth (10^{-6}) of a curie, and a picocurie is one-trillionth (10^{-12}) of a curie;

(27) "Effluent," partially or completely treated or untreated liquid waste that is discharged to waters of the state or to the surface environment;

(28) "Ephemeral stream," a stream or reach of a stream that flows only in direct response to precipitation in the immediate watershed or to the melting of a cover of snow or ice;

(29) "Excursion," any unwanted and unauthorized movement of recovery fluid out of the production zone as a result of in situ leach mining activities;

(30) "Exempted aquifer," an aquifer or portion of an aquifer that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to ARSD 74:29:11:09;

(31) "Facility," for an in situ leach mine, all contiguous land, structures, and improvements on the land used for underground injection activities associated with injection wells;

(32) "Filing," notification of the applicant in writing by the department that the submitted application is procedurally complete; or receipt by the department of a request from the applicant that the application be considered filed following the initial seven-day deficiency review period, as specified by subsection 74:29:01:07(3)(b);

(33) "Final reclamation," reclamation performed during and following a mining operation to meet the requirements of the approved reclamation plan and attain the approved postmining land use on land affected by the mining operation that is

not planned to be disturbed again;

(34) "First operator," the operator presently holding the mining operation permit;

(35) "Fluid," any material or substance that flows or moves whether in a semisolid, liquid, sludge, gas, or other form or state;

(36) "Formation," a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity that is prevailingly, but not necessarily, tabular and is mapable on the earth's surface or traceable in the subsurface;

(37) "Formation fluid," fluid present in a formation under natural conditions as opposed to introduced fluids;

(38) "Geomembrane," a synthetic impermeable membrane used in contact with soil or other materials in geotechnical and civil engineering applications and for the containment of liquids. Geomembranes are made of various materials, with each type having different characteristics that affect installation procedures, lifespan, and performance;

(39) "Geonet," "drainage net," a synthetic planar structure that allows for fluid movement. A geonet or drainage net is used in contact with soil, rock, or other materials in geotechnical and civil engineering applications and as an alternative to aggregate drains in containment systems;

(40) "Geosynthetic clay liner," a factory-assembled hydraulic barrier consisting of clay supported by geosynthetic carriers, such as geomembranes or geotextiles, used in contact with soil or other materials in geotechnical and civil engineering applications;

(41) "Geotechnical analysis," a study of the engineering characteristics and properties of the site's soils, rocks, and other materials for suitability in construction;

(42) "Grab sample," an individual discrete sample collected over a period of time not exceeding 15 minutes;

(43) "Gray," a unit of absorbed radiation dose. One gray (Gy) is equal to an absorbed dose of 100 rads;

(44) "Ground water," water below the land surface that is in the zone of saturation;

(45) "Ground water restoration," for an in situ leach mine, the condition achieved when the quality of ground water affected by the injection of mining solution in production and nonproduction zones is returned to restoration table values;

(46) "Grout," a slurry that is used to form a permanent, impervious seal in the annular space or to fill and seal abandoned holes or wells;

(47) "Hazardous waste," as defined in SDCL subdivision 34A-11-2(4);

(48) "Injection well," a Class III well;

(49) "Injection zone," a geological formation, group of formations, or part of a formation receiving fluids through a well for the purposes of mineral recovery;

(50) "In situ leach mining," a method of in-place surface mining in which quantities of overburden are disturbed to install a conduit or well and the mineral is mined by injecting or recovering a liquid, solid, sludge, or gas that causes the leaching, dissolution, gasification, liquefaction, or extraction of the mineral. In situ leach mining does not include the primary or enhanced recovery of naturally-occurring oil and gas;

(51) "Interim reclamation," reclamation performed during a mining operation or between mining phases to stabilize affected land by regrading and revegetating to control erosion, improve aesthetics, and minimize hazards. It can be construed to be temporary reclamation for affected land that will be disturbed again;

(52) "Intermittent stream," a stream or reach of a stream that flows for at least some part of the year and obtains its flow from both surface runoff and groundwater discharge;

(53) "Land application," a process or activity involving the placement of process water, process contaminated water, wastewater, surface water, or semiliquid material on the ground surface for the purpose of disposal and pollutant removal;

(54) "Life form," the characteristic form or appearance of vegetative species at maturity, such as trees, shrubs, and herbs;

(55) "Major modification," a change in the approved operating or reclamation plan which might significantly increase adverse environmental effects;

(56) "Mechanical integrity," for an in situ leach mine, the condition of an injection well, when there is no significant leak in the casing, tubing, or packer, and there is no significant fluid movement into an unauthorized zone or underground source of drinking water through vertical channels adjacent to the injection well bore. The determination that there are no significant leaks or fluid movement is based on the results of the mechanical integrity testing;

(57) "Millsite," a structure or facility used in the beneficiation of a mined material from its natural occurrence in ore, including leach pads, vats, process ponds, recovery units, sorting bins, crushers, and gravity separation devices used for the milling of placer deposits;

(58) "Mineral reserve," a mineralized deposit that is well-defined by geologic mapping and drilling that can be shown to have production potential under a given set of economic circumstances; ore reserves; potential reserves;

(59) "Mining solution," for an in situ leach mine, the injected fluid containing the chemicals used to mobilize the ore minerals into solution;

(60) "Minor modification," a change, other than a technical revision, in the approved operating or reclamation plan which does not increase the potential for adverse environmental effects;

(61) "Monitor well," a well used for the sampling or measurement of a chemical or physical property of ground water;

(62) "Negative pressure gradient," for an in situ leach mine, the condition that results from the creation of a localized hydrological cone of depression or pressure sink within the production zone caused by the production of more fluid than was injected. This pressure gradient provides containment of the recovery fluid by causing natural ground water to move from the surrounding area toward the production zone;

(63) "Nonproduction zone," an aquifer that is above or below the active production zone in an in situ leach mining operation;

(64) "On/off load pad," a heap leach pad which is designed so that treated tailings can be removed to allow for the reuse of the pad for leaching additional ore;

(65) "Pathway and fate analysis," a study conducted to determine the mechanisms and routes by which contaminants may enter a specific environment, the specific environments potentially affected by the contaminants, and the final disposition and chemical form of the contaminants in those environments;

(66) "Perennial stream" a stream or reach of a stream that flows continuously during all of the calendar year as a result of groundwater discharge or surface runoff;

(67) "Permit amendment," a change to an approved mining operation permit that requires board action and approval;

(68) "Permit application," a mining operation permit application;

(69) "Permit area," the area, including the affected lands, within specified boundaries approved by the board;

(70) "Plugging," the process of filling a borehole or a well to restore hydrologic conditions and to prevent migration of ground water between formations;

(71) "Pore water," water that exists in the void space between soil or rock particles;

(72) "Postmining land use," the selected beneficial land use or uses upon which a mining operation reclamation plan is based, including forest planting, agriculture or horticulture, rangeland, wildlife habitat, recreation, homesite, industrial, and future mineral exploration and development;

(73) "Potential reserve," that part of the mineral resource, excluding the ore reserve, which has, at the time of determination, an average total cost of production not exceeding twice the average commodity price;

(74) "Pressure," the total force per unit area acting on a surface;

(75) "Process solution," solution used in the extraction of minerals from ore during the milling process;

(76) "Production," the removal or processing of at least 10 percent of the permitted annual ore or overburden production rate or the conduct of other activities, including reclamation, which significantly move the operation toward completion;

(77) "Production area," the plan view showing the area in which mineral extraction is taking place at an in situ leach mine operation;

(78) "Production well," for an in situ leach mine, a well or conduit through which a recovery fluid, mineral, or product is produced from the subsurface. If a well is used for both injection and recovery, it is considered an injection well for the purposes of this chapter until the operator has adequately demonstrated to the department that the well has been converted to uses other than injection;

(79) "Production zone," the geologic interval into which mining solutions are to be injected and recovery fluids extracted from an in situ leach mine operation;

(80) "Proper stocking," the placement on a given area of a number of animals that will either maintain or improve the range condition at the end of the planned grazing period;

(81) "Rad," an acronym for the term radiation absorbed dose. A special unit of absorbed radiation dose, one rad is equal to an absorbed dose of 100 ergs/gram or 0.01 gray;

(82) "Radioactive waste," any waste that contains radioactive material in concentrations that exceed those listed in 10 CFR part 20, appendix B, table II, column 2 (March 27, 2006);

(83) "Receiving strata," the geologic units within which the production zones are contained;

(84) "Reclaimed land surface," affected land that has been manipulated to achieve visually and functionally compatible contours and revegetated in accordance with the approved reclamation plan and that supports the intended postmining land use;

(85) "Reclamation type," postmining land use;

(86) "Recovery fluid," for an in situ leach mine, the fluid resulting from the injection of mining solution that has dissolved or mobilized ore minerals from the production zone for extraction and recovery;

(87) "Reference area," a land unit that is representative in terms of physiography, geology, soils, aspect, hydrology, vegetation, wildlife, and land use of the area affected by a mining operation;

(88) "Rem," an acronym for the term Roentgen equivalent in man. A special unit of radiation dose equivalent that is the amount of ionizing radiation required to produce the same biological effect as one rad of high-penetration x-rays, or one roentgen (R) of x-rays or gamma rays. One rem equals 0.01 sievert;

(89) "Restored aquifer," for an in situ leach mine, an aquifer whose local average water quality has, by natural or artificial processes, returned to at least restoration table values;

(90) "Restoration table," for an in situ leach mine, in the mine permit, a list of parameters with assigned ground water quality restoration values that are the compliance requirements for restoration of the production and nonproduction zones;

(91) "Riparian zone," the lands and water adjacent to the banks of a stream, pond, lake, or other source of water that support vegetation dependent on the water source;

(92) "Roentgen," a unit of radiation exposure. One roentgen (R) is the dose of ionizing radiation that will produce one electrostatic unit of electricity in one cubic centimeter of dry air. A microroentgen (μR) is one-millionth (10^{-6}) of a roentgen;

(93) "Satellite facility," a uranium recovery or ion exchange facility set up at a well field a remote distance from a central processing plant. The satellite facility extracts uranium from an in situ recovery fluid by loading it on an ion exchange resin. The loaded resin is then transported to a central processing plant where the uranium is removed from the resin and processed into yellowcake;

(94) "Sievert," a unit of ionizing radiation dose equivalent, obtained as a product of the absorbed dose in grays multiplied by a quality factor, indicating the biological effectiveness of the radiation. A millisievert (mSv) is one-thousandth (10^{-3}) of a sievert (Sv);

(95) "Slope," the average inclination of a surface measured from the horizontal;

(96) "Slope ratio," the ratio between the horizontal and vertical components of a slope face;

(97) "Solid waste," as defined in SDCL subdivision 34A-6-1.3(17);

(98) "Spoil," waste material removed or disturbed during the course of surface or underground mining;

(99) "Stratum," a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material;

(100) "Submission," the initial physical delivery of an application to the department;

(101) "Subsoil," that part of the soil immediately below the topsoil that may be capable of supporting vegetation;

(102) "Successor operator," the operator to whom a mining operation permit is being transferred;

(103) "Surface impoundment," a natural or artificial closed basin that holds water, slurry, or other liquid or semiliquid material. A permanent surface impoundment is a structure that will remain after final bond release;

(104) "Tailings impoundment," a structure designed to hold tailings, including leach pads and dumps containing treated spent ore;

(105) "Technical revision," a change in the operating plan, reclamation plan, or permit which the board determines has only a minimal effect on the environment or on reclamation;

(106) "Topsoil," soil material at the surface of the earth that has been modified and acted upon by physical, chemical, and biological processes so that it will easily produce and sustain growths of vegetation specified in an approved reclamation plan;

(107) "Treatment," any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of a waste for the purpose of disposal or final reclamation;

(108) "Treatment solution," solution applied to tailings for the purpose of treatment;

(109) "Unauthorized zone," for an in situ leach mine, the area outside the production zone that is not permitted for the injection of mining solution or extraction of recovery fluid, or authorized for any excursion of recovery fluid out of the production zone;

(110) "Underground source of drinking water," an aquifer or part of an aquifer that meets any one of the following criteria. The aquifer or part of an aquifer:

(a) Supplies any public water system;

(b) Contains a sufficient quantity of ground water to supply a public water system and either currently supplies drinking water for human consumption or contains fewer than 10,000 mg/l total dissolved solids; or

(c) Is not an exempted aquifer;

(111) "Upper limit value," a value greater than the maximum value of a chemical or physical parameter that can be attributed to natural fluctuations and analytical variability. Upper limit values are determined from the baseline sampling and agreed upon by the department and the operator prior to initiation of mining. Upper limit values are used to determine when there is movement of recovery fluid out of authorized areas or unapproved changes to a chemical or physical parameter. For certain parameters, such as pH, an upper limit value may be defined as an acceptable range of values;

(112) "Vegetative type," a characteristic group of plant species that have similar ecological requirements and tolerances;

(113) "Verifying analysis," a second sampling and analysis of control parameters for the purpose of confirming a routine sample analysis that indicates an increase in a control parameter to a level exceeding the upper limit value;

(114) "Visual screening," means used to buffer the visual effects of a mining operation, including existing landforms and vegetation, planting vegetation, constructing fences, and painting buildings, equipment, and facilities; and

(115) "Visually and functionally compatible contours," the surface configuration that is achieved by grading the affected land so that the reclaimed land surface is stable, is similar to the surrounding topography, serves the postmining land use function, minimizes surface and groundwater pollution, and is functionally compatible with the surrounding surface and groundwater hydrology.

(116) "Well," an artificial excavation or opening in the ground with a depth greater than the largest surface dimension. A well is made by digging, boring, drilling, jetting, or another artificial method, and is often walled or cased to prevent the sides from caving; and

(117) "Yellowcake," a processed oxide of uranium, U_3O_8, that is extracted and concentrated from uranium ore.

Source: 14 SDR 111, effective March 3, 1988; 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-3(6), 45-6B-5, 45-6B-18, 45-6B-37 to 45-6B-47.

74:29:01:02. Computation of time. In computing any time period prescribed by this article, the day of the act from which the designated period of time begins to run shall not be included. The last day of the period shall be included unless it is a Saturday, Sunday, or legal holiday, in which case the period runs until the end of the next day which is not a Saturday, Sunday, or legal holiday. When the period of time prescribed or allowed is less than seven days, intermediate Saturdays, Sundays, and legal holidays shall be excluded in the computation.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-15, 45-6B-17, 45-6B-28, 45-6B-30.

74:29:01:03. Presubmission meetings. Applicants may schedule meetings with the department and other review agencies to discuss general and technical application requirements in advance of permit application preparation.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5.

74:29:01:04. Submission of mining permit application. The following procedures apply to the submission of a permit application:

(1) The applicant shall transmit to the department proof of submission of a copy of the application to the register of deeds in the county in which the affected land is located;

(2) To facilitate departmental review of an application, the applicant may submit three copies of the application; and

(3) To facilitate agency review of an application, the applicant may submit copies of the application by certified mail to the following agencies at the same time the application is submitted to the department:

(a) The department of game, fish and parks;
(b) The department of education and cultural affairs;
(c) The U.S. forest service, if lands under its jurisdiction are included in the proposed operation;
(d) The local conservation district;
(e) The U.S. bureau of land management, if lands under its jurisdiction are included in the proposed operation; and
(f) The department of health.

A copy of the return receipts shall be submitted to the department.

Source: 14 SDR 111, effective March 3, 1988; SL 2021, ch 1, §§ 8, 19, effective April 19, 2021.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-5, 45-6B-11.

74:29:01:05. Interested persons mailing list. Within 10 days after the submission of a permit application, the department shall notify individuals on the interested persons mailing list and the appropriate county commission of the application submission. An individual wishing to be included on the interested persons mailing list must provide the department with a name and mailing address.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-15 to 45-6B-17, 45-6B-19.

74:29:01:06. Request for copy of mining operation permit application. A person may request a copy of a permit application before or after the determination of its completeness by contacting the department. The department shall supply the requesting party a copy of the application exclusive of confidential information as provided in SDCL 45-6B-19.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-15 to 45-6B-17, 45-6B-19.

74:29:01:07. Determination of procedural completeness. The department shall determine the procedural completeness of a permit application as follows:

(1) Within 30 days after submission of an application, the department shall notify the applicant in writing whether the application is procedurally complete;

(2) An application is considered filed on the final day of the initial 30-day review period if it is procedurally complete; if the application is procedurally incomplete, the department shall identify in the notification the items required to complete the application. The department shall determine the adequacy of the applicant's response to the notice of deficiencies and shall notify the applicant in writing of the adequacy of the response within 7 days after receipt of the response. If the response is adequate, the application is considered filed;

(3) If the response is inadequate, the applicant may do one of the following:

(a) Submit additional information necessary to complete the application;

(b) Request in writing that the application be considered filed; or

(c) Withdraw the application.

If additional information is submitted to complete the application, the procedure in subdivision (2) of this section shall be followed.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-11, 45-6B-15, 45-6B-16.

Cross-Reference: Permit applications -- Completeness requirements, ch 74:29:02.

74:29:01:08. Notice of filing. When the permit application is procedurally complete and is considered filed, the department shall provide the applicant with the notice of filing prescribed in SDCL 45-6B-16. Before the notice of filing is published, the applicant must file all additional information contained in its response to completeness deficiencies with the office of the register of deeds in the county in which the affected land is located. Proof of the filing with the register of deeds and an affidavit of publication of the notice of filing shall be transmitted to the department.

The department, at its own discretion and cost, may publish a notice of filing in newspapers throughout the state other than those prescribed by SDCL 45-6B-16.

The department shall provide a copy of the notice of filing to the board, to individuals on the interested persons mailing list, and to the county commission of a county containing affected land within 10 days after the filing of an application for a large-scale operation or 5 days after the filing of an application for a small-scale operation.

The notice of filing shall state the deadline for intervention in the application proceeding. The notice of filing shall include a statement that a permit will be issued if the application is uncontested and the department's recommendation is for approval or conditional approval. The approximate date of the issuance of the department's recommendation shall be included in the notice of filing.

Source: 14 SDR 111, effective March 3, 1988; 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-59, 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-11, 45-6B-15, 45-6B-16, 45-6B-29.

Cross-Reference: Interested persons mailing list, § 74:29:01:05.

74:29:01:09. Intervention in application proceeding. A person may request permission to intervene in the permit application proceeding by filing a petition pursuant to the provisions of § 74:09:01:01 within 20 days for large-scale operations or 7 days for small-scale operations after the date of the last publication of the notice of filing. Upon the filing of a petition, the contested case procedures of chapter 74:09:01 apply to the application proceeding unless they are specifically altered in this article.

Source: 14 SDR 111, effective March 3, 1988; 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-59, 45-6B-81.

Law Implemented: SDCL 45-6B-16, 45-6B-29, 45-6B-30.

74:29:01:10. Summary document. For large-scale mining operation permit applications, the department, in consultation with the applicant, shall prepare a summary document describing the major elements of the proposed mining operation and identifying the critical environmental issues involved. The summary document and any responsive comments submitted by the applicant shall be made available to intervening parties and the public upon request.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-29, 45-6B-30.

74:29:01:11. Information added after filing. Additional information submitted to the department by the applicant to supplement, correct, amend, or clarify an application following filing must also be filed with the register of deeds in the county in which the affected land is located and sent by certified mail to the applicable review agencies by the applicant. The filing and mailing must occur within 35 days after the filing of a large-scale application or 20 days after the filing of a small-scale application, and at least 20 days before the hearing date. The applicant must transmit proof of filing and mailing to the department.

The department shall provide a list of the additional materials submitted by the applicant after the filing of the application to the applicable county commission, interested persons, and intervening parties. The list shall be provided within 35 days after the filing of a large-scale application or 20 days after the filing of a small-scale application and at least

20 days before the hearing date. The department shall provide copies of any item, with the exception of confidential information pursuant to SDCL 45-6B-19, to a person upon request.

An agency must submit comments on additional information to the department prior to the issuance of the department's recommendation. An intervening party must submit comments on additional information to the department at least 15 days before the hearing date. The department shall transmit copies of such comments to the applicant.

Source: 14 SDR 111, effective March 3, 1988; 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-59, 45-6B-81.

Law Implemented: SDCL 45-6B-11, 45-6B-15, 45-6B-30, 45-6B-31.

74:29:01:12. Notice to agencies of filing. Within 10 days after the filing of a large-scale permit application or 5 days after the filing of a small-scale permit application, the department shall send copies of the application to the departments of education and cultural affairs, game, fish and parks, and health pursuant to SDCL 45-6B-11. If copies of the application have already been provided to these agencies pursuant to subdivision 74:29:01:04(3), the department shall notify the agencies that the application has been filed and that they have 30 days for a large-scale operation or 20 days for a small-scale operation to respond pursuant to SDCL 45-6B-11. Responses to completeness deficiencies submitted to the department by the applicant shall be provided to the agencies with this notification, unless already provided.

Source: 14 SDR 111, effective March 3, 1988; 20 SDR 59, effective November 1, 1993; SL 2021, ch 1, §§ 8, 19, effective April 19, 2021.

General Authority: SDCL 45-6B-59, 45-6B-81.

Law Implemented: SDCL 45-6B-11.

74:29:01:13. Hearing date. The department shall schedule a hearing date pursuant to SDCL 45-6B-30 or 45-6B-59 within 10 days after the filing of a permit application.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-16, 45-6B-30, 45-6B-59.

