PROPOSED REGULATION OF THE

STATE ENVIRONMENTAL COMMISSION

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P2017-07

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EXPLANATION – Matter in ***italics*** are new; matter with ~~[omitted material]~~ are material to be omitted.

AUTHORITY: §§1-7, 10-14, 16-21, NRS 445A.425 and 445A.465; §§ 8, NRS 445A.425, 445A.465 and 445A.590; §§ 9, NRS 445A.425, 445A.465 and 445A.495; §§ 15, NRS 445A.425, 445A.430 and 445A.465.

Section 1. NAC 445A.359 is hereby amended to read as follows:

445A.359 "Facility" means all portions of a mining operation, including, but not limited to, the mine, waste rock piles, or***e*** piles, beneficiation process components, processed ore disposal sites, and all associated buildings and structures. The term does not include any process component or nonprocess component which is not used for mining or mineral production, and has not been used in the past for mining or mineral production as part of an operation which is active as of September 1, 1989.

Sec 2. Chapter 445A of NAC is hereby amended by adding thereto a new section to read as follows:

"Mitigation or Mitigated" includes one or more of the following:

1. Avoiding the potential for degradation of waters of the State by taking or not taking a certain action or parts of an action;

2. Minimizing degradation, or the potential for degradation, of waters of the State by limiting the degree or magnitude of an action and its implementation;

3. Rectifying degradation, or the potential for degradation, of waters of the State by taking corrective action as defined at NAC 445A.2262; and

4. Reducing or eliminating degradation, or the potential for degradation, of waters of the State over time by preservation and maintenance during the life of an action.

Sec 3. NAC 445A.367 is hereby amended to read as follows:

445A.367 "Permanent closure" means that time in the ~~[operating]~~ life of a facility when activities for the final stabilization, removal or mitigation of sources are ~~[initiated]~~***undertaken***.

Sec 4. NAC 445A.383 is hereby amended to read as follows:

445A.383 "WAD cyanide" means the ***weak acid dissociable*** cyanide concentration as determined by ***one of the following methods:***

1. ASTM D2036-082, Method C, ~~[Weak Acid Dissociable Cyanide, D2036-082,]~~Part 31 ~~[of *American Society of Testing Materials Book of Standards*]~~;

2. ASTM D2036-06, Method C, followed by Part 16.2 (titrimetric), 16.3 (colorimetric), or 16.4 (ion-specific electrode);

3. ASTM D2036-09, Method C, followed by Part 16.2 (titrimetric), 16.3 (colorimetric), or 16.4 (ion-specific electrode);

4. Standard Methods (SM), online edition, SM 4500-CN-I, followed by SM 4500-CN-D (titrimetric), SM 4500-CN-E (colorimetric), or SM 4500-CN-F (ion-specific electrode); or

5. Another version or method approved in writing by the Department and scientifically demonstrated as achieving equivalent performance to one of the above methods in determining weak acid dissociable cyanide.

Sec 5. Chapter 445A of NAC is hereby amended by adding thereto a new section to read as follows:

"Waste Rock" means a naturally occurring material that is mined as part of the process to reach the ore but from which a metallic mineral of economic value cannot be extracted at the time that it is mined.

Sec 6. NAC 445A.392 is hereby amended to read as follows:

445A.392 1. Except as otherwise provided in subsection 2, a person wishing to construct or modify materially a process component at a facility must file an application for a permit pursuant to NAC 445A.394.

2. Persons wishing to construct a small-scale, ~~[pilot, testing,]~~ placer, or other facility which relies solely on physical separation methods to process ore, may file an abbreviated application for a permit pursuant to NAC 445A.410~~[, 445A.412 and]~~ ***or*** 445A.414, ***respectively***. The application must be accompanied by the appropriate fee as required by NAC 445A.232.

Sec 7. NAC 445A.398 is hereby amended to read as follows:

445A.398 The proposed operating plans for a facility must include:

1. A description of the mineral processing circuit which includes a flow chart of the facility and the range of operating conditions for which the process components were designed.

2. A plan for the management of process fluids which describes the methods to be used for the monitoring and controlling of all process fluids. The plan must provide a description of the means to evaluate the conditions in the fluid management system so as to be able to quantify the available storage capacity for meteoric waters and to define when and to what extent the designed containment capacity has been exceeded.

