

Note to readers:

This early draft rule contains reader aids that call attention to the source and/or potential reasoning behind rule text. In general, colored italic text indicates the source of the preceding or following rule text; such as ADWR, or EPA’s current or proposed regulations, etc.

Example, *[R12-15-1216(A)]* means that the text comes from Arizona Administrative Code (A.A.C.) R12-15-1216(A). Also, *[R18-8-280A]* means the text was taken from A.A.C. R18-8-280(A). “added all of 1212” means that all of R12-15-1212 was added to that section.

R18-13-1010 was drafted to match similar language in EPA’s proposed permitting rule. Black text in italics in R18-13-1010(C) is rule text is considering adding to EPA’s proposed permitting rule.

These reader aids will not be in the formal proposed rule.

[Bracketed text], as explained in R18-13-1000, will remain in the rule, proposed and final.

**TITLE 18. ENVIRONMENTAL QUALITY**

**CHAPTER 13. DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SOLID WASTE MANAGEMENT**

**ARTICLE 10. COAL COMBUSTION RESIDUALS**

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**ARTICLE 17. FINANCIAL ASSURANCE**

Section

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### **R18-13-1000. Incorporation by Reference**

Any reference or citation to 40 CFR 257, or a section thereof, appearing in the body of this Article includes any modification to the CFR or section made by this Article. When federal regulatory language that has been incorporated by reference has also been amended, brackets [ ] indicate the new language. The subsection labeling for incorporated material in this Article may not conform to the Arizona Secretary of State's formatting requirements, because the formatting reflects the structure of the incorporated federal regulation.

### **R18-13-1001. General Provisions**

- A.** 40 CFR 257.50 through 257.53, revised as of December 14, 2020 (and no future editions) are incorporated by reference, modified by the following subsections, and on file with the Arizona Department of Environmental Quality (ADEQ) with the exception of the following:
1. 40 CFR 257.50(e) is not incorporated by reference;
  2. 40 CFR 257.51 is not incorporated by reference. 40 CFR 257, subpart D was effective as federal law as provided therein, but is effective as state law, as incorporated in this Article, on the effective date of this rule.
- B.** 40 CFR 257.53, titled "Definitions", is amended as follows:
1. The definitions in A.R.S. § 49-701 apply in this Article.
  2. "ADEQ" or "Department" means the Arizona Department of Environmental Quality.
  3. "Applicable requirement" means a requirement in A.R.S. Title 49, Chapter 4, or this Article, to which an owner or operator is subject based on the applicability criteria in these laws.
  4. "Certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority" means "certification from a qualified professional engineer, approved by the Director", unless specifically provided otherwise.
  5. "Director" or "State Director" means [the director of ADEQ.]
  6. "EPA" means the United States Environmental Protection Agency.

7. “Participating State” means [Arizona after CCR program approval.]
  8. “Participating State Director” means the [Director of ADEQ after CCR program approval.]
  9. “Qualified professional engineer” is amended as follows: Qualified professional engineer means an individual who is licensed by [the state of Arizona] as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this [Article. An engineer is considered qualified to provide information to the Director regarding the safe storage level of a reservoir if the engineer: *[R12-15-1219(B)]*
    - a. Is licensed in accordance with A.R.S. Title 32, Chapter 1, with proficiency in engineering and knowledge of dam technology,
    - b. Has three years of experience in the field of dam safety, and
    - c. Has actual experience in conducting dam safety inspections.]
  10. “State” means [Arizona.]
- C. The following definitions are also applicable in this Article: *(all definitions in this subsection are adapted from current ADWR rule at R12-15-1202, and are added to § 257.53)*
1. “Appurtenant structure” means any structure that is contiguous and essential to the safe operation of the CCR surface impoundment including embankments, saddle dikes, outlet works and controls, diversion ditches, spillway and controls, access structures, bridges, and related housing at a surface impoundment.
  2. “Emergency spillway” means a spillway designed to safely pass the inflow design flood routed through the reservoir. If the flow is controlled by gates, it is a controlled spillway. If the flow is not controlled by gates, it is an uncontrolled spillway.
  3. “Incremental adverse consequences” means under the same loading conditions, the additional adverse consequences such as economic, intangible, lifeline, or human losses, that would occur due to the failure or

improper operation of the CCR surface impoundment over those that would have occurred without failure or improper operation of the CCR surface impoundment.