74:29:01:14. Notice of hearing. In addition to the notice of hearing requirements of SDCL 45-6B-30 and 45-6B-59, the department shall mail copies of the notice of hearing to the county commission of a county containing affected land and individuals on the interested persons mailing list. This mailing shall occur at the same time the notice of hearing is sent for publication to the newspaper in the locality of the mining operation.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-30, 45-6B-59.

74:29:01:15. Department recommendation. The department shall make a recommendation on a permit application 30 days before the hearing date for large-scale operations or 15 days before the hearing date for small-scale operations. The recommendation shall include proposed permit conditions and reasons for approval or denial of the application. A copy of the recommendation shall be transmitted by the department to the applicant, the county commission of a county containing affected land, interested persons, intervening parties, and review agencies.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-30, 45-6B-59.

74:29:01:16. Permit changes by applicant prohibited immediately prior to hearing. During the 20-day period immediately preceding a hearing, the applicant may not change or amend a permit application unless the change or amendment is stipulated by all parties to the pending hearing proceeding.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-30, 45-6B-59.

74:29:01:17. Permit area boundaries. In determining the permit area boundary, the board shall consider the following:

(1) The county conditional use permit area boundary;

(2) The legal right of the applicant to conduct a mining operation within the proposed permit area boundary;

(3) The location of the proposed permit boundary with respect to special or unique land pursuant to § 74:29:07:29; and

(4) The ratio of the proposed permit area to the proposed affected land.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3, 45-6B-5, 45-6B-6.

74:29:01:18. Recommendation uncontested -- Notice of decision -- Recommendation contested. The department shall submit its recommendation to the board in accordance with § 74:29:01:15. If, within seven days after the issuance of the recommendation, the board, the applicant, or any person does not contest the recommendation, the recommendation is the final determination on the application.

The department shall transmit a notice of decision to the applicant, individuals on the interested persons mailing list, and the county commission of the county containing affected land. The notice shall approve, conditionally approve, or deny

the permit application as specified in the department's recommendation and shall contain any conditions or restrictions imposed by the department and other review agencies.

If a petition contesting the recommendation is filed within the seven-day period, the contested case procedures of chapter 74:09:01 apply to the application proceeding unless they are specifically altered in this article. The department shall schedule a hearing before the board. The department shall mail a copy of the petition and a notice of hearing to the applicant and other parties.

Source: 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-81, 45-6B-88.

Law Implemented: SDCL 45-6B-29, 45-6B-30, 45-6B-31, 45-6B-32, 45-6B-59, 45-6B-88.

Cross-Reference: Department recommendation, § 74:29:01:15.

74:29:01:19. Report required following issuance of uncontested permit. In accordance with SDCL 1-40-29, following the issuance of any uncontested permit under this chapter, the secretary shall give the board a report containing the following information:

(1) The notice of decision pursuant to § 74:29:01:18;

(2) The name, address, and telephone number of the operator;

(3) The legal description of the affected land;

(4) The mineral or minerals to be extracted;

(5) A narrative description of the permit or the summary document prepared pursuant to § 74:29:01:10;

(6) The proposed duration of the operation;

(7) The affected land acreage;

(8) The surface mining disturbed land acreage; and

(9) The postmining land use of the area.

Source: 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-81, 45-6B-88.

Law Implemented: SDCL 45-6B-88.

CHAPTER 74:29:02

PERMIT APPLICATIONS -- COMPLETENESS REQUIREMENTS

Section

Cross-Reference: Determination of procedural completeness, § 74:29:01:07.

74:29:02:01. Procedural completeness requirements. For a large-scale mining operation, a procedurally complete permit application must contain all information necessary to address SDCL 45-6B-4 to 45-6B-10, inclusive; 45-6B-14; 45-6B-15; 45-6B-32 to 45-6B-33.2, inclusive; 45-6B-37 to 45-6B-46, inclusive; 45-6B-81; 45-6B-91; and 45-6B-92. For a small-scale mining operation, a procedurally complete permit application must contain all information necessary to address SDCL 45-6B-4; 45-6B-8; 45-6B-9; 45-6B-15; 45-6B-32; 45-6B-33; 45-6B-33.2; 45-6B-37 to 45-6B-46, inclusive; 45-6B-53 to 45-6B-55, inclusive; 45-6B-81; 45-6B-91; and 45-6B-92. The applicant must indicate which sections of the permit application fulfill the statutory application requirements and describe how the information meets those requirements.

Source: 14 SDR 111, effective March 3, 1988; 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-4 to 45-6B-10, 45-6B-14, 45-6B-15, 45-6B-32 to 45-6B-33.2, 45-6B-37 to 45-6B-46, 45-6B-53 to 45-6B-55, 45-6B-81, 45-6B-91, 45-6B-92.

74:29:02:02. Local zoning requirements. For SDCL 45-6B-4, a permit application is not considered procedurally complete until all county or city zoning ordinances and requirements have been met or until the applicant provides proof that the operation is in substantial compliance with the procedure for obtaining necessary county or city permits.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-4.

74:29:02:03. Surface and mineral owners. For SDCL 45-6B-6(2) and (3), the name of the surface owner of the affected land, the owner of the mineral to be mined, and a map clearly depicting all surface and mineral owners of the affected land must be included for the permit application to be considered procedurally complete.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-6.

74:29:02:04. Mining and milling methods. For SDCL 45-6B-6(8), a permit application is considered procedurally complete if the following items are included:

(1) A narrative description of the mining and milling techniques to be employed;

(2) A narrative description of and plan view maps depicting the premining contours and proposed postmining topography;

(3) A narrative description of the proposed depth and direction of mining and representative cross-sections depicting the premining and proposed postmining land surface;

(4) A map depicting the proposed locations of tailings dams, waste dumps, ore stockpiles, or other mine spoil material;

(5) A stability analysis for all critical earth structures; and

(6) A description of the proposed blast procedures and a proposed program for mitigating resulting fugitive dust, noise, and potential structural or stability damage outside the permit area.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-6.

74:29:02:05. Timetable. For SDCL 45-6B-6(10), a permit application is considered procedurally complete if the timetable includes a narrative description of existing plans for future exploration and mining in the area of the proposed operation.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-6.

74:29:02:06. Historic or archaeologic significance. For SDCL 45-6B-7(5), in evaluating the permit area for characteristics of historic or archaeologic significance of the affected land, the operator shall consult the state archaeologist's office. If the state archaeologist's office determines that the proposed operation may impact significant historic or archaeologic sites, a cultural resources management survey may be required. If sites are found that are eligible for the state or national historic register, a plan for mitigating the effects of the proposed operation shall be prepared in cooperation with the state archaeologist's office and submitted as part of the application.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7.

74:29:02:07. Water quality and water level data. For SDCL 45-6B-7(9), baseline water quality and water level data must be submitted with the application. The data must represent at least a one-year period during which data is collected

monthly unless the applicant can demonstrate to the satisfaction of the department that less frequent sampling or sampling for a shorter period for specific locations is hydrologically justifiable. In no case may baseline sampling be less frequent than quarterly.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7.

74:29:02:08. Reclamation costs. For SDCL 45-6B-7(12), estimated reclamation costs must be submitted for each component of the affected land; for example, the mine pit, waste dumps, heaps, and ponds. A cost analysis for each activity to be conducted in implementing reclamation of the components of the proposed operation must be included. The method for calculating estimated reclamation costs must be described in detail. If an applicant intends to propose phased bonding based on the estimated land to be affected at any one time, a similar analysis is required for each phase.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7.

74:29:02:09. Permit area boundary -- Map requirements. For SDCL 45-6B-10, the map must clearly depict the applicant's proposed permit area boundary.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-10.

Cross-Reference: Map requirements for large-scale mining operations, § 74:29:02:12.

74:29:02:10. Revegetation. For SDCL 45-6B-39, the application must address revegetation as described in § 74:29:07:06.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39.

74:29:02:11. Effect on hydrologic balance and on surface water and groundwater. For SDCL 45-6B-41, the following information may be required to address the potential impact to the hydrologic balance of the affected land and to determine if a groundwater discharge plan is required pursuant to chapter 74:54:02 or a surface water discharge permit (SWD) is required pursuant to chapter 74:52:01:

(1) A baseline surface and groundwater report, including a description of the aquifers potentially affected by the operation, the geology of the area of affected land, surface and groundwater quality and quantity, groundwater level data, surface water discharge rates, ground water gradients, groundwater recharge and discharge areas, meteorologic data, and other information necessary to characterize the hydrologic system;

(2) Representative geologic cross-sections;

(3) A surface water inventory map on a topographic base map, depicting all identifiable surface water resources potentially affected by the operation, including seeps, springs, rivers, streams, lakes, ponds, wetlands, and dams;

(4) A well location inventory map depicting any identifiable wells, excluding exploration test holes, located within one mile of the boundary of the permit area;

(5) A potentiometric surface map on a topographic base map;

(6) A geochemical characterization of ore and waste rock. At a minimum, the EP Toxicity test shall be used;

(7) A surface and groundwater monitoring plan for the life of the mine;

(8) A meteorologic monitoring plan;

(9) A drainage, erosion, and sedimentation control plan;

(10) For operations using chemicals in the milling process, a description of the proposed methods to monitor and collect leakage or spills and a spill contingency plan;

(11) An estimate of the project water requirements including flow rates and volumes for each phase of the operation. This estimate must include a description of the potential affect on the quality and quantity of the proposed water source;

(12) A description of the chemical characteristics of process solutions and the chemicals used to process ore, including a range of operating concentrations; and

(13) Preliminary engineering plans and specifications for pollution control facilities and a quality assurance/quality control plan for the construction of such facilities.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-41.

Reference: Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW846 February 1987, stock number 955-001-00000-1. Published by U.S. Environmental Protection Agency. Copies are available from the subscription desk, U.S. Government Printing Office, Washington, D.C. 20402-9325. The cost is $110.

74:29:02:12. Map requirements for large-scale mining operations. All maps submitted with large-scale permit applications must be legible and drawn to a scale which clearly shows the elements being delineated. Maps must conform to the following criteria:

(1) Show the name of the applicant;

(2) Be prepared and signed by a person qualified in the preparation of maps;

(3) Give the date prepared;

(4) Identify the requirement the map is intended to fulfill;

(5) Include a legend indicating the items shown on that particular map;

(6) Clearly indicate township, range, and section boundaries; and

(7) Identify scale.

Base maps must identify all major topographic features and landmarks, streams, towns, subdivisions, historic or archaeologic sites, utilities, roads, and buildings. In lieu of delineating these items on the map, the use of a standard U.S.

geological survey seven-and-one-half-minute quadrangle map may be used as a base map.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-10.

CHAPTER 74:29:03

PERMIT AMENDMENTS

Section

74:29:03:01. Permit amendment required. A permit amendment is required for an increase of more than 20 percent of contiguous affected land within the permit area or for a minor modification of the terms and conditions of the operating or reclamation plans. Minor modifications include the following:

(1) An increase in milling or mining capacity;

(2) A change in the reclamation plan timetable; or

(3) The addition of ancillary facilities of a minor nature.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18.

74:29:03:02. New permit application required. A new permit application is required for major modifications. Major modifications include the following:

(1) The addition of proposed affected land not within the approved permit area;

(2) The expansion of the boundaries of the permit area;

(3) A change in the overall postmining land use of the affected land;

(4) A change in the permit which may adversely affect surface or groundwater; or

(5) The initiation of milling capabilities, excluding crushers.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18.

74:29:03:03. Contents of permit amendment application. An operator desiring to amend a mining permit must file an amendment application with the department. The application must include the following:

(1) The operator's name;

(2) The permit number;

(3) A narrative description of the amendment being proposed;

(4) The legal description of land affected by the amendment;

(5) A map in compliance with SDCL 45-6B-10 and § 74:29:02:12, showing the land affected by the amendment;

(6) The estimated cost of implementing and completing the reclamation of land affected by the amendment;

(7) A description of the reclamation being proposed for the land affected by the amendment;

(8) The name and address of the surface owner of land affected by the amendment;

(9) The name and address of the mineral owner of land affected by the amendment;

(10) An instrument of consultation with the surface owner as required by SDCL 45-6B-12 and proof of consultation with adjacent landowners as required by SDCL 45-6B-44 for the land affected by the amendment;

(11) Proof of consultation with the department of game, fish and parks and the local conservation district, including any additional surveys and requirements considered necessary by those agencies;

(12) Proof of compliance with all county or city zoning ordinances and requirements or proof that the amendment application is in substantial compliance with the procedure for obtaining any necessary county or city permits;

(13) A postmining reclamation map as required by SDCL 45-6B-7(8);

(14) The effect the amendment has on the timetable and duration of the mining operation; and

(15) Baseline data and maps pursuant to the requirements of § 74:29:03:07.

The applicant need not submit any information which would duplicate that which has previously been filed with the department, but shall reference the section, paragraph, and page of the permit or other applicable correspondence for that information.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18.

74:29:03:04. Additional surety required. If a permit amendment application or technical revision causes the cost of reclamation to exceed the amount of the reclamation surety posted for the existing permit, the operator must submit a surety in an amount equal to the additional cost of reclamation before board approval of the amendment application or approval by the department of the technical revision.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18, 45-6B-26, 45-6B-27.

74:29:03:05. Procedure for submission of permit amendment application. The following procedures apply to the submission of a permit amendment application:

(1) Upon submission of a permit amendment application to the department, the applicant shall submit a copy of the application to the office of the register of deeds in the county in which the affected land is located. Proof of submission to the register of deeds shall be transmitted to the department;

(2) To facilitate agency review of a permit amendment application, the applicant may submit copies of the amendment application by certified mail to the following agencies at the same time the application is submitted to the department:

(a) The department of game, fish and parks;
(b) The department of education and cultural affairs;
(c) The U.S. forest service, if lands under its jurisdiction are included in the amendment;
(d) The local conservation district;
(e) The U.S. bureau of land management, if lands under its jurisdiction are included in the amendment; and
(f) The department of health.

A copy of the return receipts shall be submitted to the department.

(3) Within 10 days after the submission of a permit amendment application, the department shall notify individuals on the interested persons mailing list and the county commission of a county containing affected land.

Source: 14 SDR 111, effective March 3, 1988; SL 2021, ch 1, §§ 8, 19, effective April 19, 2021.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-5, 45-6B-11, 45-6B-15 to 45-6B-18.

Cross-Reference: Interested persons mailing list, § 74:29:01:05.

74:29:03:06. Request for copy of permit amendment application. A person may request a copy of a permit amendment application by contacting the department. The department shall supply the requesting party with a copy of the amendment application.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-11, 45-6B-15 to 45-6B-18.

Cross-Reference: Confidential information in application protected, SDCL 45-6B-19.

74:29:03:07. Procedural completeness requirements. The procedural completeness requirements for a permit amendment application must conform to the provisions of chapter 74:29:02, as applicable.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18.

74:29:03:08. Determination of procedural completeness -- Filing additional completeness information with county register of deeds. The department shall determine the procedural completeness of a permit amendment application as provided in § 74:29:01:07. The applicant must fill its response to completeness deficiencies with the office of the register of deeds in the county in which the affected land is located within 10 days following the date of amendment application filing. Proof of the filing with the register of deeds shall be transmitted to the department.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-11, 45-6B-18.

74:29:03:09. Summary document. For large-scale mining operation permit amendment applications, the department in consultation with the applicant shall prepare a summary document describing the major elements of the amendment application and identifying the critical environmental issues involved. The summary document and any responsive comments submitted by the applicant shall be made available to intervening parties and the public upon request.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18, 45-6B-29 to 45-6B-31.

74:29:03:10. Information added after filing. Additional information submitted to the department by the applicant to supplement, correct, amend, or clarify a permit amendment application following filing must also be filed with the register of deeds in the county in which the affected land is located and sent by certified mail to the applicable review agencies by the applicant. The filing and mailing must occur within 10 days after the initial publication of the department's recommendation. Proof of filing and mailing shall be transmitted to the department.

The department shall maintain a list of information submitted by the applicant regarding an amendment application and shall provide a copy of the list to intervening parties and, upon request, to other persons.

Comments on additional information by an agency or intervening party must be submitted to the department by the final day of the 15-day public comment period. The department shall transmit copies of such comments to the applicant.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-11, 45-6B-15, 45-6B-18, 45-6B-30, 45-6B-31.

Cross-Reference: Publication of notice of departmental recommendation -- Contents of notice, § 74:29:03:12.

74:29:03:11. Notice to agencies of permit amendment application. Within 10 days after the filing of a permit amendment application, the department shall send copies of the application to the departments of education and cultural affairs, game, fish and parks, and health. If copies of the amendment application have already been provided to these agencies pursuant to subdivision 74:29:03:05(2), the department shall notify the agencies that the amendment application has been filed and that they have 30 days to respond. Responses to completeness deficiencies submitted to the department by the applicant shall be provided to the agencies with this notification, unless already provided.

Source: 14 SDR 111, effective March 3, 1988; SL 2021, ch 1, §§ 8, 19, effective April 19, 2021.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-11, 45-6B-18.

74:29:03:12. Publication of notice of departmental recommendation -- Contents of notice. The department shall publish a notice of departmental recommendation in a newspaper of general circulation in the locality of the mining operation once a week for two consecutive weeks, beginning not more than 45 days after filing. The notice must contain the following:

(1) The identity and address of the applicant;

(2) The applicant's registered agent, if applicable;

(3) The location of the mining operation;

(4) The primary mineral being mined;

(5) A brief description of the amendment application;

(6) The number of the permit being amended;

(7) The selected postmining land use of the affected land;

(8) The location where additional information about the permit amendment application may be obtained;

(9) The department's recommendation of board action on the amended application; and

(10) A statement indicating that petitions to initiate a contested case hearing pursuant to chapter 74:09:01 must be received by the department no later than 15 days following the final publication of the notice or the amendment application will be issued pursuant to the department's recommendation.

A copy of the notice of departmental recommendation shall be mailed by the department to the applicant at the same time it is mailed to the newspaper for publication.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-16, 45-6B-18.

74:29:03:13. Notice of departmental recommendation to others. The applicant shall mail a copy of the notice of departmental recommendation immediately after the first publication to all owners and lessees of severed surface estates affected by the amendment application. Proof of the mailing shall be transmitted to the department. The department shall provide copies of the notice to individuals on the interested persons mailing list and to the county commission of a county containing affected land within 10 days after the issuance of the departmental recommendation.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-17, 45-6B-18.

74:29:03:14. Intervention -- Petition to initiate contested case hearing -- Notice of hearing. Any interested person, the applicant, or the department may intervene in a permit amendment application proceeding by filing a petition to initiate a contested case hearing before the board. The petition must be filed with the department no later than 15 days following final publication of the notice of departmental recommendation. A petition to initiate a contested case hearing must comply with the requirements of § 74:09:01:01.

If a petition for a contested case hearing is filed, the contested case procedures of chapter 74:09:01 apply to the proceeding unless they are specifically altered by this article. The department shall schedule a hearing before the board. The hearing must be held within 50 days after final publication of the notice of departmental recommendation. The department shall mail a copy of the petition and a notice of hearing to the applicant and other parties.

Source: 14 SDR 111, effective March 3, 1988; 20 SDR 59, effective November 1, 1993.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 1-26-17, 1-26-27, 45-6B-16, 45-6B-18, 45-6B-29 to 45-6B-31.

74:29:03:15. Notice of decision to applicant in absence of contested case. If a petition to initiate a contested case is not filed, the department shall transmit a notice of decision to the applicant, individuals on the interested persons mailing list, and the county commission of the county containing affected land immediately following the 15-day intervention period provided for in § 74:29:03:14. The notice shall approve, conditionally approve, or deny the permit amendment application as specified in the department's recommendation and shall contain any conditions or restrictions imposed by the department and other review agencies.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18.

Cross-Reference: Interested persons mailing list, § 74:29:01:05.

74:29:03:16. Technical revisions to mining operation permits. The board, through permit conditions, may authorize the department to approve proposed technical revisions to a mining operation without the requirement of permit amendment. Such technical revisions include the following:

(1) Monitoring plans or parameters;

(2) Plans and specifications for permitted facilities;

(3) Seeding mixtures or rates;

(4) Relocation of proposed roads within permitted affected land;

(5) Relocation of chemical or petroleum product storage areas;

(6) Modification or relocation of erosion, sedimentation, or drainage control;

(7) Compliance limits for chemical parameters;

(8) Quality control and quality assurance plans;

(9) Topsoil stripping or storage; and

(10) Adding contiguous affected land within the permit area when the total of such additions does not exceed 20 percent of the originally permitted affected land area.

Technical revisions must comply with § 74:29:03:03, as applicable, and must be submitted to the department in writing. The department shall either approve, disapprove, conditionally approve, or request additional information within 30 days after receipt.

The applicant or an interested person may appeal the decision of the department to the board by petitioning for a contested case hearing pursuant to chapter 74:09:01.

All technical revisions authorized by the department shall be recorded on a list which is kept updated and which is readily available for public inspection. A copy of the list shall be provided to anyone upon request.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-18.

74:29:03:17. Use of amendments to avoid filing permit application. Operators must file a new permit application to change an approved operating or reclamation plan if the permit amendment process is being used to avoid the application and processing requirements of a new permit.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-18.