3. A plan for monitoring the facility which describes:

(a) The water quality in the area;

(b) The monitoring locations the applicant proposes to sample routinely in order to evaluate surface and groundwater at the site that may be affected by the operation of the facility;

(c) An analytical profile of each surface and groundwater that may be affected by the operation of the facility; and

(d) The locations of the leak detection systems, the frequency for sampling these systems and the analytical profile to be used for evaluation of the samples.

4. ***A waste rock management plan which:***

(a) Presents representative characterization data and sample locations from the waste rock that will be mined by the facility;

(b) Provides an evaluation of the potential for the waste rock to degrade waters of the State;

(c) Describes the size and location of all proposed waste rock storage facilities; and

(d) Describes the sampling and analysis protocols that will be used to verify the character of the waste rock once it is mined by the facility.

➥ ***If the characterization data indicate the potential to degrade waters of the State, the waste rock management plan must describe management protocols and/or engineered containment that will be used to eliminate the potential over the short term and long term.***

5. ~~[4]~~ A plan for responding to emergencies which:

(a) Describes what actions must be initiated and by whom as a result of various possible failures in the fluid management system which would result in releases of pollutants; and

(b) Is designed to minimize the environmental impact resulting from the release of process fluids.

6. ~~[5]~~ A temporary closure plan resulting from conditions described in subsection 1 of NAC 445A.444 which describes the activities which must be maintained during the time of closure.

7. ~~[6]~~ A tentative plan for the permanent closure of the facility which describes the procedures, methods, and schedule for stabilizing spent process materials ***and all other sources at the facility***. The plan must include:

(a) Procedures for characterizing spent process materials as they are generated; ~~[and]~~

(b) The procedures to stabilize all process components with an emphasis on stabilizing spent process materials and the estimated cost for the procedures~~.~~***; and***

(c) Preliminary conceptual closure plans adequate for initial reclamation and closure cost estimation.

Sec 8. NAC 445A.402 is hereby amended to read as follows:

445A.402 1. The Department shall, at least 30 days before the issuance of a permit or denial of an application:

(a) Circulate a public notice in a manner intended to inform interested and potentially interested persons.

(b) Cause to be published ***on an Internet website designed to give general public notice*** ~~[in a newspaper of general circulation within the geographic area of a proposed facility,]~~ a***n electronic copy of the Director of the Department's*** notice of ~~[the]~~intent to issue the permit or deny the application.

(c) Mail to the applicant and the landowner, if other than the applicant, members of the board of county commissioners of the county in which the facility is to be located, the Division of Minerals, the Division of Water Resources of the Department, and any other person or group who so requests, written notice of the intent to issue a permit or deny the application.

2. Notice given pursuant to subsection 1 must include:

(a) The name, address and telephone number of the Department;

(b) The name and address of the applicant;

(c) The location of the proposed facility;

(d) The tentative decision of the Department to issue a permit or deny the application;

(e) A description of the procedure for:

(1) Making a final decision, which must include 30 days for interested persons to submit to the Department written comments on the tentative decision to issue a permit or deny the application; and

(2) Requesting a public hearing, if one has not been scheduled; and

(f) The specific location where interested persons may obtain further information or inspect and copy the draft permit, statement and fact sheet, and other relevant forms or documents.

Sec 9. NAC 445A.409 is hereby amended to read as follows:

445A.409 1. If an application is approved, a single permit must be issued for the construction, operation and closure of the facility. A valid permit must be maintained until permanent closure***, and post-closure monitoring pursuant to NAC 445A.446, subsection 3, are*** ~~[is]~~ complete***, and the Department has terminated the permit***.

2. A permit may be issued for a maximum term of 5 years, at which time the holder of the permit may apply for renewal.

Sec 10. NAC 445A.411 is hereby deleted in its entirety:

[445A.411 Pilot facility or testing facility: Conditions for issuance of permit. The Department may issue a permit to construct, operate and close permanently a pilot facility or testing facility if:

1. The facility is to evaluate less than 10,000 tons of ore, except that a greater amount may be permitted if the applicant demonstrates that the greater amount is necessary for a specific purpose in the testing program; and

2. The applicant has clearly shown that the facility will not degrade the waters of the State.

A permit to operate a pilot facility or testing facility may not exceed 1 year for a single test or 2 years for a facility that has several tests to conduct.]