4. “Intangible losses” means incremental adverse consequences to property that are not economic in nature, including property related to social, cultural, unique, or resource-based values, including the loss of irreplaceable and unique historic and cultural features; long-lasting pollution of land or water; or long-lasting or permanent changes to the ecology, including fish and endangered species habitat identified and evaluated by a public natural resource management or protection agency.
5. “Maximum credible earthquake” means the most severe earthquake that is believed to be possible at a point on the basis of geologic and seismological evidence.
6. “Maximum water surface” means the maximum elevation of the reservoir water level attained during routing of the inflow design flood.
7. “Outlet works” means a closed conduit under or through a CCR surface impoundment or through an abutment for the controlled discharge of the contents normally impounded by a CCR surface impoundment and reservoir. The outlet works include the inlet and outlet structures appurtenant to the conduit. Outlet works may be controlled or uncontrolled.
8. “Probable maximum flood” or “PMF” means the flood runoff expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the region, including rain and snow where applicable. 1/2 PMF is that flood represented by the flood hydrograph with ordinates equal to 1/2 the corresponding ordinates of the PMF hydrograph.
9. “Probable maximum precipitation” means the greatest depth of precipitation for a given duration that is theoretically physically possible over a particular size storm area at a particular geographical location at a particular time of year.
10. “Reservoir” means a CCR surface impoundment.

11. “Residual freeboard” or “freeboard” means the vertical distance between the highest water surface elevation during the inflow design flood and the lowest point at the top of the CCR surface impoundment.
12. “Safe storage level” means the maximum reservoir water surface elevation at which the Director determines it is safe to impound water or other liquids in the reservoir.
13. “Safety deficiency” means a condition at a CCR surface impoundment that impairs or adversely affects the safe operation of the CCR surface impoundment.
14. “Spillway crest” means the highest elevation of the floor of the spillway along a centerline profile through the spillway.
15. “Storage capacity” means the maximum volume of water, sediment, or debris that can be impounded in the reservoir with no discharge of water, including the situation where an uncontrolled outlet becomes plugged. The storage capacity is reached when the water level is at the crest of the emergency spillway, or at the top of permanently mounted emergency spillway gates in the closed position. Storage capacity excludes dead storage below the natural ground surface.
16. “Total freeboard” means the vertical distance between the emergency spillway crest and the top of the CCR surface impoundment.
17. “Unsafe” means that safety deficiencies in a CCR surface impoundment or spillway could result in failure of the CCR surface impoundment with subsequent loss of human life or significant property damage.

**R18-13-1002. Location Restrictions**

- A. 40 CFR 257.60 through 40 CFR 257.64, revised as of December 14, 2020 (and no future editions) are incorporated by reference, modified by the following subsections, and on file with ADEQ.
- B. [In addition to the location requirements in 40 CFR 257.62(a), new CCR surface impoundments, and all lateral expansions of CCR surface impoundments shall not be located within 60 meters (200 feet) of the outermost damage zone of a fault that

has had displacement in either Holocene or Late Pleistocene time unless the owner or operator demonstrates by the dates specified in § 257.62(c) that an alternative setback distance of less than 60 meters (200 feet) will prevent damage to the structural integrity of the CCR impoundment.] *[R12-15-1216(A)(6)(b)]*

**C.** [In addition to the requirements in 40 CFR 257.64, the owner or operator shall not construct a new CCR surface impoundment on active faults, as defined by 257.62(a), collapsible soils, dispersive soils, sinkholes, fissures, or soils with the potential for subsidence, unless the owner or operator demonstrates that the CCR surface impoundment can safely withstand the anticipated offset or other unsafe effects on the CCR surface impoundment.] *[R12-15-1216(A)(5)(b)]*, *[R12-15-1215(3)(t)]*

**D.** The demonstration requirement in 40 CFR 257.63(a) is amended by adding:

[(1) For a new or lateral expansion of a CCR surface impoundment, the owner or operator shall submit a review of the seismic or earthquake history of the area around the surface impoundment within a radius of 100 miles to establish the relationship of the site to known faults and epicenters. The review shall include any known earthquakes and the epicenter locations and magnitudes of the earthquakes *[R12-15-1216(A)(6)(a)]*