CHAPTER 74:29:04

PERMIT TRANSFERS

Section

74:29:04:01. Notice of transfer. The successor operator shall file a notice of transfer with the department. The notice shall include the following:

(1) A completed permit transfer application form provided by the department pursuant to § 74:29:04:02;

(2) The fee of $100 required by SDCL 45-6B-47; and

(3) A replacement surety.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-47.

74:29:04:02. Contents of notice of permit transfer. The application form for a permit transfer must contain the following information:

(1) The number of the mining permit to be transferred;

(2) The legal description of the affected land;

(3) The names, addresses, and telephone numbers of the first operator and the successor operator;

(4) The name and address of the surface owner;

(5) The name and address of the mineral owner;

(6) The name, address, and telephone number of the successor operator's registered agent if the successor operator is an out-of-state corporation;

(7) A statement that the first operator understands that the transfer releases the first operator of liability with regard to reclamation and that the surety can be released only upon approval of the permit transfer by the board;

(8) A statement that the successor operator accepts all responsibility and liability for the mining operation and the reclamation of all land affected by the mining operation, as described in the first operator's permit, that the successor operator has notified the surface and mineral owners of the pending transfer, and that the successor operator will conduct activities pursuant to the permit conditions; and

(9) Signatures of the first and successor operators witnessed by a notary public.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-47.

74:29:04:03. Departmental review of notice of transfer. The department shall review the notice of transfer and notify the successor operator of deficiencies within 30 days after submission.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-47.

74:29:04:04. Recommendation on permit transfer. The department shall publish a recommendation on the permit transfer pursuant to publication requirements of SDCL 45-6B-30 prior to board action on the transfer.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-47.

74:29:04:05. Applicability of transferred permit. A transferred permit authorizes only those activities approved in the operating and reclamation plan, permit conditions, and approved permit amendments. Any changes in the permit, including adding contiguous land, minor modifications, major modifications, or technical revisions, are subject to the requirements of chapter 74:29:03.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-47.

74:29:04:06. Surety. The board shall not release the surety of the first operator until the successor operator submits a replacement surety and the permit transfer application has been approved.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-25, 45-6B-47.

74:29:04:07. Notice to county commissioners of board action on permit transfer. The board shall transmit notice of board action on a permit transfer to the board of county commissioners in the county containing affected land within 30 days after final action.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-34, 45-6B-47.

CHAPTER 74:29:05

RECLAMATION OF MILLSITES

Section

74:29:05:01. Reclamation of millsites. Reclamation of any millsite constructed in conjunction with a mining operation must be addressed in the permit application.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-6(8).

74:29:05:02. Choice of reclamation. The type of reclamation for the millsite shall be chosen in accordance with SDCL 45-6B-45 and chapter 74:29:06. Reclamation of the millsite must meet requirements set forth in chapter 74:29:07.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-6(8), 45-6B-44, 45-6B-45.

74:29:05:03. Process pond reclamation. The reclamation plan must address reclamation of all process and storage ponds associated with a millsite. Items which must be addressed include the following:

(1) Physical reclamation of the ponds;

(2) Solution disposal;

(3) Sludge disposal; and

(4) Liner removal or disposal.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-7, 45-6B-44, 45-6B-45.

74:29:05:04. Removal of equipment and buildings. All buildings and equipment associated with a millsite must comply with the requirements of § 74:29:07:13.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-7, 45-6B-44, 45-6B-45.

74:29:05:05. Reclamation of tailings impoundments. The reclamation plan must address interim and final reclamation of any tailings impoundments.

Plans and specifications for all tailings impoundments must be certified by a registered professional engineer retained by the applicant. The engineer must be competent in the field of geotechnical analysis and impoundment design. The department's review of the plans and specifications must be performed by a registered professional engineer with the same qualifications. The plans and specifications must include a stability analysis of the impoundment.

Upon final reclamation, all tailings impoundments not designed for retention of fluids must be free draining. Drainage from such impoundments must not cause erosion, interfere with postclosure monitoring systems, cause water pollution, or limit access to the site.

The plan must address the proposed method of treatment of tailings. The plan must include the following:

(1) The treatment method proposed;

(2) Reasons for selection of the proposed treatment method over other possible treatment methods;

(3) Preliminary plans and specifications for facilities associated with tailings treatment;

(4) Storage of the proposed treatment reagents at the site;

(5) A plan of operation for the treatment; and

(6) Plans for disposal of treatment solutions, if applicable.

In heap leach operations, the treated tailings must be used as backfill in the mine pits where compatible with the overall mine plan. If in-place tailings piles are approved by the board, physical reclamation must conform to the reclamation requirements for spoil in § 74:29:07:14.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-5, 45-6B-44, 45-6B-45.

74:29:05:06. Treatment of tailings -- Initial sampling and chemical characterization. Prior to the initiation of treatment, effluent or pore water from a tailings impoundment shall be sampled and chemically characterized for the following parameters:

(1) Chemical constituents which may be used in or are likely to result from the milling or treatment process;

(2) Aluminum, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silicon, silver, vanadium, and zinc;

(3) Major cations and anions, including ammonia, bicarbonate, calcium, carbonate, chloride, magnesium, nitrate, potassium, sodium, and sulfate;

(4) pH;

(5) Radon, uranium, radium 226, radium 228, total alpha radiation, total gamma radiation; and

(6) Total dissolved solids.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:07. Treatment of tailings -- Monitoring during treatment process. Effluent or pore water from tailings impoundments shall be monitored for key parameters designated by the department to statistically characterize the treatment cycle. The monitoring shall be done throughout the duration of the treatment process.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:08. Treatment of tailings. Treatment of the tailings shall continue until the effluent or pore water from the tailings impoundment meets the following criteria as determined by using a statistical method agreed upon by the department and the operator:

(1) Less than 0.5 mg/1 weak acid dissociable cyanide for operations which use cyanide in their milling or treatment process;

(2) For all other parameters, South Dakota drinking water standards in chapter 74:04:05, South Dakota surface water quality standards in chapter 74:51:01, or South Dakota groundwater quality standards in chapter 74:54:01, whichever is more appropriate based on a pathway and fate analysis;

(3) Other parameters of concern, as determined by the department, which are not specified in the South Dakota drinking water standards or South Dakota water quality standards, shall not exceed background concentrations as determined by baseline monitoring for potential receiving streams or groundwater, as applicable; and

(4) pH of 6.5 to 8.5.

If the criteria in this section prove to be inappropriate, alternate site-specific criteria based on a pathway and fate analysis may be developed by the department; and the board of water management may require that a state surface water or groundwater discharge permit be obtained in accordance with chapter 74:52:01 or 74:54:02, as applicable.

If future sampling according to the standards in this section proves treatment to be inadequate, other criteria may be specified by the department on a site-specific basis.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:09. Retreatment of tailings. If the operator is not able to prove that the tailings meet applicable standards, the operator may retreat the tailings. If a treatment process different than that previously approved will be employed, the operator shall submit a new plan which complies with §§ 74:29:05:05 to 74:29:05:08, inclusive. Upon completion of the retreatment of the tailings, a final sampling program shall be implemented as required in § 74:29:05:10.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:10. Treatment of tailings -- Final sampling program. Before an operator is released of reclamation liability for a tailings impoundment, the operator must prove to the satisfaction of the board that the tailings will not degrade the environment. The operator shall demonstrate that this has been accomplished by conducting a final sampling program that is sufficient to statistically characterize the geochemistry of the tailings, both spacially and temporally, so that a reasonable basis for prediction of future conditions and trends is established. The sampling program may consist of solids sampling, pore water or effluent sampling, or a combination of both or an alternative program approved by the department. Sampling frequency and parameters may be revised during the final sampling program if the department finds that the initial results warrant revision.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:11. Treatment and disposal of tailings from on/off load pads. Tailings which will be removed from an on/off load pad must be chemically characterized and treated to comply with §§ 74:29:05:05 to 74:29:05:10, inclusive.

Tailings which are treated and removed from on/off load pads shall, when possible, be relocated and reclaimed on lands which have been previously disturbed by the mining operation. Disposal sites and practices must meet the requirements of this article as determined by the board.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:12. Reclamation of tailings which cannot meet treatment standards. Tailings which have been treated and cannot meet the criteria established in § 74:29:05:08 or which cannot feasibly be treated shall be reclaimed so that infiltration into, percolation through, and discharge from such tailings are minimized. Discharges from tailings must comply with the provisions of a groundwater discharge plan pursuant to chapter 74:54:02 or a surface water discharge permit pursuant to chapter 74:52:01, as applicable. The reclamation plan for such tailings disposal sites and tailings disposal practices shall be based on a detailed pathway and fate analysis augmented by engineering plans and specifications and monitoring data. Revegetation must comply with the general reclamation requirements of § 74:29:07:06.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:05:13. Uranium tailings. Uranium tailings impoundments are subject to applicable state law as cited in SDCL 45-6B-32.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-32, 45-6B-44, 45-6B-45.

74:29:05:14. Land application of solution -- General requirements. If a mine operator disposes of any solution by land application methods, the requirements in §§ 74:29:05:15 to 74:29:05:20, inclusive, and the following requirements apply:

(1) Plans and specifications for the land application system must be submitted to the department for review and approval prior to installation or construction;

(2) Before initiation of land application of solution, a chemical characterization of the solution must be conducted for all parameters listed in § 74:29:05:06;

(3) Solution may be applied to land only if the criteria in § 74:29:05:08 are met;

(4) Hydraulic loading rates of land application must not result in surface runoff;

(5) The land application system must be operated to minimize erosion and physical disturbance of vegetation; and

(6) Both during and following land application, the department shall conduct compliance monitoring of surface and ground water.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45.

74:29:05:15. Land application of solution -- Sampling requirements. Sampling of solution to be applied to the land shall consist of not less than one grab sample per 100,000 gallons of solution. If less than 100,000 gallons is to be applied to land, at least one grab sample must be taken and analyzed for the required parameters. Each grab sample must be of sufficient volume so the sample can be split. Each split of the sample must be of a volume sufficient to allow for analysis for all operational monitoring parameters. At every fifth sampling, one split sample of each five consecutive grab samples shall be composited and analyzed for the required monitoring parameters. The remaining split sample for all grab samples shall be preserved and stored for further individual analysis if analyses of composited samples indicate the presence of a concentration for a given parameter in excess of the criteria of § 74:29:05:08. Additional sampling in compliance with a quality assurance plan must be performed. Operational monitoring parameters shall be determined from the chemical characterization.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45.

Cross-Reference: Land application of solution -- Plan for operational monitoring, § 74:29:05:17.

74:29:05:16. Land application of solution -- Site evaluation. Before initiation of land application of solution, a site evaluation and characterization must be conducted to show site compatibility with the chemical composition of the solution

and the amount of solution to be applied. The evaluation shall address the following:

(1) Site vegetation and wildlife;

(2) Site geology;

(3) Groundwater and surface water;

(4) Soils and depths to bedrock;

(5) Area slopes;

(6) Site erodibility;

(7) Distance to flowing streams;

(8) Adjacent land use; and

(9) Weather monitoring.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45.

74:29:05:17. Land application of solution -- Plan for operational monitoring. Before initiation of land application of solution, the operator must submit a written plan for operational monitoring of the land application area to the department and the department of game, fish and parks for review and approval. The plan must include the following:

(1) Methods for soil and soil water monitoring and sampling;

(2) Vegetation sampling and analysis;

(3) Soil characteristics and parameters to be monitored;

(4) Proposed analytical techniques;

(5) Sampling frequency;

(6) Criteria for determining if and when land application should be initiated or discontinued;

(7) Surface and groundwater monitoring plans;

(8) Maximum allowable metals accumulation values; and

(9) A sampling and analytical quality assurance and quality control plan.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45

74:29:05:18. Land application of solution -- Notice of intent to implement. The operator must give the department written notice of intent to implement land application at least one week before the initiation of the land application cycle. The notice must include the following:

(1) The date on which application will start;

(2) The amount of solution to be applied to land;

(3) The estimated duration of land application; and

(4) The chemical characterization of the solution prior to treatment.

In emergency situations requiring land application, the operator must notify the department by telephone before starting land application.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45.

74:29:05:19. Land application of solution -- Revegetation of site -- Inspection. Areas of surface disturbance within land application sites must be stabilized by grading and revegetating immediately following the disturbance. In areas where vegetation is destroyed by the land application of solution, revegetation shall be conducted during the first suitable planting period following disturbance.

The site must be inspected by the operator daily during periods of solution application for any unplanned effects, such as erosion, sedimentation, and damage to vegetation or wildlife. If any such effects are noted, steps must be taken immediately to mitigate the problem.

If the composition of the vegetative species of the native ground cover significantly changes during the course of land application, the operator must develop a plan that either demonstrates that after termination of land application a permanent, self-perpetuating ground cover at least equal in character and extent to the original will remain or details a revegetation program that has been approved by the department of game, fish and parks and the local conservation district.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45.

74:29:05:20. Land application of solution -- Written report. Following each land application cycle, a written report must be submitted to the department. This report must include the following:

(1) The total amount of solution applied;

(2) The total hydraulic loading rate per acre;

(3) The total metals loading rate per acre;

(4) The duration of the application cycle;

(5) All sampling data; and

(6) A general discussion of the success of the system.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-41, 45-6B-44, 45-6B-45.

CHAPTER 74:29:06

PROCEDURE FOR DETERMINING RECLAMATION TYPE

Section

74:29:06:06 Confidential information.

74:29:06:01. Presubmission conference -- Determination of postmining land use. Before a mining operation permit application or a permit amendment application for an existing reclamation plan is submitted, the operator, the department, and the landowner or the landowner's designated representative must confer on and determine the postmining land use of the affected lands.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:06:02. General requirements for determination of reclamation type. For all reclamation types the applicant must present a management plan for the purpose of determining the reclamation type that does the following:

(1) Demonstrates that the affected land has the capability of meeting reclamation criteria in chapter 74:29:07;

(2) Demonstrates that the postmining land use is compatible with surrounding land uses;

(3) Details support and maintenance activities required for successful implementation; and

(4) Includes assurance that the proposed postmining land use meets the following requirements:

(a) Is obtainable according to data on expected need and market;

(b) Is supported by commitments from public agencies where appropriate;

(c) Is practicable on the basis of private financial capability for completion of the proposed operation;

(d) Is planned pursuant to a schedule attached to the reclamation plan that integrates the mining operation and reclamation with the postmining land use;

(e) Is consistent with existing state and local land use plans and programs; and

(f) Is of a beneficial use.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:06:03. Economic study required for determination of future mineral exploration and development as reclamation type. In addition to the general requirements in § 74:29:06:02, for future mineral exploration and development to be considered as an acceptable postmining land use, the applicant must provide evidence that a potential reserve tonnage exists that is equal to or greater than the estimated annual ore production tonnage from the mine. The applicant shall determine the average commodity price of the primary mineral to be mined for the preceding five-year period and prepare an economic study. The study, using current dollars, must be based on geologic evidence, the calculated maximum allowable cost of production, and production cost projections. Unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance are not required to meet the definition of a potential reserve.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:06:04. Alternative postmining land use. If the postmining land use selected for a reclamation plan is industrial use, homesite development, or future mineral exploration and development, the applicant must select an alternative postmining land use to be implemented if the approved postmining land use and reclamation plan are not achieved pursuant to chapter 74:29:07. When required, alternative postmining land uses must be determined at the same time as the postmining land use.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:06:05. Approval required for future mineral exploration and development as a reclamation type. Future mineral exploration and development as a reclamation type is subject to approval by the board, the operator, the landowner, and the local board of county commissioners pursuant to SDCL 45-6B-44. Landowner, county commission, and operator approval of this reclamation type must obtained before submission of a mining operation permit application or a permit amendment application.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-44, 45-6B-45.

74:29:06:06. Confidential information. Information marked confidential that is provided to justify future mineral exploration and development or other reclamation types is considered part of the permit application and shall be protected pursuant to SDCL 45-6B-19.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-19.

CHAPTER 74:29:07

MINIMUM RECLAMATION STANDARDS

Section

74:29:07:01. General requirements for all reclamation types. All mining operations must comply with the general requirements in §§ 74:29:07:02 to 74:29:07:17, inclusive, and with the following requirements:

(1) Reclamation must rehabilitate the affected land to a condition that meets the selected postmining land use;

(2) All reclamation activities are subject to the concurrent, interim, and final reclamation requirements of chapter 74:29:08; and

(3) All reclamation required by the approved reclamation plan must be completed prior to final and full bond release.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-25, 45-6B-45.

74:29:07:02. Minimizing of adverse impacts. To minimize the adverse impacts of a mining operation, the following must be considered during the mine planning process:

(1) Design of mine operation facilities to minimize surface disturbances;

(2) Construction of mine facilities so that affected lands are cleared in small sections or increments to match the needs of mine production;

(3) Visual screening of affected lands, including pits, dumps, impoundments, process facilities, buildings, and equipment;

(4) Design, construction, and location of mine facilities to minimize impacts to surface water and groundwater;

(5) Control of access;

(6) Preventive measures to minimize harmful impacts to wildlife;

(7) Location of waste dumps, spoil piles, and topsoil stockpiles to facilitate implementation of reclamation and to minimize environmental impacts;

(8) Minimizing the production of mine waste and spoil;

(9) Design and location of facilities so they are compatible with surrounding land uses; and

(10) Integration of mine operations planning with the reclamation plan.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-45.

74:29:07:03. Grading and backfilling -- Necessity. Grading, backfilling, and other topographic reconstruction methods must be included in the reclamation plan to achieve visually and functionally compatible contours.

Backfilling is not required if the applicant can demonstrate that it is economically or physically infeasible. In determining if backfilling is required or the extent to which it is required, the board shall consider the following factors:

(1) Public safety and welfare;

(2) Technical and economic feasibility;

(3) Surface and mineral ownership;

(4) Land use requirements;

(5) Pollution potential; and

(6) Mineral resource values.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-45.

74:29:07:04. Grading and backfilling -- Criteria. The following general criteria apply to all grading, backfilling, or other topographic reconstruction methods:

(1) All reclaimed slopes and slope combinations must meet the following requirements:

(a) Be visually and functionally compatible with the configuration of the surrounding area;

(b) Be suitable for the postmining land use;

(c) Be structurally stable; and

(d) For fill slopes or other slopes composed of unconsolidated material, not exceed the angle of repose;

(2) All grading, backfilling, and topographic reconstruction must control erosion and sedimentation, protect areas outside the affected land from slides or other damage, and minimize the need for long-term maintenance. Erosion control measures must be implemented during all phases of construction, operation, reclamation, and closure. Detailed plans indicating dimensions, location, spacing, and design of erosion control techniques are required;

(3) All grading, backfilling, and topographic reconstruction must be completed as soon as feasible after mining ceases. The operator shall establish reasonable timetables consistent with good mining and reclamation practices;

(4) Depressions for the accumulation of water are not allowed unless they are consistent with the approved postmining land use;

(5) Original drainage must be preserved as much as possible. Alternative drainage may be approved by the board if it is functionally compatible with and complements the prevailing hydrologic balance of the surrounding area;

(6) When highwall reduction or elimination is not proposed, the applicant must provide justification demonstrating that such reduction or elimination is impossible, impractical, or aesthetically undesirable. If they are not eliminated, all highwalls must be stabilized; and

(7) Landforms created as the result of grading, backfilling, or topographic reconstruction of the affected land must blend in with and complement the visual continuity of the surrounding area. Mitigation techniques such as land shaping, rock sculpting, or visual screening may be used to minimize negative visual impacts.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-37, 45-6B-45.

74:29:07:05. Disposal of refuse. All refuse from the mining operation, including garbage and rubbish, must be disposed of in an approved landfill or may be disposed of on-site if disposal complies with the South Dakota solid waste regulations in article 74:27. Acid-forming or toxin-producing materials that have been mined must be handled and disposed of in a manner that will control unsightliness and protect the hydrologic system from pollution. All hazardous wastes must be handled in accordance with South Dakota hazardous waste regulations in article 74:28.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-45, 46-6B-83.

Cross-References: Solid waste, art 74:27; Hazardous waste, art 74:28.

74:29:07:06. Revegetation. Revegetation must meet the following general requirements:

(1) Vegetative species and composition must be appropriate for the postmining land use. The species of vegetation to be used must be described in the reclamation plan, indicating the composition of seed mixtures and plant types and the seeding and planting rates per acre. Vegetative species and composition must be selected in consultation with the local conservation district, the landowner, and the department of game, fish, and parks if wildlife habitat is included as a postmining land use. Introduced, naturalized, or nonnative plant species may be used only if they are suitable for the postmining land use and are approved by the board;

(2) The applicant must develop methods and procedures for revegetation which incorporate reference areas, baseline data comparisons, or other procedures to determine postreclamation revegetation success;

(3) A reference area may serve as a basis for comparatively measuring reclamation success. Reference areas must meet the following requirements:

(a) Be large enough to make comparisons;

(b) Be located in areas where they will not be affected by future mining while serving their designated use;

(c) Be managed in a way that will not cause significant changes in the cover, productivity, species diversity, and composition of the vegetation; and

(d) Be representative of the postmining land use; and

(4) Seeding and planting must be done in accordance with accepted agricultural practices. Affected lands shall be seeded during the first normal period of favorable planting conditions after final topsoil preparation, unless an alternative plan is approved. Any rills or gullies that would preclude successful establishment of vegetation or achievement of the postmining land use must be removed or stabilized.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-45.