Sec 11. NAC 445A.412 is hereby deleted in its entirety:

[445A.412 Pilot facility or testing facility: Contents of application for permit. An application for a permit to construct, operate and close permanently a pilot facility or testing facility must include:

1. The information required in paragraphs (a) to (d), inclusive, of subsection 2 of NAC 445A.394;

2. The quantity of the material to be evaluated;

3. The time required to complete all testing;

4. The type and quantity of chemicals to be utilized in the testing process;

5. A copy of the plans for the system and individual process components;

6. A description of the monitoring systems which are to be used to satisfy the requirements of NAC 445A.424;

7. A description of the procedures to be used to stabilize and dispose of the spent ore;

8. A topographic map of the area for the test site;

~~9. A description of hydrogeologic conditions at the site; and~~

~~10. A draft plan for the permanent closure of the facility, including a plan to stabilize areas disturbed by the operations of the facility.]~~

Sec 12. NAC 445A.413 is hereby deleted in its entirety:

~~[445A.413 Pilot facility or testing facility: Construction of application indicating need to conduct testing beyond 2 years. An application for a permit to operate a pilot facility or testing facility which indicates a need to conduct testing beyond 2 years will be construed to be a request to operate a facility subject to the filing requirements of NAC 445A.394 to 445A.398, inclusive.]~~

Sec 13. NAC 445A.414 is hereby amended to read as follows:

445A.414 1. An applicant for a permit to construct, operate and close permanently a facility which utilizes physical separation methods of concentrating ore such as placer mining ~~[and flotation]~~ methods, and which uses only coagulants~~[,]~~ ***and*** flocculants ~~[and reagents]~~ submitted to and approved by the Department, must submit to the Department:

(a) The information required by paragraphs (a) to (e), inclusive, of subsection 2 of NAC 445A.394;

(b) An abbreviated area of review which covers only the site and the adjacent area, including an identification of all surface water within 1/2 mile of the site and the depth and quality of all groundwater beneath the site;

(c) A draft operating plan which describes the circuit for concentrating the ores and identifies all process components;

(d) A ~~[multi-element spectrographic assay]~~***meteoric water mobility procedure and Profile I analysis (ASTM E2242-13 method, or the most recently promulgated version thereof that is***

approved in writing by the Department and scientifically demonstrated as achieving equivalent performance to the ASTM E2242-13 method in determining Profile I constituent concentrations) or other approved method of analysis which characterizes the ore body. ***This analysis is not required for facilities that will process only uncrushed alluvium, unless otherwise required in writing by the Department based on a specific concern regarding the potential to degrade waters of the State***;

(e) The results of an analysis of the process make up water and process water for the inorganic constituents listed in NAC 445A.453 and 445A.455 to determine which and to what extent the process water burden of these elements is increased; and

(f) A certification that the applicant will not utilize any chemicals in the process except those submitted to and approved by the Department.

2. The use of a chemical not approved by the Department removes the facility from this category of operation and requires the holder of the permit to meet the requirements established in NAC 445A.394 to 445A.398, inclusive.

Sec 14. NAC 445A.4155 is hereby amended to read as follows:

445A.4155 1. A modification to the design of a facility for which a permit has been granted by the Department does not require a new public notice if:

(a) The modification requires review by the Department pursuant to NAC 445A.350 to 445A.447, inclusive; and

(b) The Commission determines that the modification is not a modification of such significance as to constitute a "minor modification" or a "major modification," as those terms are described in NAC 445A.416 and 445A.417, respectively.

2. Such a modification may not extend the term of the permit.

3. Such a modification is referred to as an engineering design change.

Sec 15. NAC 445A.418 is hereby amended to read as follows:

445A.418 1. The fee for a minor modification to a permit is one-half the amount of the renewal fee for a permit, up to a maximum fee of $5,000.

2. The fee for a major modification to a permit is equal to the amount of the renewal fee for a permit.

3. The fee for ~~[the type of a modification described in NAC 445A.4155]~~***an engineering design change modification*** is $500.