(2) For a new or lateral expansion of a CCR surface impoundment, the owner or operator shall identify the location of active or potentially active faults that have experienced Holocene or Late Pleistocene displacement within a radius of 100 miles of the site. *[R12-15-1216(A)(6)(b)]*

(3) For a new or lateral expansion of a high or significant hazard potential CCR surface impoundment, the owner or operator shall design the impoundment to withstand the maximum credible earthquake or the maximum horizontal acceleration, whichever is greater.] *[R12-15-1216(A)(6)(c)]*

**E.** Subsections (B), (C), and (D) of this Section are enhancements to 40 CFR 257, subpart D based on Arizona dam safety standards and do not apply to:

1. CCR surface impoundments with a maximum height of less than 6 feet, regardless of storage capacity;
2. CCR surface impoundments with a maximum height of between 6 and 25 feet and a storage capacity of less than 50 acre-feet; or

3. CCR surface impoundments with a maximum height greater than 25 feet and a storage capacity of 15 acre-feet or less.

**R18-13-1003. Design Criteria**

- A. 40 CFR 257.70 through 40 CFR 257.74, revised as of December 14, 2020 (and no future editions) are incorporated by reference, modified by the following subsections, and on file with ADEQ.
- B. 40 CFR 257.73(a)(4) is amended by deleting “not to exceed a height of 6 inches above the slope of the dike,”.
- C. 40 CFR 257.73(d)(1)(iv) is amended by deleting “not to exceed a height of 6 inches above the slope of the dike,”.
- D. 40 CFR 257.74(a)(4) is amended by deleting “not to exceed a height of 6 inches above the slope of the dike,”.
- E. 40 CFR 257.74(d)(1)(iv) is amended by deleting “not to exceed a height of 6 inches above the slope of the dike,”.

**R18-13-1003.01. Additional Arizona Design Criteria for New CCR Surface Impoundments and Lateral Expansions of CCR Surface Impoundments**

- A. Geotechnical Requirements. The owner or operator shall provide an evaluation of the static stability of the foundation, CCR surface impoundment, and slopes of the reservoir rim and demonstrate that sufficient material is available to construct the CCR surface impoundment as designed.
- B. Embankment CCR surface impoundment Requirements.
  1. Geotechnical Requirements. Table 5 states minimum factors of safety for embankment stability under various loading conditions. For an embankment CCR surface impoundment an owner or operator shall provide a written analysis of minimum factors of safety for stability in the CCR permit or modification application.
    - a. The analysis of minimum factors of safety shall include the effects of anisotropy on the phreatic surface position by using a ratio of horizontal permeability to vertical permeability of at least 10. The



Director may require ratios of up to 100 if the material types and construction techniques will cause excessive stratification.

- b. The owner or operator shall use tests modeling the conditions being analyzed to determine the strengths used in the stability analysis. The stability analysis shall include total and effective stress strengths appropriate for the different material zones and conditions analyzed. The stability analysis shall use undrained strengths or strength parameters for all saturated materials.
- c. If applicable, the owner or operator shall perform an analysis of the upstream slope stability for a partial pool with steady seepage considering the reservoir level that provides the lowest factor of safety.

2. Seismic Requirements

- a. The owner or operator shall determine the seismic characteristics of the site as prescribed in R18-13-1002(D) and R18-13-1010.01(F)(3).
- b. The owner or operator shall determine the liquefaction susceptibility of the embankment, foundation, and abutments. The owner or operator shall use standard penetration testing, cone penetration testing, shear wave velocity measurements, or a combination of these methods to make this determination. The owner or operator shall compute the minimum factor of safety against liquefaction at specific points and make a determination of whether the overall site is subject to liquefaction.
- c. The owner or operator shall compute a minimum factor of safety against overtopping due to deformation and settlement in each of the following cases. The minimum factor of safety against overtopping can be no less than 2.5, determined by dividing the total pre-earthquake freeboard by the estimated vertical settlement in feet. The owner or operator shall determine the total vertical settlement

by adding the settlement values of the upstream and downstream slopes.