74:29:07:07. Topsoil management. In addition to the requirements of SDCL 45-6B-40, topsoil must be managed as follows:

(1) All salvageable topsoil or other suitable material must be removed from the areas of affected land before the land is disturbed. The board may authorize topsoil to remain on areas where minor disturbances associated with construction and installation activities will occur, such as light-use roads, signs, utility lines, fences, and monitoring stations, provided that the minor disturbances will not adversely affect the soil resource;

(2) Where long-term disturbances will occur, the board may authorize the temporary distribution of a portion of stockpiled topsoil or other suitable material to enhance stabilization of affected lands during periods of interim reclamation and temporary cessation of operations under the following conditions:

(a) The topsoil or subsoil capacity and productive capabilities are not diminished by the distribution or can be restored;

(b) The topsoil is protected from erosion; and

(c) The topsoil will be available for final reclamation;

(3) The board may require topsoil or other suitable material to be analyzed by the operator prior to replacement to determine if fertilizer or other soil amendments are necessary to establish and sustain the required vegetation;

(4) Topsoil stockpiles must be marked with legible signs containing letters not less than six inches high in sufficient locations to clearly identify stockpiles. Such signs must be in place from the time stockpiling begins;

(5) Topsoil or other suitable material shall be distributed as necessary to establish and sustain the required vegetation. The reclamation plan must contain an estimate of topsoil necessary to complete reclamation;

(6) If excess topsoil is present, the board may approve the use of the excess for reclamation purposes elsewhere;

(7) Trees, large rocks, and other waste material which may hinder redistribution of topsoil must be separated from the topsoil before stockpiling;

(8) If the amount of topsoil necessary for reclamation does not exist on the affected land, other suitable material such as subsoil may be used as a topsoil substitute if it can be demonstrated that the material is capable of establishing and sustaining the required vegetation. If other suitable materials are used in lieu of topsoil, they must be managed in accordance with all topsoil requirements in this section and with the following:

(a) Topsoil substitute stockpiles must be segregated from topsoil stockpiles and signed as substitute topsoil stockpiles; and

(b) In addition to soil analyses, the board may require test plots to determine the suitability of topsoil substitutes as a plant-growing medium.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-40, 45-6B-45.

74:29:07:08. Hydrologic balance -- Water quality. To minimize disturbances to the prevailing hydrologic balance of the affected land and adverse effects on the quality and quantity of surface water and groundwater, both during and after the mining operation and during reclamation, the following requirements must be met:

(1) South Dakota water rights laws and regulations must be complied with;

(2) South Dakota water quality laws and regulations must be complied with;

(3) Dredge and fill laws in sections 401 and 404 of the Federal Clean Water Act as they existed on February 1, 1987, must be complied with;

(4) Temporary or large sedimentation, erosion, or drainage control structures must be removed after affected lands have been vegetated and stabilized, if required by the reclamation plan;

(5) Permanent diversion structures must be designed not to erode during the passage of the approved design precipitation event; and

(6) Unchannelized surface water must be diverted around the operation as necessary to minimize pollution and erosion and to protect the operation and downstream water users who have prior water rights.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-41, 45-6B-45.

Cross-References: Water rights statutes and rules, SDCL 1-40-15 to 1-40-20, 43-17, 46-1 to 46-10A, and art 74:02; Water quality statutes and rules, SDCL 34A-2 and 34A-3A and arts 74:51, 74:52, and 74:54.

74:29:07:09. Surface runoff diversions. Surface runoff diversions must meet the following general requirements:

(1) In soils or other unconsolidated material, the sides of diversion ditches may be no steeper than two horizontal to one vertical. The sides and, in ditches carrying intermittent discharges, the bottom must be stabilized by seeding with grasses or other methods specified in the reclamation plan as soon as practicable;

(2) In rock, the sides of diversion ditches must be stable;

(3) Rock riprap, concrete, geosynthetic liners, geosynthetic filter media, soil cement, or other methods must be used where necessary to prevent erosion;

(4) Culverts or bridges must be installed where necessary to allow access;

(5) Diversion ditches must be constructed to minimize hazards to humans, wildlife, or livestock;

(6) Surface runoff diversions around milling or processing facilities using potentially toxic chemicals or materials must be capable of carrying the flow from the six-hour probable maximum precipitation event without causing erosion;

(7) All other surface water diversions must be capable of carrying a minimum of the two-year six-hour precipitation event without causing erosion; and

(8) Diversion ditches may not discharge on topsoil storage areas, spoil, or other unconsolidated material such as newly reclaimed affected lands.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-41, 45-6B-45.

Cross-Reference: Definition of probable maximum precipitation, § 74:02:08:01.

74:29:07:10. Diversions of intermittent and perennial streams. Permanent or temporary diversions of intermittent and perennial streams on affected lands must meet the following general requirements:

(1) Spoil, topsoil, or other unconsolidated materials may not be pushed into or placed within 10 feet of the banks of a perennial or intermittent stream or in a location which may subject them to bankfull flooding except during the construction of the diversion as approved in the permit;

(2) The banks of a diverted perennial or intermittent stream must be stabilized and vegetated with approved species as soon as practicable;

(3) The banks and channel of a diverted perennial or intermittent stream must be protected where necessary by rock, geosynthetic liners, geosynthetic filter media, riprap, or similar measures to minimize erosion and degradation of water quality. Permanent diversions must be designed and constructed to prevent erosion and to carry flow consistent with the flow produced by stream's original width, depth, shape, and gradient;

(4) The board may not permit mining on the flood plain of a perennial or intermittent stream if it would cause the uncontrolled diversion of the stream during bankfull periods;

(5) Channel and flood plain diversions must be designed to prevent erosion during the passage of the approved design precipitation event. Cross-sections and other hydrologic data for the existing stream above, below, and within the diversion area must be used to determine the flow capacities, channel configuration, and shape of the diversion. Such design information must be included in the reclamation plan; and

(6) The water quality of a diverted intermittent or perennial stream must meet surface water quality standards in chapter 74:51:01.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-41, 45-6B-45.

74:29:07:11. Impoundments. For permanent surface impoundments, the criteria in § 74:29:07:27 apply. Tailings impoundments on all affected land must meet the criteria set forth in chapter 74:29:05.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-41, 45-6B-45.

74:29:07:12. Roads and railroad spurs. Constructed or upgraded roads and railroad spurs are affected land from the location where they provide exclusive service to the mining operation and must be covered by the reclamation bond. They must meet the following general requirements:

(1) When feasible, roads and railroad spurs must not be constructed within riparian zones;

(2) Roads within riparian zones must be constructed so that negative effects on streams are minimized;

(3) Roads or railroad spurs within the riparian zone of a coldwater permanent fishery designated pursuant to chapter 74:51:02 or 74:51:03 may be subject to the requirements of §§ 74:29:07:29 to 74:29:07:32, inclusive.

(4) Streams must be crossed at or near right angles unless contouring down to the stream bed will result in less potential stream bank erosion. Ford entrances and exits must be constructed to minimize erosion and prevent water from flowing down the roadway;

(5) Drainage control structures must be used as necessary to control runoff and to minimize erosion, sedimentation and flooding. When used, drainage control structures must be installed as road construction progresses;

(6) Culverts must be installed at prominent drainage ways. Culverts must be protected from erosion by rock, concrete, riprap, or other approved means. Culverts and drainage pipes must be constructed and maintained to avoid plugging, collapsing, or erosion at inlets and outlets;

(7) Trees and vegetation may be cleared only to the width necessary to maintain slope stability and to serve traffic needs;

(8) Access and haul road drainage structures must be routinely maintained;

(9) Other transport facilities and utilities must be constructed and maintained to control degradation of water quality and quantity; and

(10) An applicant may request in writing to the board that a road or railroad spur be permitted to remain unreclaimed if the surface landowner or a local, state, or federal agency has requested that the road or spur remain unreclaimed and agrees to be responsible for future maintenance. The operator must furnish proof of such a request. No surety is required for reclamation of such a road or spur and reclamation of the road or spur is not required if the request is approved by the board.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-41, 45-6B-45.

74:29:07:13. Buildings and structures. All buildings and structures constructed, used, or improved by the operator must be dismantled and removed unless it can be demonstrated to the board's satisfaction that they will be consistent with the approved postmining land use.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-45.

74:29:07:14. Spoil. Spoil on all affected land must meet the following general requirements:

(1) Except where diversions are approved by the board, all spoil must be located to avoid blocking intermittent or perennial drainages. Ephemeral drainages may be blocked if the engineering and environmental methods used for dealing with runoff control and sedimentation are approved by the board;

(2) If permanent spoil dumps are approved by the board, the board may require the operator to demonstrate the long-term stability of the dumps through geotechnical stability analyses conducted by a registered professional engineer competent in the field of geotechnical analysis;

(3) The board may require the operator to analyze spoil material to determine if it will be a source of water pollution. If the spoil material may be such a source the operator must describe proposed procedures for mitigating the condition; and

(4) All spoil material that is determined to be toxic or acid-forming or that will prevent reestablishment of vegetation on the reclaimed land surface must be properly disposed of during the mining operation unless such materials occur naturally on the land surface.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-43, 45-6B-45.

74:29:07:15. Noxious weeds. The applicant, in consultation with the county weed board, local conservation district, or other appropriate agency, must develop and implement a noxious weed control plan. The plan must be included as part of the reclamation plan.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-43, 45-6B-45.

74:29:07:16. Subsidence. The operator must prevent or minimize subsidence that may result from mining activities. Where subsidence cannot be prevented, measures must be taken to minimize damage to and loss of value of property and to minimize hazards to livestock, wildlife, and humans.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-42, 45-6B-45.

74:29:07:17. Underground mines. All underground mine openings and workings or previously existing underground mine workings intercepted by surface mining activities must be sealed during reclamation.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-45.

74:29:07:18. Requirements for specific types of reclamation. The requirements in §§ 74:29:07:19 to 74:29:07:27, inclusive, apply to the specific type or types of reclamation selected pursuant to SDCL 45-6B-45. These requirements are to be used to develop, when practicable, a multiple-use reclamation plan.

The individual who develops the reclamation plan must be competent in the management and planning of the specific type or types of reclamation selected.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:19. Forest planting. The following requirements apply to forest planting as an approved postmining land use:

(1) Trees, shrubs, and other understory vegetation physiologically suited to the site shall be used to revegetate disturbed areas. Woody species shall be planted at rates which can reasonably be expected to yield mature timber stand density appropriate to the species;

(2) No slope may exceed the maximum for typical forest usage in the surrounding area;

(3) Reclamation is complete when the following conditions are met;

(a) Sufficient woody species to achieve the expected stand density are viable and vigorous growth can be demonstrated by the operator;

(b) The understory vegetative cover is adequate to control erosion;

(c) The surviving vegetative species composition is appropriate for the postmining land use; and

(d) If an approved reference area is used, the reclaimed tree stand density must achieve at least 70 percent of that of the reference area five years after planting.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:20. Rangeland. The following requirements apply to rangeland as an approved postmining land use:

(1) Affected land must have the capability to support a livestock carrying capacity that is equivalent to that of the surrounding area or to that of the reference area, if used;

(2) Slopes may not exceed three to one unless the board approves steeper slopes;

(3) Fencing newly seeded areas is required if it is necessary to preclude livestock or wildlife from impairing establishment of the required vegetation; and

(4) Reclamation is complete when the reclaimed range is capable of withstanding proper stocking rates for two consecutive years prior to bond release.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:21. Agricultural or horticultural crops. The following requirements apply to agricultural or horticultural crops as an approved postmining land use:

(1) The reclaimed land must have the capability of meeting or exceeding the premining crop production of the affected land or of the reference area, if used. If crop production did not occur on the affected land prior to mining, the reclaimed land must be capable of producing crops consistent with similar crop production areas in the surrounding region. The applicant must document the targeted crop production potential based on premining, reference area, or regional productive capabilities; and

(2) Reclamation is complete when productive capability is equivalent to or exceeds, for two consecutive crop years, that of the premining condition, the reference area, or similar crop production areas in the surrounding region.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:22. Wildlife habitat. The following requirements apply to wildlife habitat as an approved postmining land use:

(1) Reclamation shall be directed toward optimizing habitat diversity for game and nongame species. The surrounding unaffected land must be considered in determining habitat diversity goals;

(2) The applicant must identify the wildlife species to benefit from the proposed reclamation;

(3) The affected land must be revegetated with native trees, shrubs, forbs, grasses, or other approved alternative vegetation. Revegetation composition, spacing, and arrangement must be based on consultation with the department of game, fish and parks or on an approved reference area. Woody species and understory vegetation shall be planted at rates which can reasonably be expected to yield densities appropriate for the designated wildlife species;

(4) Alternative wildlife habitat reclamation objectives shall be developed in consultation with the department of game, fish and parks and approved by the board;

(5) Sites to be reclaimed for recreational fisheries must provide suitable habitat for the selected fish species;

(6) Surface impoundments to be reclaimed for recreational fisheries must have at least 25 percent of the bottom at a minimum depth of 20 feet to ensure sufficient water during drought, limit growth of undesirable weeds, and reduce the potential for winterkill;

(7) Streams to be reclaimed for recreational fisheries must have a baseline study prepared by an individual who is competent in the field of fisheries management which addresses faunal, floral, and channel characteristics and is approved by the department of game, fish, and parks. Streams to be reclaimed for recreational fisheries must be reconstructed so that they provide suitable habitat for the selected fish species. Reclamation must achieve to the extent possible the premining pool to riffle ratio, width-to-depth ratio, and stream bed particle sizing and sorting ratio, unless modifications to enhance the stream habitat are approved by the department of game, fish and parks and the department. Reclamation techniques such as stream bank stabilization and revegetation, construction of wing deflectors, k-dams, or other management techniques may be incorporated into the reclamation plan and must have the approval of the department, the department of game, fish and parks, and the board;

(8) Sites to be reclaimed for recreational fisheries must have safe bank access; and

(9) Reclamation is complete when the following conditions are met:

(a) The surviving vegetation species composition is capable of supporting the wildlife species identified as those to benefit from the proposed reclamation;

(b) The understory cover is adequate to control erosion;

(c) Stream fisheries approximate or exceed the baseline condition of the stream or that of the approved reference area; and

(6) Surface impoundment fisheries meet the postmining land use as described in the approved reclamation plan.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:23. Recreation. The following requirements apply to recreation as an approved postmining land use:

(1) The applicant must identify the proposed type of recreation which the reclamation will provide and must demonstrate the following to the satisfaction of the board:

(a) The affected land will support the proposed type of recreation. This may be accomplished by identifying reference areas having physiographic and ecological characteristics similar to the affected lands. Reference areas, when used, must be determined in consultation with the department of game, fish and parks, the local conservation district, and a panel of three experts, recognized as such by the department, in the type of recreation being proposed; and

(b) A public demand exists for the proposed type of recreation. This may be done with data showing numbers of licenses or permits sold in the area, participant surveys, or sales from area equipment stores; and

(2) Reclamation is complete when it is demonstrated that the type of recreation has been established and all other requirements of the reclamation plan have been met.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:24. Industrial use. The following requirements apply to industrial use as an approved postmining land use:

(1) The applicant must identify the type of industry which will be located at the site and must demonstrate or address the following to the satisfaction of the board:

(a) The existence of a market or need for the proposed type of industry;

(b) The availability of electricity, water, phone services, sewage and waste disposal, and other support services necessary for the establishment of the proposed type of industry;

(c) Access to the site, maintenance of access, and traffic control;

(d) The source, suitability, and quantity of water available for industrial and potable uses;

(e) The industry's legal right to inhabit the land;

(f) The geotechnical feasibility of establishing an industrial site; and

(g) The prior approval of the city or county planning and zoning commissions or other city or county authorities. The board may not allow industrial sites as a type of reclamation without prior local approval;

(2) The reclamation plan must provide for an alternative postmining land use in the event that the proposed type of industry is not feasible;

(3) A vegetative cover sufficient to control erosion must be established as soon as practicable following cessation of operations on affected land designated for industrial reclamation if the development and associated earth work will not begin within one year following cessation of operations. If the affected land is not developed within three years, the operator must implement the alternative postmining land use reclamation plan unless the board approves a time extension; and

(4) Reclamation is complete when a vegetative cover sufficient to control erosion has been established over all affected land not being developed for industrial use and the incoming industry has firmly established itself at the site. If the alternative postmining land use reclamation plan is implemented, surety release criteria appropriate to that type of reclamation apply.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:25. Homesites. The following requirements apply to homesites as an approved postmining land use:

(1) The applicant must demonstrate or address the following to the satisfaction of the board:

(a) The suitability to the affected land for residences being established;

(b) The availability of electricity, water, phone service, sewage and waste disposal, and other support services necessary for permanent occupancy;

(c) Access to the site, maintenance of access, and traffic control;

(d) The source, suitability, and quantity of water available for domestic use;

(e) The geotechnical feasibility of establishing homesites;

(f) The prior approval of city or county planning and zoning commissions or other city or county authorities. The board may not allow homesites as a type of reclamation without prior local approval; and

(g) The potential effect on the health and well-being of the occupants of areas formerly used for disposal of tailings, hazardous or toxic wastes, sewage, rubbish, or other potentially harmful materials;

(2) The reclamation plan must provide for an alternative postmining land use in the event that the proposed homesites are not feasible;

(3) A vegetative cover sufficient to control erosion must be established as soon as possible following suspension of operations on affected land designated for homesite reclamation if the development and associated earth work will not begin within one year following cessation of operations. If the affected land is not developed within three years, the operator must implement the alternative postmining land use reclamation plan unless the board approves a time extension. On affected lands designated for homesite reclamation, slopes may not exceed those considered by the board to be practical for housing development; and

(4) Reclamation is complete when a vegetative cover sufficient to control erosion has been established over all affected land not presently being developed for homesites and at least 25 percent of the land designated for homesite development is developed or in the process of being developed for homesites. If the alternative postmining land use reclamation plan is implemented, surety release criteria appropriate to that type of reclamation apply.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:26. Future mineral exploration or development. The following requirements apply to future mineral exploration or development as an approved postmining land use:

(1) The applicant must identify the following:

(a) Plans for the future mineral exploration and mineral development being proposed, including the information required by § 74:29:06:03; and

(b) Affected lands which must remain in an unreclaimed state to provide access to or development of the potential reserve;

(2) Final reclamation of affected lands not required for the future mineral exploration and development being proposed must be conducted;

(3) The reclamation plan must provide for an alternative postmining land use in the event that the future mineral exploration and development proposed does not occur within the time limits specified in this section;

(4) Interim reclamation consistent with the requirements of § 74:29:08:02 must be conducted on all affected land designated for future mineral exploration and development if mining will not begin within one year following cessation of mining operations. In addition, the following measures must be taken:

(a) Shafts, portals, adits, or other underground mine entrances must be covered or secured and all trenches and small excavations must be backfilled or covered to minimize safety hazards; and

(b) Access must be limited by maintaining site security, establishing locked gates, and other measures;

(5) If the affected land designated for future mineral exploration and development is not developed within three years following the cessation of mining, the operator must implement the alternative postmining land use reclamation plan. The board may extend this time period if justification is provided by the operator; and

(6) Reclamation is complete when affected land to be used for future mineral exploration and development is repermitted and covered by a reclamation surety or, if the alternative postmining land use reclamation plan is implemented, reclamation is completed in accordance with criteria appropriate to that reclamation type.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:27. Permanent surface impoundment. The following requirements apply to a permanent surface impoundment as an approved postmining land use:

(1) Dams must be designed to contain and, if necessary, pass the design precipitation event. All dam designs must be reviewed and approved by the division of water rights;

(2) If necessary to prevent failure, dams must contain an overflow notch and spillway. Overflow notches and spillways must be riprapped with rock, concrete, or other suitable materials to prevent erosion;

(3) Slopes around surface impoundments, unless otherwise approved by the board, may not exceed two to one, except from five to ten feet below the expected water line where slopes may not exceed three to one. If a swimming area is proposed, the slope, unless otherwise approved by the board, may be no steeper than five to one throughout the area proposed for swimming. All slopes around surface impoundments must be graded and contoured to minimize hazards to humans, livestock, and wildlife;

(4) The board may require the operator to determine if sources of water contamination within the impoundment exist. Such sources must be treated to prevent contamination of the impounded water;

(5) Surface impoundments intended for use as recreational fisheries or recreation areas must meet the applicable requirements of § 74:29:07:23; and

(6) Reclamation is complete when the intended use of the surface impoundment has been attained and all other requirements of the reclamation plan have been met.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-7, 45-6B-25, 45-6B-37 to 45-6B-45.

74:29:07:28. Changes occurring in approved reference area. Any changes occurring in an approved reference area which may affect the area's usefulness as an indicator of reclamation success must be reported in writing to the department. Examples of such changes are fires, insect damage to vegetation, landslides, or man-made changes.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-39, 45-6B-44.

74:29:07:29. Definition of special or unique land. Repealed.

Source: 14 SDR 111, effective March 3, 1988; repealed, 20 SDR 59, effective November 1, 1993.

74:29:07:30. Restrictions on permits including special or unique land. Repealed.

Source: 14 SDR 111, effective March 3, 1988; repealed, 20 SDR 59, effective November 1, 1993.

74:29:07:31. Procedure for determining special or unique land. Repealed.