Sec 16. NAC 445A.424 is hereby amended to read as follows:

445A.424 1. A facility, regardless of size or type, may not degrade the waters of the State to the extent that:

(a) The quality of surface water is lowered below that allowed by NRS 445A.565.

(b) For groundwater:

(1) The ~~[quality is lowered below]~~***concentration exceeds*** a state or federal regulation prescribing standards for drinking water ***or the natural background concentration of the regulated drinking water constituent, whichever value is greater***; or

(2) The concentration of WAD cyanide exceeds 0.2 mg/l.

➥ The Department may establish a numerical limit for any constituent not regulated by subparagraphs (1) and (2) which may reasonably be expected to be discharged by the facility in sufficient volume and concentration to cause an adverse impact on human health.

(c) The quality of those waters of the State which already exceed the criteria established by subsection 2 is lowered to a level that the Department finds would render those waters unsuitable for the existing or potential municipal, industrial, domestic or agricultural use.

2. The Department may exempt a body of groundwater or portion thereof from the standards established in subsection 1 if the request for an exemption to the groundwater standards and the supporting information is submitted as part of the application for the permit. The following criteria will be considered by the Department in determining whether to exempt a potentially impacted body of groundwater from the standards in subsection 1:

(a) The impacted groundwater does not currently serve as a source of drinking water and because of the following reasons the groundwater will not serve as a source of drinking water:

(1) The groundwater produces a mineral, hydrocarbon or geothermal fluid which the applicant can demonstrate to the satisfaction of the Department exists at a concentration that is expected to be capable of commercial production and that releases by the facility will not affect this production;

(2) The groundwater is situated at a depth or location which makes recovery of water for drinking economically or technologically impractical; or

(3) It would be economically or technologically impractical to render the water fit for human consumption; or

(b) The total dissolved solids in the groundwater is more than 10,000 milligrams per liter and the groundwater is not reasonably expected to become a supply of drinking water.

Sec 17. NAC 445A.428 is hereby amended to read as follows:

445A.428 For placer mining ~~[or flotation]~~facilities, the level of containment required by the Department for process fluids will depend upon the characteristics of the ore and process water.

Sec 18. NAC 445A.429 is hereby amended to read as follows:

445A.429 1. The holder of the permit must institute appropriate procedures to ensure that all mined areas do not release contaminants that have the potential to degrade the waters of the State.

2. Open pit mines must, to the extent practicable, be free-draining or left in a manner which minimizes the impoundment of surface drainage and the potential for contaminants to be transported and degrade the waters of the State. ***Underground mines must, to the extent practicable, be left in a manner which minimizes the inflow and outflow of water through a mine opening.***

3. Bodies of water which are a result of mine pits penetrating the water table must not create an impoundment which:

(a) Has the potential to degrade the groundwaters of the State; or

(b) Has the potential to affect adversely the health of human, terrestrial or avian life.

4. The holder of a permit may apply to the Commission to establish a beneficial use with a level of protection less than that required by paragraph (b) of subsection 3 for water impounded in a specific mine pit.

Sec 19. NAC 445A.433 is hereby amended to read as follows:

445A.433 1. The following minimum design requirements apply to all process components:

(a) In areas where annual evaporation exceeds annual precipitation, a process component must achieve zero discharge.

(b) All sources must be designed to minimize releases of contaminants into groundwaters or subsurface migration pathways so that any release from the facility will not degrade waters of the State.

(c) All process components must be designed ***for their operating life*** to withstand the runoff from a 24-hour storm event with a 100-year recurrence interval.

(d) The primary fluid management system must be designed ***for its operating life*** to be able to remain fully functional and fully contain all process fluids including all accumulations resulting from a 24-hour storm event with a 25-year recurrence interval. The Department may require additional containment based on the following factors:

(1) Proximity to surface water bodies;

(2) Depth to groundwater; and

(3) Proximity to population.

↳Contingency plans for managing process contaminated flows in excess of the design quantity must be described in the appropriate operating plans.

(e) The fluid management system must be designed to be functional for 5 years after the projected operating life of the process component and permanent closure period.

(f) The design of the process components must take into consideration the proposed range of operating conditions for each component and the history of seismic events at the site in order to preclude any differential movement or shifting of the subbase, liner or contained material which endangers primary or secondary containment integrity.