- i. An embankment, foundation, or abutment is not subject to liquefaction, has a maximum peak acceleration of more than 0.2g or a maximum peak acceleration of more than 0.35g and consists of clay on a clay or bedrock foundation; or
  - ii. The embankment, foundation or abutment is subject to liquefaction.
- d. The owner or operator shall perform a liquefaction analysis to establish approximate boundaries of liquefiable zones and physical characteristics of the soil following liquefaction for an embankment, foundation, or abutment subject to liquefaction. The owner or operator shall perform an analysis of the potential for flow liquefaction.
- e. Other analytical procedures may be required by the Director for sites with high seismicity or low strength embankment or foundation soils.

### 3. Miscellaneous Design Requirements

- a. The design of any significant or high hazard potential CCR surface impoundment shall provide seepage collection and prevent internal erosion or piping due to embankment cracking or other causes.
- b. The Director shall review the filter and permeability design for a chimney drain, drain blanket, toe drain, or outlet conduit filter diaphragms on the basis of unique site characteristics.
  - i. The minimum thickness of an internal drain is 3 feet.
  - ii. The minimum width of a chimney drain is 6 feet.
  - iii. The owner or operator shall filter match an internal drain to its adjacent material.
  - iv. The owner or operator shall design internal drains with sufficient capacity for the expected drainage without the use of drainpipes using only natural granular materials.

- c. The use of a geosynthetic is not permitted in a design if it serves as the sole defense against CCR surface impoundment failure. The use of geotextiles and geonets as a filter or drain material or a geomembrane liner is permitted only in a location that is easily accessible for repair or if its excavation cannot create an unsafe condition at the CCR surface impoundment. The Director may impose permit conditions, including monitoring appropriate to the hazard classification, inspection, and necessary repairs.
- d. The owner or operator shall use armoring on any upstream slope of an CCR surface impoundment embankment. If the owner or operator uses rock riprap, it shall be well-graded, durable, sized to withstand wave action, and placed on a well-graded pervious sand and gravel bedding or geotextile with filtering capacity appropriate for the site.
- e. The owner or operator shall protect the downstream slopes and groins of a CCR surface impoundment embankment from erosion.
- f. The minimum width of the top of a CCR surface impoundment embankment is equal to the structural height of the CCR surface impoundment divided by 5 plus an additional 5 feet. The required minimum width for any CCR surface impoundment embankment is 12 feet. The maximum width for any CCR surface impoundment embankment is 25 feet.

**Table 5. Minimum Factors of Safety for Stability<sup>1</sup>**

<b>Embankment Loading Condition</b>	<b>Minimum Factor of Safety</b>
End of construction case – upstream and downstream slopes	1.3
End of construction case for embankments greater than 50 feet in height on weak foundations	1.4
Steady state seepage - upstream (critical partial pool) and downstream slope (full pool)	1.5

Instantaneous drawdown - upstream slope	1.2
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<sup>1</sup> Not applicable to an embankment on a clay shale foundation.

**C.** This Section does not apply to:

1. CCR surface impoundments with a maximum height of less than 6 feet, regardless of storage capacity;
2. CCR surface impoundments with a maximum height of between 6 and 25 feet and a storage capacity of less than 50 acre-feet; or
3. CCR surface impoundments with a maximum height greater than 25 feet and a storage capacity of 15 acre-feet or less.

**R18-13-1003.02. Additional Emergency Action Plan Requirements for Arizona CCR Surface Impoundments**

**A.** In addition to the emergency action plan (EAP) requirements in 257.73(a)(3) and 257.74(a)(3), the EAP shall contain a:

1. Notification chart showing the priority for notification in an emergency situation. The owner shall notify local emergency response agencies, affected downstream populations, county emergency management agencies, and affected flood control districts; *[R12-15-1221(A)(1)]*
2. Description of the demand reservoir and scope of the emergency action plan; *[R12-15-1221(A)(2)]*
3. Delineation of potentially unsafe conditions, evaluation procedures, and triggering events that require the initiation of partial or full emergency notification procedures, based on the urgency of the situation; *[R12-15-1221(A)(3)]* including the following:
  - a. Sliding of upstream or downstream slopes or abutments contiguous to the CCR surface impoundment;
  - b. Sudden subsidence of the top of the CCR surface impoundment;
  - c. Longitudinal or transverse cracking of the top of the CCR surface impoundment;
  - d. Unusual release of water from the downstream slope or face of the CCR surface impoundment;