Source: 14 SDR 111, effective March 3, 1988; repealed, 20 SDR 59, effective November 1, 1993.

74:29:07:32. Hearing on determination of special or unique land. Repealed.

Source: 14 SDR 111, effective March 3, 1988; repealed, 20 SDR 59, effective November 1, 1993.

74:29:07:33. Underground mining. Repealed.

Source: 14 SDR 111, effective March 3, 1988; repealed, 20 SDR 59, effective November 1, 1993.

CHAPTER 74:29:08

CONCURRENT RECLAMATION

Section

74:29:08:01. Requirements for concurrent reclamation. Concurrent reclamation shall be conducted during all phases of the mining operation. Concurrent reclamation plans and estimated timetables must be included in the reclamation plan. Concurrent reclamation accomplished and any deviations from concurrent reclamation plans or timetables must be reported in the annual filing required by SDCL 45-6B-36.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-36, 45-6B-46.

74:29:08:02. Requirements for interim reclamation. Interim reclamation must be initiated on affected land if no further disturbance is scheduled to occur on that land within two years. Interim reclamation must be completed within one year thereafter. Where revegetation is required in the interim reclamation plan, seeding shall be done at the earliest favorable planting time. All affected lands requiring interim reclamation shall be stabilized and made visually and functionally compatible with the surrounding area by regarding, recontouring, revegetating, and implementing other measures, as necessary, to effectively control drainage and erosion. Interim reclamation must be conducted in accordance with the general and specific reclamation requirements specified in chapter 74:29:07, as applicable, unless otherwise approved by the board.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-37, 45-6B-39, 45-6B-40, 45-6B-42, 45-6B-43, 45-6B-46.

74:29:08:03. Requirements for final reclamation. Final reclamation shall be performed during the course of the mining operation on those affected lands which will not be disturbed again and where it will not adversely affect other mining operation activities.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-46.

74:29:08:04. Disturbance to avoid requirements -- Board order. If the board determines that affected lands are being subjected to disturbances to avoid the requirements of this chapter, the board may order the concurrent reclamation of the affected land.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-46.

CHAPTER 74:29:09

TEMPORARY CESSATION

Section

74:29:09:01. Temporary cessation -- When applicable. A mining operation is in a state of temporary cessation when 180 days have elapsed during which no production occurred. A mining operation is not in a state of temporary cessation when one or more of the following occur:

(1) The mining operation resumes within one year and a statement is included in the mining operation permit that indicates the affected lands are to be used for less than 180 days each year;

(2) Production has been completed and only final reclamation and related activities remain to be completed; or

(3) A mining operation permit has been issued, but the mining operation has not begun.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6).

74:29:09:02. Notice of temporary cessation -- Contents. An operator who desires to cease production temporarily must file a notice of temporary cessation with the board. The notice must contain the following information:

(1) The permit number;

(2) The date of cessation of production;

(3) Evidence that shows mineral reserves remain;

(4) Reasons for nonproduction;

(5) A plan for the resumption of mining activities;

(6) Measures to be taken to comply with the concurrent reclamation requirements of chapter 74:29:08;

(7) Measures to be taken to maintain the site and limit access during the period of temporary cessation as required by § 74:29:09:03;

(8) A statement concerning the existing condition of the affected land and reclamation activities which have already been completed; and

(9) Proof of consultation with the surface landowner if different from the mineral owner.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6).

74:29:09:03. Site maintenance and other activities required. All mining operations which enter a state of temporary cessation must conduct site maintenance and other activities in accordance with the approved mining permit and conditions or, if not specified in the permit, with the following, as applicable:

(1) Inspect quarterly and maintain all erosion, sedimentation, and drainage controls and areas that have undergone reclamation or revegetation;

(2) Install locking gates, fences, and warning signs to limit access to the site;

(3) Periodically remove or dispose of trash and other waste that accumulates during the period of temporary cessation;

(4) Inspect for and destroy noxious weed infestations in accordance with the approved noxious weed control plan in the permit;

(5) Remove, store, or dispose in an approved manner all chemicals, process solutions, petroleum products, and explosives;

(6) Inspect all containment liner systems for damage, take measures to prevent further damage, and immediately repair any damage discovered;

(7) Remove runoff water from process ponds as necessary to prevent damage or overflow;

(8) Maintain fire protection;

(9) Provide equipment, tools, and power to conduct maintenance activities;

(10) Check and maintain all motorized components of the processing system;

(11) Perform site, surface water, and groundwater monitoring required by the mine permit; and

(12) Perform any other activities required to minimize environmental damage during the period of temporary cessation and to maintain the operation in working order.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6), 45-6B-37, 45-6B-38, 45-6B-39, 45-6B-40, 45-6B-41, 45-6B-42, 45-6B-43.

74:29:09:04. Departmental review of notice. The department shall review the notice of temporary cessation and may conduct an inspection of the affected land. The department shall notify the operator within 30 days after submission that the notice is complete or that the notice requires additional information.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6).

74:29:09:05. Agency review. Within 10 days after the receipt of a notice of temporary cessation or of any information supplementing the notice, the department shall send a copy of the notice or additional information to the department of game, fish and parks and to the county commission and local conservation district in the affected county. The agencies shall have 30 days from the date of receipt in which to file written comments for consideration by the board. The failure of an agency to respond within 30 days constitutes its approval of the temporary notice of cessation.

Source: 14 SDR 111, effective March 3, 1988; SL 2021, ch 1, §§ 8, 19, effective April 19, 2021.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-3(6), 45-6B-11, 45-6B-34.

74:29:09:06. Notice of recommendation. The department shall publish a notice of recommendation pursuant to the publication requirements of SDCL 45-6B-30 and shall allow 20 days in which interested persons may file a petition to initiate a contested case hearing on the notice of temporary cessation. A petition to initiate a contested case hearing must comply with the requirements of chapter 74:50:02. If a petition is not filed, the notice of temporary cessation is automatically approved by the board as recommended by the department.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6), 45-6B-30.

74:29:09:07. Notice of temporary cessation required. The board shall order an operator who has temporarily ceased production for the periods defined in SDCL 45-6B-3(6) and has not filed a notice of temporary cessation to file a notice pursuant to the requirements of this chapter. Operators who fail to file a notice of temporary cessation within 30 days after being notified by the board shall be issued a notice of violation by the board pursuant to SDCL 45-6B-48.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6), 45-6B-48.

74:29:09:08. Confidential information submitted with notice of temporary cessation. Information submitted with a notice of temporary cessation provided as evidence to showing that mineral reserves remain in the mining operation as required by SDCL 45-6B-3(6)(b) shall be protected pursuant to SDCL 45-6B-19 if marked confidential.

Source: 14 SDR 111, effective March 3, 1988.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-3(6), 45-6B-19.

CHAPTER 74:29:10

SPECIAL, EXCEPTIONAL, CRITICAL, OR UNIQUE LANDS

Section

74:29:10:01. Applicability. This chapter applies only to mining and milling operations as defined in SDCL chapter 45-6B. This chapter does not apply to mining operations regulated under SDCL chapter 45-6 or to mineral exploration or uranium exploration regulated under SDCL chapters 45-6C and SDCL 45-6D, respectively. Lands within the permit boundaries of a mining operation under permit by the effective date of this chapter are exempt from the provisions of this chapter until final reclamation has been completed and the reclamation surety has been released.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33, 45-6B-33.3, 45-6B-33.4, 45-6B-33.8.

74:29:10:02. Operator required to request a determination. Any prospective operator contemplating the establishment of a mining operation must request the department to determine whether or not the lands included in the proposed mining operation constitute special, exceptional, critical, or unique lands by submitting a notice of intent to operate to the department.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.6.

74:29:10:03. Notice of intent to operate -- Contents. A notice of intent to operate shall include the following:

(1) The name, address, and telephone number of the operator;

(2) The legal description of the area of the proposed mining operation;

(3) A map showing sufficient information to locate the area of the proposed mining operation, including access routes and the approximate size and location of areas where surface resources will be disturbed;

(4) A list of surface and mineral owners of the area of the proposed mining operation and a list of surface owners of the area within 500 feet of the proposed mining operation. Such ownership information need include only that which is normally kept by the county register of deeds;

(5) A general description of the type of mining operation proposed and how it would be conducted; and

(6) A detailed assessment of whether the lands included in the proposed mining operation meet the criteria of SDCL 45-6B-33.3 including all information and data necessary to support the assessment and its conclusions.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.6.

74:29:10:04. Submission of notice of intent to operate. The following procedures apply to the submission of a notice of intent to operate:

(1) A notice of intent to operate must be submitted to the department and public notice complying with the requirements of § 74:29:10:05 must be provided at least 60 days before the submission of a mining permit application;

(2) Copies of a notice of intent to operate must be provided to the following state agencies at the same time it is submitted to the department:

(a) The Department of Game, Fish, and Parks;
(b) The Department of Tourism;
(c) The Office of History; and
(d) The State Archaeologist; and

(3) Upon submission of the notice to the department, a copy of the notice of intent to operate must be filed with the register of deeds of the county in which the proposed mining operation is located. Proof of filing must be submitted to the department.

Source: 17 SDR 86, effective December 25, 1990; SL 2021, ch 1, §§ 8, 19, effective April 19, 2021.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-33.6.

74:29:10:05. Publication of notice of intent to operate. A prospective operator that submits a notice of intent to operate to the department must publish in a newspaper of general circulation within the county of the proposed mining operation a public notice containing the following information:

(1) The name, address, and phone number of the operator;

(2) The legal description of the area of the proposed mining operation;

(3) A general description of the type of mining operation proposed;

(4) A statement indicating that the operator has submitted a notice of intent to operate to the department for purposes of determining whether the lands potentially affected by the proposed mining operation are eligible for inclusion on the preliminary list of special, exceptional, critical, or unique lands; and

(5) A statement indicating that any citizen, organization, or agency may nominate lands described in the notice of intent to operate for inclusion on the preliminary list of special, exceptional, critical, or unique lands by submitting a nominating petition to the department complying with the requirements of § 74:29:10:16 within 60 days after the publication date of the notice.

A copy of the public notice and proof of publication must be submitted to the department.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.6.

74:29:10:06. Notice of intent to operate to be sent to others. A copy of a notice of intent to operate submitted to the department pursuant to subdivision 74:29:10:04(1) shall be mailed by the department, within 10 days after receipt, to the county commission of the county in which the proposed mining operation is located and to persons on the interested persons mailing list established under § 74:29:01:05.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.6.

74:29:10:07. Agency review and recommendation. The agencies identified in subdivision 74:29:10:04(2) have 60 days from the date of receipt of a notice of intent to operate to submit to the department recommendations for nominating lands described in the notice for inclusion on the preliminary list of special, exceptional, critical, or unique lands. Such recommendations must be in writing and must comply with the requirements of § 74:29:10:16. Failure of an agency to respond within the 60 days constitutes that agency's clearance of the lands described in the notice for special, exceptional, critical, or unique characteristics.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.6.

74:29:10:08. Department determination on notice of intent to operate -- Procedure. Within 60 days after the date of publication of the public notice required under § 74:29:10:05, the department shall determine whether the lands described in the notice of intent to operate are eligible for inclusion on the preliminary list of special, exceptional, critical, or unique lands by doing the following:

(1) Conducting an on-site inspection coordinated, if possible, with the agencies identified in subdivision 74:29:10:04(2);

(2) Examining the preliminary list established pursuant to § 74:29:10:18 to determine whether lands described in the notice of intent to operate are designated;

(3) Consulting with any agency that submits a recommendation to the department pursuant to § 74:29:10:07; and

(4) Evaluating the information provided with the notice of intent to operate.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4, 45-6B-33.6.

74:29:10:09. Department determination on notice of intent to operate. The department must determine that lands described in a notice of intent to operate are eligible for inclusion on the preliminary list of special, exceptional, critical, or unique lands if:

(1) A complete recommendation that meets the requirements of § 74:29:10:07 is filed;

(2) The lands described in the notice of intent to operate are already included on the preliminary list; or

(3) The assessment required by subdivision 74:29:10:03(6) clearly indicates that the lands described in the notice of intent to operate constitute special, exceptional, critical, or unique lands.

The department may determine that lands described in a notice of intent to operate are eligible for inclusion on the preliminary list of special, exceptional, critical, or unique lands by preparing a nominating petition complying with the requirements of § 74:29:10:16.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4, 45-6B-33.6.

74:29:10:10. Notice of determination to operator and others. Upon determining whether or not lands included in a notice of intent to operate are eligible for inclusion on the preliminary list of special, exceptional, critical, or unique lands, the department shall notify the operator of the determination in writing. The notice shall include the reason for the determination and copies of nominating petitions or other information supporting the determination.

Copies of the written notice shall be mailed by the department to the following:

(1) Any agency that submitted a recommendation pursuant to § 74:29:10:07;

(2) Individuals on the interested persons mailing list;

(3) Any person who submitted a nominating petition for lands described in the notice of intent to operate;

(4) The county commission of the county in which the proposed mining operation is located; and

(5) The surface and mineral owners of the lands described in the notice of intent to operate.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4, 45-6B-33.6.

74:29:10:11. Department determination -- Operator appeal. The operator may appeal the department's determination by complying with the appeal provisions of SDCL 45-6B-33.7. If the operator does not appeal, the lands described in the notice of intent to operate, as applicable, shall be included on the preliminary list of special, exceptional, critical, or unique lands. If the operator does appeal, the board shall set a time and place for a hearing on the appeal that is not more than 45 days following the filing of the appeal, unless extended by mutual agreement of the parties. The hearing, public notice, and intervention must comply with the requirements of SDCL 45-6B-33.7. Upon receipt of an appeal, the department shall give notice of the appeal to any citizen, organization, or agency that submitted an applicable nominating petition.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.7.

74:29:10:12. Nomination by others of lands described in notice of intent to operate. Any citizen, organization, or agency may nominate lands described in a notice of intent to operate for inclusion on the preliminary list of special, exceptional, critical, or unique lands by submitting a nominating petition to the department and to the operator within 60 days following the date of publication of the public notice required under § 74:29:10:05. Nominating petitions must comply with the requirements of § 74:29:10:16.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.6.

74:29:10:13. Nominating petition -- Public hearing. If any nominating petitions pertaining to a notice of intent to operate are received within the 60-day time period allowed under § 74:29:10:12, the board shall set a time and place for a hearing on the petitions. The hearing must be held on a date not more than 45 days following the final date allowed for submission of nominating petitions, unless extended by mutual agreement of the parties. The hearing, public notice, and

intervention must comply with the applicable requirements of SDCL 45-6B-33.7. The board may hold a consolidated hearing on nominating petitions and on the appeal of the department's determination.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4, 45-6B-33.6.

74:29:10:14. Nominating petition -- Burden of proof. Any citizen, organization, or agency that submits a nominating petition pursuant to § 74:29:10:12 carries the burden of proving, during a hearing on the nominating petition, that the lands the nominating petition applies to are eligible for inclusion on the preliminary list of special, exceptional, critical, or unique lands. Failure to appear at or carry the burden of proof during the hearing constitute grounds for dismissal of the nominating petition by the board.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:15. Clearance. The lands described in a notice of intent to operate shall be considered cleared for special, exceptional, critical, or unique land characteristics if the department determines that the lands do not constitute special, exceptional, critical, or unique land and no nominating petitions pertaining to lands described in the notice are filed. The clearance shall remain in effect for seven years. If a mine permit application is not submitted within the seven-year period, the board may declare the clearance void and the lands may be reevaluated for special, exceptional, critical, or unique land characteristics.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4, 45-6B-33.6.

74:29:10:16. Nominating petition for lands described in a notice of intent to operate -- Contents. A petition to nominate lands for inclusion on the preliminary list of special, exceptional, critical, or unique lands must contain the following information:

(1) The name, address, and telephone number of the person submitting the nominating petition;

(2) The legal description of the lands being nominated;

(3) A map of sufficient scale to clearly identify the boundaries of the lands being proposed for nomination;

(4) A description of the nominator's interest in the lands being nominated for inclusion on the preliminary list;

(5) A written statement giving reasons for establishing the proposed boundaries;

(6) A list and description of the characteristics of SDCL 45-6B-33.3 that apply to the lands being proposed for nomination and evidence that supports that the lands possess those characteristics; and

(7) The signature of the person submitting the nominating petition witnessed by a notary public and the date of signature.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:17. Establishment of initial preliminary list -- Board procedure. The board shall establish an initial preliminary list of special, exceptional, critical, or unique lands in accordance with the following:

(1) Recommendations for nominating lands to the preliminary list shall be solicited from the agencies listed in subdivision 74:29:10:04(2) within 14 days after the effective date of this chapter;

(2) Within 14 days after the effective date of this chapter, the board shall publish in five newspapers of general circulation a notice of intent to establish a preliminary list of special, exceptional, critical, or unique lands. The notice shall solicit nominating petitions from the general public and shall describe nominating petition content requirements. The notice shall indicate that nominating petitions must be submitted to the department within 90 days after the date of publication of the notice. Within 10 days after receipt, the department shall mail a copy of a nominating petition to the surface and mineral owners of the lands being nominated;

(3) A copy of the notice of intent to establish a preliminary list shall be mailed by the department to individuals on the interested persons mailing list; and

(4) A least 90 days and not more than 120 days following the publication of the notice of intent to establish a preliminary list, the board shall set a time and date for hearing any nominating petitions received. At least 20 days before the hearing, the board shall notify any person or agency that submitted a nominating petition, individuals on the interested persons mailing list, the county commission of any county containing lands being nominated, and surface and mineral owners of lands being nominated of the time, date, and location of the hearing. Additionally, the board shall publish a notice of the time, date, and location of the hearing in a newspaper of general circulation within the county of any lands being

nominated to the preliminary list. The notice shall be published once a week for two consecutive weeks immediately prior to the hearing.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:18. Establishment of initial preliminary list -- Hearing procedures. The following procedures apply to the hearing for establishing the initial preliminary list of special, exceptional, critical, or unique lands and to any subsequent hearings held for the purpose of updating the preliminary list:

(1) The board shall hear nominating petitions in the order that they were received by the department;

(2) If more than one nominating petition is filed for a given land area, the board may consider such nominating petitions jointly;

(3) The board shall afford all interested persons opportunity to submit data, opinions, or arguments either orally or in writing, or both, on a given nomination proceeding;

(4) The person or agency that submits a nominating petition must be present during the proceeding on the petition and must be prepared to present evidence to the board supporting the nominating petition. Failure to be present or failure to present evidence if requested may be considered by the board as cause for rejecting the nominating petition; and

(5) After considering a nominating petition and any evidence presented in support of or adverse to the petition, the board shall either find that the lands nominated or a portion of them constitute special, exceptional, critical, or unique lands and place them on the preliminary list or find that the lands do not constitute special, exceptional, critical, or unique lands.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:19. Board update of preliminary list. Following the establishment of the initial preliminary list, the board shall annually hold a hearing to consider any nominating petitions received during the preceding year. The notification and publication requirements of subdivision 74:29:10:17(4) shall be followed prior to the hearing.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:20. Contents of nominating petition for preliminary list. In addition to the information required for a petition to nominate lands described in a notice of intent to operate listed in § 74:29:10:16, a petition for nominating lands to the preliminary list must include a list of the surface and mineral owners of the area being nominated and of the lands within 500 feet of the boundaries of the nominated area. The ownership information need only include that which is normally kept by the county register of deeds.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:21. Preliminary list to be maintained by department. The preliminary list of special, exceptional, critical, or unique lands and all nominating petitions or other evidence used to support the nomination of those lands included on the list shall be maintained by the department. The list and supporting information shall be made accessible to any interested person on request.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:22. Petition to remove lands from preliminary list. Any person may petition the board to remove lands from the preliminary list by submitting a petition including the following information:

(1) The name, address, and telephone number of the person submitting the petition;

(2) The legal description of the lands to be removed from the preliminary list;

(3) A map of sufficient scale to clearly identify the boundaries of the lands to be removed from the preliminary list;

(4) Evidence and data demonstrating that the lands proposed to be removed from the preliminary list do not have any of the characteristics described in SDCL 45-6B-33.3 that resulted in their inclusion on the preliminary list;

(5) A description of the petitioner's interest in the lands proposed to be removed from the preliminary list and the effect to those interests that may result from having the lands on the preliminary list;

(6) A list of all surface and mineral owners of the lands proposed to be removed from the preliminary list; and

(7) The signature of the person submitting the petition witnessed by a notary public and the date of signature.

A copy of the petition must be filed with the register of deeds of the county in which lands proposed for removal from the preliminary list are located at the same time it is submitted to the department. Proof of filing must be submitted to the department.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:23. Copies of petition to remove lands from preliminary list to be sent to others. Within 10 days after receipt of a petition to remove lands from the preliminary list, the department shall mail copies of the petition to the following:

(1) Any person or agency that submitted a nominating petition that resulted in inclusion of the lands being proposed for removal on the preliminary list;

(2) Individuals on the interested persons mailing list; and

(3) The county commission of the county in which the lands being proposed for removal from the preliminary list are located.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:24. Hearing on petition to remove lands from preliminary list. The board shall schedule a hearing on a petition to remove lands from the preliminary list for a date within 60 days after receipt of the petition, unless waived by the petitioner. The notification and publication requirements of subdivision 74:29:10:17(4) shall be followed prior to the hearing. The petitioner shall present the petition and supporting evidence to the board during the hearing on a petition to remove lands from the preliminary list. Failure to appear during the hearing may constitute grounds for dismissal of the petition by the board. After considering all evidence presented, the board shall, during the hearing, either remove the lands from the preliminary list or determine that the lands are special, exceptional, critical, or unique.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

74:29:10:25. Final designation of lands on preliminary list. During a hearing on a mining permit application that includes lands on the preliminary list, the board shall determine whether the lands are finally designated as special, exceptional, critical, or unique. The operator may petition the board to hold a hearing to make the final determination on designation at any time after a mine permit application is filed.