2. Additional containment of process fluids may be required in areas where groundwater is considered to be near the surface. Groundwater is considered to be near the surface if:

(a) The depth from the surface to groundwater is less than 100 feet and the top 100 feet of the existing formation has a coefficient of permeability greater than that exhibited by 100 feet of 1x10-5 cm/sec material;

(b) Open fractured or faulted geologic conditions exist in the bedrock from the surface to the groundwater; or

(c) There is an inability to document that all exploratory and condemnation borings beneath the site have been adequately sealed.

3. Subject to NAC 445A.432, the following minimum design requirements apply to process components for which the Department has not approved a Final Plan for Permanent Closure by September 1, 2018:

(a) During permanent closure, all process components must be designed or modified to withstand the runoff from a 24-hour storm event with a 500-year recurrence interval; and

(b) During permanent closure, all process components must be designed or modified to be able to remain fully functional and fully contain all fluids including all accumulations resulting from a 24-hour storm event with a 500-year recurrence interval. The Department may require additional containment based on the factors listed in subparagraphs (1), (2), and (3) of paragraph (d) of subsection 1.

~~[3]~~***4***. No new process component containing process fluids may be located within 1,000 feet of any dwelling which is occupied at least part of the year and which is not a part of the facility. This restriction does not apply to modifications at a facility which predate such a dwelling.

~~[4]~~***5***. The application of minimum design criteria does not release the holder of a permit from liability for degradation to waters of the State caused by the facility.

Sec 20. NAC 445A.445 is hereby amended to read as follows:

445A.445 1. In the event of an unplanned temporary closure of one or more process components, the holder of the permit shall:

(a) Within 30 days after an unplanned temporary closure begins, inform the Department of the closure and describe the procedures and controls which have been carried out to maintain the process components during this period.

(b) Within 90 days after the Department has been notified***, or otherwise becomes aware,*** of the unplanned temporary closure***, whichever occurs first***:

(1) Begin to evaluate the procedures which will be required to carry out a permanent closure of the process components affected and petition the Department to approve one or more procedures needed for the permanent closure of the process components affected; or

(2) For just cause, request that the Department grant an extension and delay permanent closure. Except as otherwise provided in subsection 2 of NAC 445A.420, the extension may not be longer than the remaining term of the existing permit or for 3 years, whichever is greater.

2. The Department shall approve or disapprove the proposed procedures for permanent closure within 30 days after they are submitted to the Department.

3. Unless the Department has granted an extension pursuant to subparagraph (2) of paragraph (b) of subsection 1, within 270 days after the Department has been notified***, or otherwise becomes aware,*** of the unplanned temporary closure, ***whichever occurs first,*** the holder of the permit shall initiate the approved procedures for permanent closure.

4. If the Department becomes aware of an unplanned or planned temporary closure at a facility and associated process fluids are not being managed in a manner that is protective of the waters of the State, then the Department may:

(a) Give notice to the permit holder and establish requirements to manage, mitigate, and stabilize the affected process components; and

(b) If necessary to stop or prevent degradation of waters of the State, give notice to the permit holder and initiate process fluid management activities and implement the requirements established in paragraph (a).

Sec 21. NAC 445A.446 is hereby amended to read as follows:

445A.446 1. The permanent closure of a facility ***or a source at a facility, as applicable,*** must be initiated:

(a) Following the request of the holder of the permit;

(b) For a facility which is under a temporary closure, no later than at the end of one renewal of a 5-year permit which has been issued pursuant to subsection 2 of NAC 445A.420;~~[or]~~

(c) When the end of the design life of that process component is reached~~[.]~~***; or***

(d) For an underground mine working, and any facility source therein, that has the potential to degrade waters of the State, prior to the elimination of safe access.

2. Permanent closure is complete when the requirements contained in NAC 445A.429, 445A.430, and 445A.431 have been achieved***, as applicable, and all other sources at the facility have been stabilized, removed, or mitigated***.

3. The time required for monitoring the facility following permanent closure depends upon the particular site and process characteristics, but in no event may the time required exceed 30 years***, unless the Department determines that chemical stabilization, source removal, or mitigation was not achieved and additional permanent closure actions are required, in which case a new post-closure monitoring period, not to exceed 30 years, will commence upon completion of the additional permanent closure actions***.