- e. Other unusual conditions at the downstream slope of the CCR surface impoundment;
  - f. Significant landslides in the reservoir area;
  - g. Increasing volume of seepage;
  - h. Cloudy seepage or recent deposits of soil at seepage exit points;
  - i. Sudden cracking or displacement of concrete in a concrete or masonry CCR surface impoundment spillway or outlet works;
  - j. Loss of freeboard or CCR surface impoundment cross section due to storm wave erosion;
  - k. Flood waters overtopping an embankment CCR surface impoundment; or
  - l. Spillway backcutting that threatens evacuation of the reservoir. *[R12-15-1224(A)]*
4. Specific notification procedure for each emergency situation anticipated; *[R12-15-1221(A)(5)]*
  5. Description of emergency supplies and resources, equipment access to the site, and alternative means of communication. *[R12-15-1221(A)(6)]*
  6. The owner shall submit a copy of the proposed emergency action plan for review by the Arizona Division of Emergency Management and all local emergency coordinators involved in the plan. The owner shall incorporate appropriate recommendations generated by the reviews and submit the revised emergency action plan to the Department. *[R12-15-1221(C)]*
  7. Annual review and update. The written EAP must be reviewed and updated, at a minimum, every year to ensure the information is accurate and to incorporate changes such as new personnel, changing roles of emergency agencies, emergency response resources, conditions of the surface impoundment and information learned from mock exercises. The owner shall send updated portions of the plan to persons and agencies holding copies of the plan within 15 days after preparation of an update *[R12-15-1221(D)]*. The updated plan shall be placed in the facility's operating record as required by § 257.105(f)(6).

8. Notwithstanding paragraph (7) above, the owner or operator of a CCR surface impoundment may amend the written EAP at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(f)(6). The owner or operator must amend the written EAP whenever there is a change in conditions that would substantially affect the EAP in effect. *[257.73(a)(3)(ii)(A)]*
  9. The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the written EAP, and any subsequent amendment of the EAP, meets the requirements of this Article. *[257.73(a)(3)(iv)]*
- B.** In addition to the emergency action plan requirements in §§ 257.73(a)(3) and 257.74(a)(3), as incorporated, when implementing the plan:
1. The owner or operator shall increase the frequency of observation when the reservoir is full, during heavy rains or flooding, and following an earthquake. *[R12-15-1205(B)(1)]*
  2. The owner or operator is responsible for the safety of the CCR surface impoundment and shall take action to lower the reservoir if it appears that the impoundment has weakened or is in danger of failing.
  3. The owner or operator of a CCR surface impoundment shall immediately notify the Department and responsible authorities in adjacent and downstream communities, including emergency management authorities, of a condition that may threaten the safety of the impoundment. The owner shall take necessary actions to protect human life and property, including action required under an emergency action plan or order issued under this Article. *[R12-15-1224(A)]*
  4. The owner or operator shall report to the Director any condition that threatens the safety of the CCR surface impoundment. The owner shall make the report as soon as possible, but not later than 12 hours after discovery of the conditions.
  5. If CCR surface impoundment failure appears imminent, the owner or operator shall notify the county sheriff or other emergency official

immediately. *[R12-15-1205(B)(3)]*

6. In case of an emergency, the owner or operator shall contact the Arizona Department of Public Safety. *[R12-15-1224(A)(2)]*
7. The owner or operator shall notify the Director immediately of any emergency condition that exists and any emergency action taken. *[R12-15-1217(F)]*.
8. For all high and significant hazard potential CCR surface impoundments, the emergency action plan shall be implemented with any emergency actions taken at the CCR surface impoundment. *[R12-15-1217(E)]*
9. Emergency actions not impairing the safety of the CCR surface impoundment may be taken before guidance can be provided by an engineer and do not require prior approval of the Director. Emergency actions do not excuse an owner's responsibility to promptly undertake a permanent solution. Emergency actions include: *[R12-15-1217(C)]*
  - a. Stockpiling materials such as riprap, earth fill, sand, sandbags, and plastic sheeting.
  - b. Lowering the reservoir level by making releases through the outlet or a gated spillway, by pumping, or by siphoning.
  - c. Armoring eroded areas by placing sandbags, riprap, plastic sheeting, or other available material.
  - d. Plugging leakage entrances on the upstream slope.
  - e. Increasing freeboard by placing sandbags or temporary earth fill on the CCR surface impoundment.
  - f. Diverting flood waters to prevent them from entering the reservoir basin.
  - g. Constructing training berms to control flood waters.
  - h. Placing sandbag ring dikes or reverse filter materials around boils at the downstream toe to provide back pressure.
  - i. Removing obstructions from outlet or spillway flow areas.
10. The Director shall issue an emergency approval to repair, alter, or remove an existing CCR surface impoundment if the Director finds that immediate