Source: 17 SDR 86, effective December 25, 1990.

General Authority: SDCL 45-6B-81.

Law Implemented: SDCL 45-6B-33.4.

CHAPTER 74:29:11

IN SITU LEACH MINING

Section

74:29:11:01. Application for in situ leach mine permit -- Contents. All applications for an in situ leach mine permit shall include, at a minimum, the information necessary to address SDCL 45-6B-4 to 45-6B-10, inclusive; 45-6B-14; 45-6B-15; 45-6B-32 to 45-6B-33.2, inclusive; 45-6B-37 to 45-6B-46, inclusive; 45-6B-91; and 45-6B-92; and §§ 74:29:01:04; 74:29:02:02 to 74:29:02:12, inclusive; 74:29:06:01; and 74:29:10:03. The application shall include a description of the activities to be conducted by the applicant for which permits or construction approvals are required; and a listing of all permits or construction approvals received or applied for in association with the in situ leach mine permit area under the following programs:

(1) The state hazardous waste management program under SDCL chapter 34A-11;

(2) The state solid waste permit program under SDCL chapter 34A-6, article 74:27, and chapters 74:54:01 and 74:54:02;

(3) The federal underground injection control (UIC) program under Part C of the Safe Drinking Water Act, 42 U.S.C. § 300h et seq. (2003);

(4) The state UIC Class III well permit program under SDCL 34A-2 and chapter 74:54:01;

(5) The state surface water quality program under SDCL chapter 34A-2 and article 74:52;

(6) The state underground storage tank and aboveground storage tank program under SDCL chapter 34A-2 and article 74:56;

(7) The state water rights permit program under SDCL title 46 and article 74:02;

(8) The new source review, Prevention of Significant Deterioration, or Title V permit program under the Clean Air Act 42 U.S.C. § 7401 et seq. as amended through November 15, 1990, and under SDCL chapter 34A-1 and article 74:36, or minor source construction and operating air quality permit program under SDCL chapter 34A-1 and article 74:36;

(9) The U.S. Army Corps of Engineers dredge and fill permit program under Section 404 of the Clean Water Act, as amended to January 1, 2008;

(10) The U.S. Nuclear Regulatory Commission source material license program under 10 CFR Part 40 (January 1, 2007); or

(11) Other relevant permitting programs, including other state and local permits or approvals.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-5 to 45-6B-7, inclusive.

74:29:11:01.01. Underground injection control -- Class III Well permit required for mine permit. The board may not grant a permit for an in situ mining operation under chapter 74:29:11 unless the applicant has obtained a permit under SDCL chapter 34A-2 and chapter 74:55:01 Underground Injection Control - Class III Wells. A permit issued under chapter 74:55:01 satisfies the permit requirements of chapter 74:29:11 for subdivisions 74:29:11:02(1)(a) and (1)(b); the background radiological data related information requirements of subdivision 74:29:11:02(2); subdivisions 74:29:11:02(4) to (8), inclusive; subdivision 74:29:11:03(1); subdivisions 74:29:11:03(2)(a) to (2)(c), inclusive; subdivisions 74:29:11:03(8)(a) to (8)(c), inclusive; subdivision 74:29:11:03(10)(a); subdivisions 74:29:11:03(10)(e) to (10)(g), inclusive; subdivisions 74:29:11:03(11) to (24), inclusive; subdivisions 74:29:11:04(1)(f) to (h), inclusive; subdivisions 74:29:11:04(2) to (4), inclusive; subdivisions 74:29:11:04(11)(c) to (g), inclusive; § 74:29:11:06; § 74:29:11:09; § 74:29:11:12; § 74:29:11:16; subdivision 74:29:11:18(1); § 74:29:11:29; and § 74:29:11:30. The applicant may submit an application for an in situ mine permit before obtaining a permit under SDCL chapter 34A-2 and chapter 74:55:01, and the department may process the application. If the department processes the application, the application may not be deemed procedurally complete pursuant to § 74:29:01:07 until the applicant has obtained a permit under SDCL 34A-2 and chapter 74:55:01.

Source: 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-5 to 45-6B-7, inclusive.

74:29:11:02. Application content requirements -- Additional baseline information required. In addition to the requirements of §§ 74:29:02:07 and 74:29:02:11, the following information is required for an in situ leach mine permit:

(1) Ground water baseline information, including:

(a) A geochemical, lithological, and mineralogical description of the receiving strata and any aquifers that may be affected by the injection of mining solution;

(b) Aquifer characteristics for the water saturated portions of the receiving strata and aquifers that may be affected by the mining process. Characteristics may include aquifer thickness, velocity and direction of ground water movement, storage coefficients or specific yields, transmissivity or hydraulic conductivity, and the directions of preferred flow under hydraulic stress in the saturated zones of the receiving strata. The extent of hydraulic connection between the receiving strata and overlying and underlying aquifers and the hydraulic characteristics of any influencing boundaries in or near the proposed production areas shall be determined and described;

(c) The volume and areal extent of ground water anticipated to be influenced by the injection activities. The area of review shall include the area within a one-quarter mile radius of the injection wells, or as determined by the department;

(2) For uranium in situ leach mines, site-specific background radiological data including the results of measurements of radioactive materials occurring in important species, soil, air, and in surface and ground waters that could be affected by the proposed operations. The applicant shall develop a preoperational environmental radiological monitoring plan that must be approved by the department. The plan shall include a radiation survey of proposed mine facilities area, to include process or recovery facility, ponds, impoundments, and wellfields, that can be used as comparison to the radiation survey to be done at the time of mine closure as required in § 74:29:11:53;

(3) Unstable/seismic areas;

(4) A list and map of all adjudicated and permitted surface and ground water water rights;

(5) A list and map of all known existing water wells, producing wells, injection wells, abandoned wells, and exploration holes, giving location, depth, producing intervals, type of use, condition of casing, plugging procedures and date of completion for each well or drill hole within the permit area and on adjacent lands to the extent such information is available in public records and from a reasonable inspection of the property;

(6) Climatic data, including source and location data;

(7) Current land use and zoning within a one-mile radius of the mine permit boundary; and

(8) A list of occupied dwellings within a one-mile radius of the mine permit boundary.

The department may require presubmission meetings to discuss the procedures for baseline data and site characterization.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 34-21-13, 45-6B-5 to 45-6B-7, inclusive.

74:29:11:03. Application content requirements -- Mine operations plan. All applications for an in situ leach mine permit shall include, at a minimum, the information and materials related to mine plans required in SDCL 45-6B-5 to 45-6B-7, inclusive, and §§ 74:29:02:04; 74:29:02:11; and 74:29:07:02 to 74:29:07:17, inclusive; and the following information:

(1) In addition to the requirements of §§ 74:29:02:04; 74:29:02:09; and 74:29:02:12, contour (topographic) maps that accurately locate and identify the permit area and show the location of any public highways, tribal reservation boundaries, dwellings, utilities, and easements within the permit area and adjacent lands in relation to all proposed affected lands and proposed activities associated with the in situ leach mine, including all processing facilities, chemical storage areas, production areas, and roads. The map shall also clearly illustrate the location of monitoring wells;

(2) Discussion and illustration of the estimated mining schedule, including:

(a) A list of the proposed wellfields;
(b) A map showing the proposed sequence for mining of the wellfields;
(c) An estimated time schedule for mining each wellfield; and
(d) The capacity of the water/wastewater treatment systems and correlation of the capacity with the mining and restoration schedules;

(3) Conceptual plans and specifications for in situ leach mine facilities in accordance with § 74:29:11:21;

(4) A leakage response plan detailing actions that will be taken in response to the detection of leakage from ponds and surface impoundments in accordance with subdivision 74:29:11:23(6)(f), and from pipeline systems in accordance with subdivision 74:29:11:24(4);

(5) A plan for the periodic inspection and maintenance of mine facilities, to include pipelines and lined impoundments. The plan shall include criteria for repair or replacement of equipment or infrastructure to keep mine facilities in good repair and order, and a quarterly report to include inspection logs, problems noted, and repair or replacement work completed;

(6) The composition of all known and anticipated wastes and procedures for their disposal;

(7) Procedures for ensuring that all radioactive, toxic, acid-forming, or other materials constituting a fire, health, safety, or environmental hazard encountered during or created by the mining process are promptly treated, confined, or disposed of in a manner designed to prevent pollution of surface water or ground water, degradation of soils or vegetation, or a threat to human or animal health and safety, and according to state law and rule;

(8) A site monitoring plan to include:

(a) Ground water quality for both production zones and nonproduction zones;
(b) Surface water quality and quantity, including discharge points, streams and lakes, and general direction of flow off the site;
(c) Requirements for water quality sampling and analysis to include:

(i) A description of, or reference for, the procedures and methods used for sample collection, preservation, quality control, and detection levels;

(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory identification number; and

(iii) Signatures of the laboratory manager or technician performing the analyses;

(d) Air quality, including process facilities and other enclosed facilities;
(e) Soils;
(f) Wildlife and aquatics;
(g) Subsidence;
(h) Vegetation; and
(i) Environmental radiological monitoring of surface water, air, soils, and vegetation;

(9) A description of the location within the permit area where underground injection is proposed;

(10) A description of the proposed method of operation, including:

(a) Injection rate, with the average and maximum daily rate and the volume of fluid to be injected;
(b) Injection pressures, with average and maximum injection pressures;
(c) A description of how a negative pressure gradient will be maintained within the production zone;
(d) Proposed well stimulation program;
(e) Type of mining solution to be used;
(f) Proposed injection procedure; and
(g) Expected changes in pressure, native ground water displacement, and direction of movement of mining solution;

(11) The following information concerning the production zone shall be determined:

(a) If the receiving strata is naturally a water-bearing formation:

(i) Fluid pressure;
(ii) Fracture pressure;
(iii) Physical and chemical characteristics of the receiving strata fluids; and
(iv) Compatibility of injected fluids with formation fluids;

(b) If the receiving strata is not a water-bearing formation, the fracture pressure in the production zone;

(12) The procedures to ensure that the installation of recovery, injection, and monitor wells will not result in hydraulic communication between the production zone and overlying or underlying stratigraphic horizons;

(13) The procedures used to verify that the injection and production wells are in communication with monitor wells completed in the receiving strata and employed for the purpose of detecting excursions;

(14) Descriptions of the completion details for all injection and production wells in accordance with §§ 74:29:11:11 to 74:29:11:13, inclusive, and for monitor wells in accordance with §§ 74:29:11:11, 74:29:11:12, and 74:29:11:14;

(15) A schedule for and description of the procedures to demonstrate and maintain mechanical integrity of all injection wells in accordance with § 74:29:11:16;

(16) A corrective action plan in accordance with § 74:29:11:19 for wells that are improperly sealed, completed, or abandoned, consisting of the steps or modifications necessary to prevent movement of fluid into unauthorized zones;

(17) A description of the proposed mining solution and the chemical reactions that may occur during mining as a result of injection of the mining solution;

(18) A subsidence analysis, using established geotechnical principles, that estimates, based upon the proposed mining operation, the effect of subsidence upon the land surface and overlying aquifers;

(19) A spill contingency plan to include reporting, response, assessment, and remedial actions;

(20) A description of measures employed to prevent an excursion, and in the event of an excursion, the plans to report or to verify the excursion, and plans for remedial action in accordance with §§ 74:29:11:35 to 74:29:11:40, inclusive;

(21) An assessment of impacts that may reasonably be expected as a result of the mining operation to water resources and water rights inside the permit area and on adjacent lands, and the steps that will be taken to mitigate these impacts;

(22) A well maintenance plan to ensure:

(a) Wells are sufficiently covered to protect against entrance of undesirable material into the well;
(b) The wells are marked and can be clearly seen;
(c) The area surrounding each well is kept clear of brush or debris; and

(d) Monitoring equipment is appropriately serviced and maintained so monitoring requirements can be met;

(23) To the extent that existing information or data is available, a determination of whether existing water wells, former producing wells, former injection wells, former monitor wells, abandoned wells, and exploration holes in the proposed production area have been appropriately plugged, and if not, a plan for replugging these wells; and

(24) Contingency plans to cope with all shut-ins or well failures so as to prevent the migration of mining solutions into underground sources of drinking water.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323. effective July 2, 2008.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 34-21-13, 45-6B-5 to 45-6B-7, inclusive.

74:29:11:04. Application content requirements -- Reclamation plan. All procedurally complete applications for an in situ leach mine permit shall include, at a minimum, the information and materials related to reclamation required in SDCL 45-6B-5 to 45-6B-7, inclusive; 45-6B-37 to 45-6B-46, inclusive; and §§ 74:29:02:08; 74:29:02:10; 74:29:06:01; 74:29:07:01 to 74:29:07:27, inclusive; and 74:29:08:01 to 74:29:08:03, inclusive; and:

(1) Discussion and information necessary to demonstrate that the operation will achieve ground water restoration, including:

(a) A list of the proposed wellfields or mining units;
(b) A map showing the estimated sequence for restoration of the wellfields;
(c) A potentiometric map of the ground water surface in the producing zone and adjacent aquifers;
(d) The geochemistry of the production zone and of up-gradient and down-gradient aquifers, to include oxidation-reduction conditions and common ions;
(e) The direction and velocity of ground water movement through the producing zone;
(f) The proposed methods to restore ground water quality, based on the geochemistry of the production zone and the chemistry of the mining solutions;
(g) An estimated time schedule for the restoration of each wellfield; and
(h) A proposed restoration table for all ground water quality restoration values;

(2) A plan for well repair, abandonment, plugging, and conversion;

(3) A plan for the disposal of drill cuttings;

(4) An estimated time schedule for achieving reclamation, including ground water restoration and reclamation of surface disturbances in any mining area, to be carried to completion within five years in accordance with SDCL 45-6B-46;

(5) Procedures for reestablishing any surface water quality and surface drainage that may be impacted by the mining operation;

(6) Procedures for permanently disposing of any radioactive, toxic, or acid-forming materials;

(7) Procedures for removing and disposing of structures used in conjunction with the mining operation;

(8) Procedures for mitigating or controlling the effects of subsidence;

(9) The removal and proper disposal of sludges from impoundments;

(10) The removal and proper disposal of geomembranes from impoundments; and

(11) The estimated costs for reclamation as computed in accordance with established engineering principles, including:

(a) The cost of removing and disposing of structures;
(b) The cost of regrading, topsoiling, and reseeding all affected lands;
(c) The cost of facilities, materials, and chemicals used for ground water restoration;
(d) The cost of ground water restoration in the production zone;
(e) The cost of water treatment;
(f) The cost of capping, plugging, and sealing of all wells;
(g) The cost for collecting and analyzing samples from surface and ground water monitoring sites;
(h) The cost for disposing of solid or hazardous waste such as pond sludges or uranium byproduct material handling and disposal systems, including costs for on-site disposal systems; and
(i) The cost for personnel working on reclamation-related activities.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-5 to 45-6B-7, inclusive, 45-6B-41.

74:29:11:05. Determination of ground water restoration demonstration. In deciding whether a demonstration has been made by the operator in accordance with subdivision 74:29:11:04(1), the department shall, at a minimum, consider the premining baseline water quality and geochemistry, including up-gradient and down-gradient aquifers and the direction and velocity of ground water movement through the producing zone.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:06. Ground water restoration table. Based upon the information submitted in accordance with subdivision 74:29:11:04(1) and the determination in accordance with § 74:29:11:05, the department shall develop a ground water restoration table with assigned ground water quality restoration values that are the compliance requirements for restoration of the production and nonproduction zones.

The restoration values shall be based on premining baseline conditions. If the ground water restoration demonstration in accordance with subdivision 74:29:11:04(1) indicates that the operation will be unable to achieve the standard of returning affected ground water to baseline conditions with the application of best practicable technology, the department shall set the restoration values as follows:

(1) To not exceed the applicable maximum contaminant levels in South Dakota ground water quality standards listed in § 74:54:01:04;

(2) To not exceed the health advisory levels or secondary drinking water regulations set by the U.S. Environmental Protection Agency for other parameters not listed in Table 1 and Table 2 of § 74:54:01:04; and

(3) To not exceed values based on an appropriate statistical method for any parameters not listed in South Dakota ground water quality standards, or in U.S. Environmental Protection Agency health advisory lists or secondary drinking water regulations.

Modification of the restoration table shall be done in accordance with § 74:29:11:50.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:07. Establishment of baseline water quality in new mining areas. In addition to the requirements of SDCL 45-6B-7(9), before mining a new area or section in a production zone, the operator shall submit a baseline ground water quality sampling plan to include an adequate number of wells and samples to adequately characterize baseline water quality in production and nonproduction zones in and adjacent to the new mining area. Water samples may not be taken until the specific conductivity, temperature, and pH have stabilized. These samples shall be analyzed for the parameters designated by the department. All baseline wells shall be sampled at least once every month for a minimum of six months before any mining activities. If a well shows results indicating a statistically significant variance for a control parameter, whether due to laboratory error or natural fluctuation, the department may require additional samples be taken. The sample results for each well shall be submitted to the department.

The department shall consider the baseline water quality to determine the upper limit value of a control parameter which, if exceeded, indicates that an injected fluid may be present.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-7, 45-6B-41.

74:29:11:08. Technical revisions to an in situ leach mine permit. The board, through permit conditions, may authorize the department to approve proposed technical revisions to the injection well portion of an in situ leach mine without the requirement of a permit amendment. In addition to the list of technical revisions in § 74:29:03:16, in situ leach mine permit technical revisions may include the following:

(1) Correction of typographical errors;

(2) Modification of monitoring plan reporting requirements;

(3) Modification of quantities or types of fluids injected that are within the capacity of the facility as permitted and would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification;

(4) Well construction requirements;

(5) The addition of wells to the wellfield within the permit area if the requirements of § 74:29:11:20 are met;

(6) Modification of injection rates and pressures;

(7) Modification of a well repair, abandonment, plugging, or conversion plan; and

(8) Delay the plugging requirement of subdivision 74:29:11:18(4) for an unused well.

In situ leach mine permit technical revision applications must comply with the procedural requirements of § 74:29:03:16, as applicable.

The applicant or an interested person may appeal the decision of the department to the board by petitioning for a contested case hearing pursuant to chapter 74:09:01.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-18.

74:29:11:09. Designation of exempted aquifers. The board may exempt an aquifer or a portion of an aquifer and designate it as an exempted aquifer if it meets the following criteria:

(1) It does not currently serve as a source of drinking water; and

(2) It cannot now and will not in the future serve as an underground source of drinking water for any of the following reasons:

(a) It produces minerals, hydrocarbons, or geothermal energy, or can be demonstrated by a permit applicant as part of a permit application for an in situ leach mine to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible;

(b) It is situated at a depth or location that makes recovery of water for drinking water purposes economically or technologically impractical;

(c) It is so contaminated that it would be economically or technologically impractical to render the water fit for human consumption; or

(d) It is located over an injection well mining area subject to subsidence or catastrophic collapse; or

(3) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 milligrams per liter and it is not reasonably expected to supply a public water system.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:10. Injection wells subject to the provisions of this chapter. An injection well for in situ leach mining shall comply with the provisions of this chapter.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:11. Well location and protection. In selecting well locations, protecting wells, and maintaining well covers, the following requirements apply:

(1) The top of the casing shall end at least 12 inches above grade. The top of the casing shall end at least 24 inches above any known high-water conditions of flooding from runoff or ponded water, and the immediate area around the collar of the well shall slope away from the well to direct surface runoff away from the well;

(2) Installation of wells in the channels and flood plains of perennial drainages is prohibited;

(3) Wells installed in an ephemeral or intermittent drainage may not be located in the streambed or the channel of the drainage. During well construction and use, steps shall be taken to minimize the potential for damage to the channel and, to protect the well from damage due to erosion, and to prevent surface water runoff from entering the well;

(4) The well opening shall be closed with a cover to prevent the introduction of undesirable material into the well; and

(5) If a well is to be constructed near buildings or power lines, the well shall be located at a distance from the buildings and power lines to provide access for repairs, maintenance, sampling, and similar work. At a minimum, a well must clear any projection from any building by three feet and clear any power line by ten feet.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:12. Well construction requirements. The method for well construction shall be stated in the permit application. Construction requirements listed in this section apply to all wells installed for activities related to in situ leach mines. The department may grant a deviation from the requirements through a technical revision, if the operator supplies documentation of reliability, mechanical integrity, design, and construction to protect ground waters of the state. Injection and production wells shall be generally constructed as follows:

(1) Annular seals shall be installed to protect the casing against corrosion, ensure structural integrity of the casing, stabilize the upper formations, protect against contamination or pollution of the well from the surface, and prevent migration of ground water from one aquifer or water-bearing strata to another in accordance with the following requirements:

(a) The drill hole shall be of sufficient diameter for adequate sealing and, at any given depth, at least three inches greater in nominal diameter than the outside diameter of the outer casing at that depth. The department may approve an alternative casing design if it provides an equivalent degree of ground water protection;

(b) Before placing the annular seal, the wellbore shall be under static conditions and all loose drill cuttings, rock chips, or other obstructions shall be removed from the annular space by circulating the borehole with water or drilling mud slurry;

(c) The annular sealing material shall be pressure-grouted as required in § 74:02:04:28;

(d) Sealing material shall consist of neat cement grout or bentonite grout mixtures meeting the following requirements:

(i) Cement grout shall be composed of high sulfate resistant Portland cement and shall conform to the requirements of § 74:02:04:53;

(ii) Bentonite grout shall conform to the requirements of § 74:02:04:53.01. The bentonite grout shall be a sodium bentonite material that has been commercially manufactured and specially formulated for use as a well casing seal;

(iii) The sealing material shall be thoroughly mixed before placement so there are no balls, clods, or other features that could reduce the effectiveness of the seal;

(iv) Special quick-setting cement, cement accelerators, retarders, fluid-loss additives, dispersants, extenders, loss-of-circulation materials, and other additives, including hydrated lime to make the mix more fluid or bentonite to make the mix more fluid and reduce shrinkage, may be used, if approved by the department; and

(v) Used drilling mud or drill cuttings from the borehole may not be used as sealing material;

(2) Well casing shall conform to the requirements of §§ 74:02:04:42 to 74:02:04:45, inclusive, and 74:02:04:48. The casing shall be of sufficient strength and diameter to prevent casing collapse during installation, convey liquid at a specified injection/recovery rate and pressure, and allow for sampling. Casing shall be placed with sufficient care to avoid damage to casing sections and joints. All joints in the casing above the perforations or screens shall be watertight. Casing shall be equipped with centralizers placed at a maximum spacing of one per forty feet to ensure even thickness of annular seal and gravel pack; and

(3) Well development shall be done by methods that will not cause damage to the well or cause adverse subsurface conditions that may destroy barriers to the vertical movement of water between water bearing strata.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:13. Well construction requirements -- Injection wells. The following construction requirements apply to injection wells and are in addition to the requirements listed in § 74:29:11:12:

(1) Appropriate logs and other tests shall be maintained and conducted during the drilling and construction of new injection wells. A descriptive report prepared by a knowledgeable log analyst interpreting the results of such logs and tests shall be submitted to the department. The logs and tests appropriate to each type of injection well shall be determined based on the intended function, depth, construction, and other characteristics of the well, availability of similar data in the area of the drilling site, and the need for additional information that may arise from time to time as the construction of the well progresses. Logs and tests shall include deviation checks on all holes to ensure that vertical avenues for fluid migration in the form of diverging holes are not created during drilling;

(2) All injection wells shall be constructed to prevent the migration of fluids to unauthorized zones. The casing and annular sealing material used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and annular sealing requirements, the following factors shall be considered:

(a) Depth to the deepest injection zone;
(b) Injection pressure, external pressure, internal pressure, axial loading, and related information;
(c) Hole size;
(d) Size and grade of all casing strings including well thickness, diameter, nominal weight, length, joint specification, and construction material;
(e) Corrosiveness of injected fluids and formation fluids;
(f) Lithology of injection zone and confining zone; and
(g) Type and grade of cement used to seal the annular space between the outer casing and the borehole.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:14. Minimum requirements for monitor wells. In determining the number, location, construction and frequency of sampling of monitor wells, the following shall be considered:

(1) Whether or not any person is relying on the underground source of drinking water affected or potentially affected by the injection operation;
(2) The proximity of the injection operation to points of withdrawal of drinking water;
(3) The local geology and hydrology;
(4) The operating pressures and whether a negative pressure gradient is being maintained;
(5) The toxicity and volume of the injected fluid, the formation water, and the process by-products; and
(6) The density of the injection wells.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:15. Disposal of drill cuttings. The operator may dispose and bury drill cuttings in a pit at the well site, such as the mud pit used to circulate drilling fluids once the drilling operation has been completed, if the following requirements are met:

(1) The drill cuttings are generated from the well at the well site;

(2) The drill cuttings are not contaminated with brines, oil, production fluids, or drilling fluids other than tophole water or fresh water;

(3) The pit is backfilled with topsoil replaced, and the site is graded to promote runoff with no depression that would accumulate or pond water on the surface. The stability of the backfilled pit shall be compatible with the adjacent land;

(4) The surface of the backfilled pit area is revegetated in accordance with the approved reclamation plan to stabilize the soil surface; and

(5) For wells into uranium ore deposits, the surface of the backfilled drill cutting pit will not exceed the following limits:

(a) The concentration of radium-226 or radium-228 in soil may not exceed the background level by more than 5 picocuries per gram (pCi/g) or 0.185 becquerels per gram (Bq/g), averaged over the first 15 centimeters (cm) of soil below the surface; and

(b) The concentration of natural uranium in soil, with no radioactive decay products present may not exceed the background level by more than 30 pCi/g or 1.11 Bq/g, averaged over the top 15 cm of soil below the surface; and 150 pCi/g or 5.55 Bq/g, average concentration at depths greater than 15 cm below the surface, so that no individual member of the public will receive an effective dose equivalent in excess of 0.1 rem per year or 1 millisievert (mSv) per year.

The department may allow the operator to use alternative drill cutting disposal methods. For wells into uranium deposits, alternative disposal methods may include the segregation and separate disposal of cuttings from the ore zone.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-43.

74:29:11:16. Mechanical integrity testing of injection wells. Before putting a new injection well into service, it must be subjected to mechanical integrity testing. A schedule and methods for mechanical integrity testing shall be included in the permit, and constitute conditions of the permit. The schedule and methods shall meet the following requirements:

(1) One of the following methods must be used to evaluate the absence of significant leaks in the casing, tubing or packer:

(a) Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the department, while maintaining an annulus pressure different from atmospheric pressure measured at the surface;

(b) Pressure test with liquid or gas; or

(c) An alternative test to demonstrate mechanical integrity other than those listed in this subdivision if it is specified in the permit or is approved by the department through a technical revision;

(2) One of the following methods must be used to determine the absence of significant fluid movement into any authorized zone, underground source of drinking water, or water-bearing strata through vertical channels adjacent to the injection bore:

(a) The results of a temperature, neutron, or noise log (e.g., cement bond log);

(b) If the nature of the casing precludes the use of the logging techniques prescribed above, sealing records demonstrating the presence of adequate sealing material to prevent such migration shall be provided; or

(c) If the department elects to rely on sealing records to demonstrate the absence of significant fluid movement, the monitoring program shall be designed to verify the absence of significant fluid movement;

(3) Maintenance of the mechanical integrity of each injection well that has not been plugged or converted shall be demonstrated at least once every five years or on a schedule determined by the department;

(4) Before resuming injection into any injection well that has been damaged by surface or subsurface activity or that has undergone an activity that may jeopardize the mechanical integrity of the well, such as the use of downhole cutting and underreaming tools, the operator must demonstrate the mechanical integrity of that well;

(5) If the department determines that an injection well lacks mechanical integrity, the department shall give written notice of this determination to the operator of the well. Unless the department requires immediate cessation, the operator shall cease injection into the well within 48 hours of receipt of the department's determination. The department may allow plugging of the well or require the operator to perform such additional construction, operation, monitoring, reporting, and corrective action as is necessary to prevent the movement of fluid into unauthorized zones or onto the surface caused by the lack of mechanical integrity. Repair or plugging of the well must be completed within 120 days of the testing that indicates the well lacks mechanical integrity. If the well is repaired rather than plugged, retesting of the well must be completed within 120 days after the repair is completed. The operator may resume injection upon written notification from the department that the operator has demonstrated mechanical integrity; and

(6) Results of mechanical integrity testing shall be reported in accordance with the requirements of § 74:29:11:42.

Injection and production wells shall maintain mechanical integrity until the wells are properly plugged in accordance with the approved plugging and abandonment plan.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:17. Supervision of well construction and testing. All phases of well construction and testing shall be done under the supervision of a driller licensed pursuant to SDCL 46-6-9.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:18. Requirements for plugging drill holes and repair, conversion, and plugging wells. The requirements for plugging drill holes and repair, conversion, and plugging of wells are as follows:

(1) A plan for drill hole plugging and well repair, plugging, and conversion shall be included in the permit application and constitutes a condition of the permit;

(2) All drill holes shall be plugged in accordance with § 74:02:04:67, 74:02:04:69, or §74:02:04:70, as applicable, in a manner that will not allow the movement of fluids either into or between water-bearing strata, including underground sources of drinking water;

(3) The operator shall notify the department 45 days before a well within a production area is converted to other uses than injection;

(4) The operator shall notify the department 10 days before plugging a well so the department can witness the plugging;

(5) All abandoned wells shall be plugged or converted, in accordance with the plugging/conversion plan in the permit, to ensure that ground water is protected and preserved for future use and to eliminate any potential physical hazard. A well is considered abandoned if it has not been used for a period of two years, unless the operator submits to the department and receives approval for a technical revision demonstrating the operator's intention to use the well again and the actions and specifying procedures that will be taken to ensure that mechanical integrity of the well is maintained and the well will not endanger any unauthorized zone, underground source of drinking water, or water-bearing strata;

(6) All wells completed in confined aquifers or encountering more than one aquifer shall be plugged in accordance with § 74:02:04:67;

(7) All wells completed in unconfined aquifers or with only one aquifer encountered shall be plugged in accordance with § 74:02:04:69;

(8) To ensure that the locations of the abandoned wells are adequately identified:

(a) The boundaries of each wellfield and the location of the monitor well ring around each wellfield shall be recorded as a deed notice with the appropriate county;

(b) The top of the plugging mixture in each abandoned well shall clearly show on a steel plate placed atop the sealing mixture the permit number, well identification number, and information required by the department. All marking devices shall be installed at a minimum depth of two feet below the land surface; and

(c) All abandoned wells shall be surveyed using global positioning system equipment that has an accuracy of at least one meter;

(9) Plugging and conversion activities shall be reported in accordance with the requirements in subdivision 74:29:11:42(3)(d).

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:19. Corrective actions for improperly sealed wells. Corrective actions shall be done on wells that are improperly sealed, completed, or abandoned. The operator shall submit a corrective action plan, for department review and approval, for wells that are improperly sealed, completed, or abandoned, consisting of the proposed actions to be taken to prevent movement of fluid into unauthorized zones. The plan shall provide information on each well to be remediated including whether it is a production, monitoring, or abandoned well, the well name or number, and a description of the condition of the well.

In determining the adequacy of corrective actions proposed by the operator to prevent fluid movement between or into water bearing strata, including underground sources of drinking water, the department shall consider the following criteria and factors:

(1) Nature and volume of injected fluid;
(2) Nature of native fluids or by-products of injection;
(3) Geology;
(4) Hydrology;
(5) History of the injection operation;
(6) Completion and plugging records;
(7) Abandonment procedures in effect at the time the well was abandoned; and
(8) Hydraulic connections between water-bearing strata, including underground sources of drinking water.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:20. Authorizing new injection wells within permit area boundary. The board, through permit conditions, may authorize the department to approve proposed technical revisions, in accordance with §§ 74:29:03:16 and 74:29:11:08, to allow the operator to construct and operate new injection wells within the permit area if the following requirements are met:

(1) The wells are of similar construction; and

(2) The cumulative effect of drilling and operation of additional injection wells is considered by the department during evaluation of the technical revision application and is acceptable to the department.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:21. Design and construction of in situ leach mine surface facilities. The permit application must provide conceptual plans and specifications for the in situ leach mine surface facilities. Before construction the operator shall submit plans and specifications for in situ leach mine facilities to the department in accordance with chapter 74:53:04. The plans and specifications must be certified by a registered professional engineer licensed to practice in the State of South Dakota and submitted to the department for review and approval. Plans and specifications are required for all surface facilities and impoundments that contain substances that could impact human health or degrade the environment if spilled, discharged, or released. The plans and specifications are required for the following:

(1) Process or recovery plants and satellite facilities;
(2) Ponds and impoundments;
(3) Pipelines;
(4) Well houses or transfer stations;
(5) Fuel storage areas; and
(6) Byproduct disposal areas.

In situ leach mine surface facilities shall conform to the considerations in § 74:29:07:02 to minimize adverse impacts to the environment, ground water, and surface water and conform to surrounding land uses.

Facilities shall be designed and operated so that all airborne emissions are as low as is reasonably achievable. The primary means of accomplishing this shall be by means of emission controls. During operations and reclamation, radiation from radon emissions or yellowcake, or other radioactive dust from process areas and surface impoundments of byproduct materials, shall be kept as low as is reasonably achievable.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-43.

74:29:11:22. Construction quality assurance plan. Before construction of mine facilities, the operator shall develop a construction quality assurance plan that addresses all aspects of facility construction. The plan shall include the following:

(1) A description of the responsibilities and authorities of key personnel;
(2) A description of the required level of experience, training, and duties of the contractor, the contractor's employees, and the quality assurance inspectors;
(3) A description of the testing protocols for every major phase of construction, including the frequencies of inspections, field testing, and sampling for laboratory testing;
(4) The sampling and field testing procedures and the equipment to be used;
(5) The calibration of field testing equipment;
(6) The laboratory procedures to be used; and
(7) Documentation to be maintained.

The operator shall submit the construction quality assurance plan at the same time the plans and specifications required in § 74:29:11:21 are submitted.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-43.

74:29:11:23. Pond and surface impoundment design and construction requirements. The following design and construction requirements apply to ponds and surface impoundments:

(1) General design and construction requirements include:

(a) A geotechnical and stability analysis shall be performed to determine the suitability of the site and materials for construction;

(b) A minimum of three feet of freeboard;

(c) Maximum side slopes of 3 horizontal to 1 vertical;

(d) A minimum bottom slope of 2 percent;

(e) Provisions for migratory bird and wildlife protection; and

(f) A minimum capacity of normal operating levels plus storage for a 100-year, 24-hour storm event;

(2) If ponds or surface impoundments are to contain fluids that have the potential to pollute surface or ground water, double liner systems must be incorporated into their design. The liners shall be separated by a leak detection, collection, and recovery system. The bottom liner shall be a composite liner, either consisting of an upper geomembrane liner and a lower compacted soil liner, or of a geosynthetic clay liner. Liner systems must be constructed of materials that have the strength, thickness, and chemical properties needed to prevent failure due to pressure gradients, physical contact with the waste or fluids to which the liners are exposed, climatic conditions, stress of installation, and stress of daily operation;

(3) Geomembrane and soil layer composite secondary liner design and construction requirements include, at a minimum:

(a) The soil liner shall have a compacted maximum coefficient of permeability of 1×10^{-7} centimeters per second. The department may require a test pad to document field permeability. The applicant shall use field testing methods approved by the department and shall take an undisturbed sample for laboratory comparison of field values;

(b) The soil liner shall have a one-foot compacted thickness placed in six-inch scarified and compacted lifts with no materials greater than three inches in diameter;

(c) The soil liner shall meet compaction specifications equivalent to 95 percent standard proctor density with a moisture content of 0 to 6 percent of optimum moisture; and

(d) The geomembrane and soil liner shall be in direct contact, with minimal void spaces, to minimize lateral flow of liquids at the geomembrane/soil liner interface;

(4) Geosynthetic clay composite secondary liner design and construction requirements include, at a minimum:

(a) For bentonite clay encapsulated by geotextile layers, the geosynthetic clay liner shall be overlain by a geosynthetic liner. The geosynthetic liner shall have a minimum 60 mil thickness;

(b) For bentonite clay bonded to a geomembrane liner, the geomembrane liner shall have a minimum 60 mil thickness. During installation, the geomembrane will be the upper layer of the composite liner; and

(c) Installation of geosynthetic clay liners must be consistent with the manufacturer's specifications and recommendations;

(5) Geomembrane liner design and construction requirements include, at a minimum:

(a) The primary or uppermost liner shall have an 80 mil thickness, and the secondary or bottom geomembrane shall have a 60 mil thickness;

(b) Geomembrane liners shall be compatible with the fluids to be contained;

(c) Geomembranes shall have a life expectancy longer than the life of the facility; and

(d) Installation of geomembrane liners must be consistent with the manufacturer's specifications and recommendations;

(6) Leak detection, collection, and recovery system design and construction requirements include, at a minimum:

(a) The system shall be designed to collect and rapidly remove fluids to minimize hydraulic head on the secondary liner;

(b) The system shall consist of a drain layer of clean sand or gravel, or a geonet drainage product. The system shall be constructed of materials chemically resistant to the fluids contained in the pond or impoundment;

(c) The system shall have a minimum hydraulic conductivity of 0.01 centimeters per second;

(d) The drain layer shall cover the entire pond or impoundment if possible, but at a minimum must cover the pond or impoundment to the high water mark;

(e) The system shall be capable of draining fluids to a collection gallery for recovery. If the collection gallery is not free draining, it will need to be continuously pumped to minimize hydraulic head on the secondary liner; and

(f) The permit application must include a leakage response plan detailing actions that will be taken in response to the detection of liner system leakage including notification, reporting, monitoring, and repair.

Alternative impoundment lining systems may be approved if they provide an equivalent degree of protection to surface and ground water.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:24. Pipeline design and construction requirements. Pipeline systems must be constructed of materials that have the strength, thickness, and chemical properties needed to prevent failure due to pressure gradients, physical contact with the waste or fluids to which the pipes are exposed, climatic conditions, stress of installation, seismic, and stress of daily operation.

Design and construction requirements for well field pipelines and pipelines between the wellfield and processing and satellite facilities shall include an early detection and shut down capability in the event of pressure drop or loss of flow as approved by the department. This may include automatic motor operated valves with pressure transmitters and manually operated valves, or devices approved by the department.

Alternative pipeline designs may be approved if they provide an equivalent degree of protection to surface and ground water.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:25. Recovery plant and satellite facility design and construction requirements. In situ leach mine recovery plants and satellite facilities shall be designed and constructed to prevent exposure to the public from radiological and chemical hazards. Recovery plant, satellite facility, and well houses shall be designed to contain process solutions, including recovery fluid, or other fluids that pose a chemical hazard. Facilities shall incorporate sumps, curbs, berms, or other structures to collect and recover spills, and shall have monitoring devices or controls for the detection of spills or overflows.

For in situ uranium mining operations, recovery plants, satellite facilities and well houses shall have monitoring and ventilation systems designed to detect and control radon gas buildup in buildings. Recovery plants shall also have monitoring and ventilation systems designed to detect and control releases of yellowcake or other radioactive dust from drying and storage operations.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:26. Uranium byproduct material handling and disposal systems. Radioactive solids shall be disposed of in accordance with U.S. Nuclear Regulatory Commission Source Material License requirements.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-38, 45-6B-41.

74:29:11:27. Disposal of liquid waste. All liquid waste streams shall be:

(1) Collected and retained in lined evaporation ponds or impoundments constructed in accordance with § 74:29:11:23;

(2) Disposed of in a permitted Class V deep disposal well under a federal underground injection control program permit;

(3) Land applied under a ground water discharge permit and solid waste permit in accordance with chapters 74:54:01 and 74:54:02 and article 74:27; or

(4) Treated if necessary and discharged under a surface water discharge permit in accordance with chapter 74:52:01.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:28. Disposal of nonradioactive solid waste. All nonradioactive solid waste shall be disposed of off-site at a permitted solid waste facility or may be disposed of on-site if disposal occurs in a solid waste facility permitted according to the South Dakota solid waste rules in article 74:27. In addition, the demolition and disposal of any structure shall comply with the asbestos requirements in § 74:36:08:02.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-38.

74:29:11:29. Prohibitions -- Injection volumes and pressure. The permit shall include maximum injection volume and pressure limits that may not be exceeded to ensure that fractures are not initiated or propagated in the confining zone or zones, injected fluids do not migrate into any unauthorized zone or underground source of drinking water, and formation fluids are not displaced into any unauthorized zone or underground source of drinking water. At a minimum, operating requirements shall specify, except during well stimulation, that injection pressure at the wellhead be calculated to ensure that the pressure in the production zone during injection does not initiate new fractures or propagate existing fractures. In no case may injection pressure initiate fractures in the confining zone or zones, if confinement is present, or cause the migration of injection of formation fluids into an unauthorized zone or underground source of drinking water. Injection between the outermost casing protecting unauthorized zones and the well bore is prohibited.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:30. Production area operational monitoring requirements. The monitoring plan included in the permit shall describe the procedures for operational monitoring of the quantity and quality of mining solution and ground water in the production area and shall, at a minimum, include provisions for:

(1) The analysis of the physical and chemical characteristics of the injected fluid, with sufficient frequency, and at least monthly, to yield representative data. Manifold monitoring may be used in cases of facilities consisting of more than one injection well operating with a common manifold. Separate monitoring systems for each well are not required provided the operator demonstrates to the department that manifold monitoring is comparable to individual well monitoring;

(2) Monitoring injection pressure and either flow rate or volume twice a month, or metering and recording daily injected and produced fluid volumes;

(3) Monitoring the fluid level in the injection zone twice a month;

(4) Monitoring ground water quality, including the control parameters, and fluid levels in monitoring wells completed above and below the production zone a minimum of every month; and

(5) A minimum of quarterly monitoring of department specified wells within one-quarter mile of the production site to detect migration of recovery fluids from the production zone.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:31. Production area monitor well location and spacing requirements. Production area monitor wells may be located no more than 400 feet from the production area and with spacing no greater than 400 feet between monitor wells. Alternative monitor well locations and spacing may be considered if the operator can demonstrate that the proposed location or spacing will adequately provide monitoring coverage to detect excursions in a timely manner. The department may require closer well spacing in the down gradient ground water flow direction from the production zone.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:32. Nonproduction zone monitoring. At a minimum, nonproduction zone monitor wells shall be completed in any aquifer potentially affected by injection into the production zone. These monitor wells shall be located within the production area and up to 200 feet outside of the production area, with the majority of these wells located in the down gradient direction of ground water flow in the aquifer in which the wells are completed.

For the first overlying aquifer above the production zone, a minimum of one well for every one acre of production area shall be completed. For each additional overlying aquifer, a minimum of one well for every three acres of production area shall be completed. For each underlying aquifer potentially affected by injection, the operator shall propose a monitor well spacing plan subject to approval by the department.

Alternative nonproduction zone monitor well locations and spacing may be considered if the operator demonstrates that the proposed location or spacing will adequately provide monitoring coverage.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:33. Subsidence monitoring. Subsidence shall be controlled to the extent that the values and uses of the surface land resources and aquifers will not be degraded. If the injection wells penetrate an aquifer in an area subject to subsidence or catastrophic collapse, an adequate number of monitor wells shall be completed into that aquifer to detect any movement of injected fluids.

The monitor wells shall be located outside the physical influence of the subsidence or collapse.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-42.

74:29:11:34. Confinement of recovery fluid. Recovery fluid shall be restricted to those production zones that have been classified by the board as an exempted aquifer within the area of production zone monitor wells. If recovery fluids migrate outside the production zone or into aquifers above or below the production zone, the operator shall report, monitor, and remediate the excursion in accordance with §§ 74:29:11:35 to 74:29:11:40, inclusive. Recovery fluids are assumed to be present in an unauthorized zone if a verifying analysis confirms that a control parameter in a monitor well is detected at a concentration equal to or greater than the upper limit value.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:35. Reporting excursions. The operator shall verbally report any suspected excursion to the department within 24 hours of detection and initiate actions required by § 74:29:11:36. The operator shall provide monitoring data or other information that indicates any contaminant may cause adverse impacts to an unauthorized zone or underground source of drinking water. The operator shall report any noncompliance with a permit or malfunction of the injection system that may cause fluid migration into or between unauthorized zones.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:36. Verifying analysis. If a routine sample analysis indicates the presence of a control parameter exceeding its upper limit value in a monitoring well, the operator shall complete a verifying analysis of samples taken from the affected well and the monitoring wells adjacent to the affected well. The operator shall take the verifying analysis within two working days after being notified by the laboratory of monitoring results. If the results from the first and second sampling event both indicate an excursion has occurred, then an excursion is considered verified for the purpose of initiating remedial action in accordance with § 74:29:11:38.

If the results from the first and second sampling events provide conflicting information about whether or not an excursion has occurred, then a third sampling event must be conducted within 24 hours of the receipt of the results from the second sampling event. However, if the results of the confirmatory sampling are not complete within seven days of the initial sampling event that indicated an excursion might be present, the excursion will be considered verified.

All sample analyses results for excursion events shall be submitted to the department within two business days after the operator receives them from the laboratory.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:37. Excursion sampling frequency. Throughout the time when any control parameter is present in a monitor well, a water sample shall be taken at least two times a week from the well. The samples must be analyzed for all control parameters within one week after the sample is taken.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:38. Remedial action for excursion. If the verifying analysis indicates that an excursion has occurred, the operator shall submit to the department for review and approval a remedial action plan and a ground water analysis report to include the following:

(1) A description of the excursion and its cause;

(2) The period of excursion, including exact dates and times;

(3) If the excursion has not been corrected, the anticipated time it is expected to continue;

(4) Steps taken or planned to reduce, eliminate, and prevent recurrence of the excursion; and

(5) Sample analyses for pH, calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, silica, uranium, ammonia, nitrate, total dissolved solids (180 degrees C.), specific conductance, and any other parameter specified by the department. One or more parameters may be excluded, if the department determines that the concentration or value of a specific parameter is not likely to occur as a result of the in situ leach mine.

The operator shall report every two weeks. All reports shall be mailed to the department, postmarked within two days of the end of each report period. The first report period shall begin the day the presence of a control parameter exceeding its upper limit value in a monitor well is verified. The operator shall continue to make remedial action reports until cleanup is accomplished.

Following review by the department, the operator shall use any method the operator judges necessary and prudent to define the extent of the excursion and to clean up recovery fluids in an expeditious manner.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:39. Excursions -- Controlled. An excursion is controlled if it can be demonstrated through water quality and ground water gradient or if applicable, pressure measurements, that recovery fluid in unauthorized areas is declining.

If the excursion is controlled, but the control parameters have not been restored to values consistent with local baseline water quality within 60 days following confirmation of the excursion, the operator shall submit, within 90 days following confirmation of the excursion, a plan and schedule, for approval by the department, for bringing the well or wells off excursion. The plan and schedule can be submitted as part of the excursion report required every two weeks in § 74:29:11:38.

Clean up is considered accomplished if the water quality in the affected monitor wells has been restored to values consistent with local baseline water quality and the restoration is confirmed by three consecutive weekly samples. The department may determine that clean up is not necessary if the operator demonstrates that the change in water quality is not due to the presence of recovery fluids.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:40. Excursions -- Not controlled. If an excursion is not controlled within 30 days following confirmation of the excursion, a sample must be collected from each of the affected monitoring wells and analyzed for the following parameters: ammonia, antimony, arsenic, barium, beryllium, bicarbonate, boron, cadmium, calcium, carbonate, chloride, chromium, conductivity, copper, fluoride, gross alpha, gross beta, iron, lead, magnesium, manganese, mercury, molybdenum, nitrate, nitrate + nitrite, pH, potassium, selenium, sodium, sulfate, radium-226 and 228, thallium, total dissolved solids, uranium, vanadium, and zinc, and any other parameter specified by the department, unless the department determines that the concentration or value of one or more parameters is not likely to occur as a result of the in situ leach mine.

If an excursion is not controlled within 60 days following confirmation of the excursion, the department may require the operator to conduct additional sampling of monitoring wells, installation of additional monitor wells, termination of injection in the portion of the wellfield in which the excursion originated, or a combination of approaches to assure control within a timely manner.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:41. Criteria for determination of adequacy of remedial action plan. In determining the adequacy of the remedial action plan required in § 74:29:11:38 proposed by the operator and in determining the additional steps needed to prevent an excursion into unauthorized zones or underground sources of drinking water, the following criteria and factors shall be considered by the department:

(1) Toxicity and volume of the injected fluid;
(2) Toxicity of formation fluids or by-products of injection;
(3) Whether or not any person is potentially affected by the injection;
(4) Geohydrology;
(5) History of the injection operation;
(6) Completion and plugging records;
(7) Abandonment procedures in effect at the time the well was abandoned; and
(8) Hydraulic connections with underground sources of drinking water.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:42. Reporting requirements. The operator's reporting requirements are as follows:

(1) A qualitative analysis and ranges in concentrations of all constituents of injected fluids at least once within the first year of authorization and thereafter whenever the mining solution is modified to the extent that the initial data are incorrect or incomplete. The operator may request that any proprietary information be considered confidential in accordance with SDCL 45-6B-19;

(2) All chemical analyses submitted to the department in accordance with the permit shall include the requirements of subdivision 74:29:11:03(8)(c);

(3) Quarterly monitoring reports shall include, at a minimum:

(a) The results of any periodic tests required by the permit or a remedial action plan that are performed during the reported quarter;

(b) The results of all mechanical integrity testing conducted during the reported quarter, including the following information identified by injection well;

(i) Date of mechanical integrity testing;
(ii) Identification of the method by which mechanical integrity was established; and
(iii) Verification of whether mechanical integrity was established for a well, to include the identification of any well that failed mechanical integrity testing and a description of the method of plugging or repair;

(c) The status of corrective action on defective wells, required in accordance with § 74:29:11:19; and

(d) The results of well repair and plugging required in accordance with § 74:29:11:18, including a statement that the wells were plugged in accordance with the permit, or documentation that prior approval was obtained from the department if plugging procedures differed from the procedures approved in the permit. This documentation shall be included in the report and contain a description of the procedures used specifying the differences between the approved method and the alternate method. To ensure the well is plugged and there has been no bridging of the sealing material, the operator shall provide the department with documentation that the volume of material placed in the well at least equals the volume of the empty hole;

(4) During excursions, results from excursion-related monitoring shall be reported in accordance with the requirements of § 74:29:11:38; and

(5) In addition to the requirements of SDCL 45-6B-36, an annual report, that includes at a minimum:

(a) The name and address of the operator and the permit number;

(b) A map showing the location of all production and monitoring wells installed in the past year and showing all new areas where mining is expected to begin during the next year;

(c) A map showing where ground water restoration has been achieved, is actively taking place, is expected to begin during the next year, a description of ground water restoration methods used, and an expected timeline to achieve ground water restoration;

(d) The total and previous year's amount of affected land;

(e) The progress of all reclamation work including the total and previous year's amount of land that has undergone final reclamation and that meets the required post-mining land use, and the total and previous year's amount of land that has undergone final reclamation that does not meet the required post-mining land use;

(f) The total quantity of mining solution injected and the total quantity of recovery fluid extracted during the reporting period for each wellfield area including a description of how these quantities were determined;

(g) Monitoring program results that have not been previously reported;

(h) An updated potentiometric surface map for all aquifers that are or may be affected by the mining operation, if requested by the department;

(i) Supporting data sufficient to demonstrate ground water restoration;

(j) A summary of all excursions for the report year including remediation progress;

(k) A brief discussion of the coming year's operational plans including any anticipated technical revisions or amendments that might require department or board approval; and

(l) The report for the inspection and maintenance of mine facilities required by subdivision 74:29:11:03(5).

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 34-21-26, 45-6B-36, 45-6B-86.

74:29:11:43. Well construction records. For all wells constructed at an in situ leach operation, well drillers shall prepare and file well construction records as required by § 74:02:04:65. The well construction records shall be submitted to the department within one year of well completion.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:44. Well plugging records. For any well abandoned and plugged at an in situ leach mine, well drillers shall prepare and file well plugging records as required by § 74:02:04:71. The plugging records shall be submitted to the department within 60 days after plugging the well or at the time of the next quarterly report (whichever is less). For other wells, well plugging records shall be submitted to the department within one year after the abandonment of any well.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:45. Maintenance and retention of records. The operator shall retain records of all monitoring information at the mine site, including the following:

(1) Laboratory analyses, including a description of or reference for the procedures and methods used for sample collection, preservation, and quality control and the name, address, telephone number, and laboratory identification number of the laboratory performing the analyses;

(2) Records of all data used to complete permit and license applications and any supplemental information;

(3) Calibration and maintenance records and all original records of continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the permit application;

(4) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures; and

(5) Information requested by the department for inclusion in the annual report.

Records shall be retained for a period of at least three years from the date of the sample, measurement, or report. This period may be extended by request of the department at any time. The department may require the operator to deliver the records to the department at the conclusion of the retention period.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-36, 45-6B-41.

74:29:11:46. Ground water restoration requirements. When the mining of a production area is completed, the operator shall notify the department and immediately proceed to reestablish ground water quality in the affected production area to levels consistent with the values listed in the restoration table contained in the permit.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:47. Restoration sampling procedure. After notifying the department that mining in a production area is complete and that ground water restoration has begun, the operator shall sample and complete an analysis of designated baseline wells agreed upon by the department and the operator in the mine production area for all restoration values listed in the permit restoration table on a monthly basis. If this analysis indicates that approved restoration values have been achieved, the operator shall file with the department a written report of the results. After filing the report, restoration sampling shall be conducted at bimonthly intervals.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:48. Restoration progress reports. Beginning six months after the indicated date for initiation of restoration of a production area, the operator shall provide semiannual progress reports to the department until restoration is accomplished for the particular area.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:49. Final restoration -- Restoration values achieved. The operator shall notify the department if the results of six consecutive bimonthly sample sets show that ground water quality in the production zone has met the restoration values on the restoration table and that the restoration values indicate stable trends. After acknowledgement in writing by the department confirming ground water restoration, the operator may request, through a technical revision, that the department modify the site water quality monitoring plan, which may include a reduction in sampling frequency, parameters to be measured, and the number of wells to be sampled in the restored production zone.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:50. Restoration values not achieved. If the restoration values established in the restoration table of the mine permit are not met after application of best practicable technology, the operator may submit an amendment in accordance with SDCL 45-6B-18 and chapter 74:29:03 to establish alternative restoration values.

To provide justification for alternative values, the amendment shall include all available water quality data for the restoration unit in question, a narrative discussing the restoration techniques used including a demonstration that best practicable technology was applied, and the rationale for altering the restoration parameters.

In determining whether the restoration table should be altered for a particular restoration zone, the department shall consider the following:

(1) Uses for which the ground water was suitable at baseline quality levels;
(2) Actual existing use of the ground water in the area before and during mining;
(3) Potential for future use of the ground water at baseline quality and at proposed restoration parameters;
(4) The effort made by the operator to restore the ground water to the restoration parameters;
(5) The availability of existing technology to restore the ground water to the restoration parameters; and
(6) The potential harmful effects of levels of particular parameters.

The alternative restoration values shall conform to the requirements of § 74:29:11:06.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41.

74:29:11:51. Closure of mine site following restoration. After completion of final restoration of all permit area aquifers, the operator shall plug wells that will not be used for postclosure monitoring, and reclaim the facilities in accordance with approved plans specified in the permit and reclamation plan. When well plugging and surface reclamation is complete, the operator shall notify the department. A final closure inspection and a review of water quality data shall be conducted by the department. Based on the inspection and review, the department shall make a recommendation to the board at a closure hearing. If the board determines the operator has achieved restoration of the aquifers and reclamation of surface facilities, the postclosure care and maintenance period shall begin.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-91.

74:29:11:52. Reclamation of in situ leach mine surface facilities. The reclamation of surface facilities shall conform to §§ 74:29:05:04, 74:29:05:05, and 74:29:07:13. Ponds and impoundments must meet the following reclamation requirements:

(1) Pond sludges must be chemically characterized to determine whether further treatment is necessary before disposal. Sludges shall be removed for disposal at an off-site permitted solid waste facility or buried and covered on-site in a solid waste facility permitted in accordance with the applicable solid waste rules in article 74:27;

(2) Geomembranes shall be removed from impoundments, unless it is demonstrated to the board's satisfaction that the geomembranes will serve a useful function consistent with the approved postmining land use. The geomembranes material must be disposed of in a permitted landfill or may be disposed of on-site only if the operator first secures a solid waste permit in compliance with the South Dakota solid waste rules in article 74:27; and

(3) Radioactive waste shall be disposed of in accordance with a U.S. Nuclear Regulatory Commission Source Material License.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-38, 45-6B-41.

74:29:11:53. Radiation survey of surface facilities at mine closure. For uranium in situ leach mines, at mine closure the operator shall submit a radiation sampling and survey plan to the department for review and approval. The plan shall include a comparison to the baseline radiation survey required by subdivision 74:29:11:02(2). In accordance with the plan, the operator shall conduct a radiation survey of the surface facilities, to include the process or recovery facility, ponds, impoundments, wellfields, and all areas surveyed during the baseline survey. The operator shall submit a report of the results of this survey. The operator shall, as appropriate:

(1) Report the following levels:

(a) Gamma radiation in units of microroentgen per hour (μR/hr) or millisieverts per hour (mSv/hr) at 1 meter (m) from surfaces;

(b) Radioactivity, including alpha and beta, in units of disintegrations per minute (dpm), microcuries (μCi), or megabecquerels (MBq) per 100 square centimeters (cm^2) for surfaces;

(c) Microcuries (μCi) or megabecquerels (MBq) per milliliter for water; and

(d) Picocuries (pCi) or becquerels (Bq) per gram (g) for solids such as soils or concrete.

(2) Specify the manufacturer's name, model, and serial number of survey instruments used and certify that each instrument is properly calibrated and tested.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-43.

74:29:11:54. Radiation standards for closure of surface facilities. For in situ uranium mine operations, closed surface facilities shall be considered suitable for release for unrestricted use if the following limits are not exceeded:

(1) The concentration of radium-226 or radium-228 in soil, averaged over any 100 square meters (m^2), does not exceed the background level by more than 5 picocuries per gram (pCi/g) or 0.185 becquerel per gram (Bq/g), averaged over the first 15 centimeters (cm) of soil below the surface;

(2) The contamination of vegetation does not exceed 5 picocuries per gram (pCi/g) or 0.185 becquerels per gram (Bq/g), based on dry weight, for radium-226 or radium-228; and

(3) The concentration of natural uranium in soil, with no radioactive decay products present, averaged over any 100 square meters (m^2), does not exceed the background level by more than 30 pCi/g or 1.11 Bq/g, averaged over the top 15 cm of soil below the surface, and 150 pCi/g or 5.55 Bq/g, average concentration at depths greater than 15 cm below the surface, so that no individual member of the public will receive an effective dose equivalent in excess of 0.1 rem (Roentgen equivalent man) per year or 1 millisievert (mSv) per year.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 34-21-15, 45-6B-81.
Law Implemented: SDCL 45-6B-43.

74:29:11:55. Postclosure plan -- Estimated costs for postclosure care. As part of the postclosure plan required by SDCL 45-6B-91, before the start of the postclosure period, the operator shall submit to the department the estimated costs for postclosure care and maintenance as computed in accordance with established engineering principles, including:

(1) The cost of long-term ground water restoration to ensure continued compliance consistent with the values listed in the restoration table contained in the permit for both production and nonproduction zones;

(2) The cost of operation of monitoring systems; and

(3) The cost of inspection and maintenance activities to ensure compliance with all applicable reclamation, design, and operating criteria.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-91.

74:29:11:56. General postclosure inspection and maintenance activities. During the postclosure period, the operator shall conduct site maintenance and other activities in accordance with the approved postclosure plan, including the following, as applicable:

(1) Conduct at minimum quarterly inspections of the entire mine site to monitor, the following:

(a) Condition of vegetation;
(b) Erosion and sediment controls;
(c) Well heads;
(d) Subsidence;
(e) Impoundments;
(f) Safety hazards; and
(g) Other potential problems;

(2) Maintain and repair, as necessary, damage to vegetation, including topsoiling, seeding, planting, fertilizing, and mulching, as necessary;

(3) Continue noxious weed control;

(4) Maintain erosion and sediment control structures in proper operating order, as necessary. If the need for sediment and erosion controls in an area becomes unnecessary the structures may be removed for aesthetic purposes;

(5) Repair leaking well heads, or replug wells as necessary;

(6) Maintain and repair impoundments to ensure stability;

(7) Monitor areas of subsidence, fencing subsidence areas as necessary, or undertaking slope reduction as necessary;

(8) Maintain locking gates, fences, and warning signs to limit access to the site;

(9) Remove or dispose of trash and other waste that accumulates during the postclosure period;

(10) Maintain fire protection; and

(11) Provide equipment, tools, and power to conduct maintenance activities.

All maintenance and repair work must be documented in an annual postclosure report submitted to the department.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-91.

74:29:11:57. Postclosure operation of monitoring systems. During the postclosure period, the operator shall continue surface and ground water quality monitoring in accordance with the approved postclosure plan or water quality monitoring plan. The results of all water quality monitoring and laboratory analyses must be included in the annual postclosure report.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-91.

74:29:11:58. Ground water contamination during the postclosure period. Ground water contamination detected during the postclosure period shall be confirmed by additional sampling conducted by the operator as required by the department and shall be evaluated to determine whether remedial action is required. The remedial action required by the operator depends upon the extent of the impact, based upon the following:

(1) Whether the impact is a result of the mining operation;
(2) The impacts to the health and well being of the people, animals, wildlife, aquatic life, and plant life affected;
(3) The social and economic value of the impacted aquifer;
(4) The technical practicability and economic reasonableness of reducing or eliminating the source of pollution;
(5) The effect upon the environment; and
(6) The potential impacts to other waters of the state.

Based upon the evaluation, the department shall determine whether remedial action is required. If the department determines remedial action is required, the operator shall submit a remedial action plan. Depending upon the severity of the impact, the remedial actions may range from additional monitoring to a resumption of ground water restoration activity. The postclosure financial assurance shall be recalculated to account for the cost of remedial actions.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-41, 45-6B-91.

74:29:11:59. End of the postclosure period. The postclosure period shall end when the restored aquifer's water quality consistently meets the restoration values on the permit restoration table and care and maintenance for the site is equal to ordinary care and maintenance for lands not affected.

Source: 33 SDR 160, effective April 17, 2007.
General Authority: SDCL 45-6B-81.
Law Implemented: SDCL 45-6B-91.

74:29:11:60. Public notice for in situ leach mines. The department shall provide on its website quarterly updates on the operational status, compliance status, technical revisions submitted or approved, public notices, and other pertinent information regarding an active in situ leach mine permit.

Source: 33 SDR 160, effective April 17, 2007; 34 SDR 323, effective July 2, 2008.
General Authority: SDCL 34-21-12, 45-6B-81.
Law Implemented: SDCL 34-21-26, 45-6B-36, 45-6B-86.