remedial action is necessary to alleviate an imminent threat to human life or property. *[R12-15-1224(B)]*

- a. The emergency approval shall be provided in writing.
- b. The emergency approval may contain conditions the Director determines are appropriate to protect human life or property.
- c. The emergency approval is effective immediately for 30 days after notice is issued unless extended in writing by the Director. The Director shall also send notice to the county flood control district of the county in which the CCR surface impoundment is located, all municipalities within five miles downstream of the CCR surface impoundment, and any additional persons identified in the emergency action plan.
- d. The Director may institute legal or administrative proceedings that the Director deems appropriate for violations of the emergency approval or conditions of the emergency approval.
- e. After the Director issues an emergency approval, the Department shall post information related to the approval on the Department's CCR website as soon as practicable.

11. Emergency actions impairing the safety of the CCR surface impoundment require prior approval of the Director. An owner shall not lower the water level by excavating the spillway or embankment unless failure is imminent.

*[R12-15-1217(D)]*

**C.** This Section contains enhancements to 40 CFR 257, subpart D based on Arizona dam safety standards and does not apply to:

1. CCR surface impoundments with a maximum height of less than 6 feet, regardless of storage capacity;
2. CCR surface impoundments with a maximum height of between 6 and 25 feet and a storage capacity of less than 50 acre-feet; or
3. CCR surface impoundments with a maximum height greater than 25 feet and a storage capacity of 15 acre-feet or less.

#### **R18-13-1004. Operating Criteria**



- A.** 40 CFR 257.80 through 40 CFR 257.84, revised as of December 14, 2020 (and no future editions) is incorporated by reference, modified by the following subsections, and on file with ADEQ:
- B.** 40 CFR 257.82(a)(3) is amended as follows: (3) The inflow design flood is:
- (i) For a high hazard potential CCR surface impoundment, as determined under § 257.73(a)(2) or § 257.74(a)(2), the probable maximum flood;
  - (ii) For a significant hazard potential CCR surface impoundment, as determined under § 257.73(a)(2) or § 257.74(a)(2), the 1,000-year flood [or, for new impoundments and lateral expansions, 0.5 PMF, whichever is greater];
  - (iii) For a low hazard potential CCR surface impoundment, as determined under § 257.73(a)(2) or § 257.74(a)(2), the 100-year flood [or, for new impoundments and lateral expansions, 0.25 PMF, whichever is greater]; or
  - (iv) For an incised CCR surface impoundment, the 25-year flood.
  - (v) The Director may accept site-specific probable maximum precipitation studies in determination of the inflow design flood.
- C.** 40 CFR 257.82(a) is further amended by adding (a)(4) as follows: “Inflow Design Flood Requirements. For new impoundments and lateral expansions, an owner or operator shall ensure that the total freeboard is the largest of the following:
- (i) The sum of the inflow design flood maximum water depth above the spillway crest plus wave run up.
  - (ii) The sum of the inflow design flood maximum water depth above the spillway crest plus 3 feet.
  - (iii) A minimum of 5 feet.
- D.** 40 CFR 257.82(a) is amended by adding (a)(5) as follows: “(4) CCR Surface Impoundment Site and Reservoir Area Requirements
- (i) An owner or operator shall demonstrate that reservoir storage during the inflow design flood will not result in incremental adverse consequences during the inflow design flood. In determining

whether a discharge will result in incremental adverse consequences, the Director shall evaluate whether the owner or operator has taken any or all of the following actions: issuing public notice to upstream affected property owners, complying with flood insurance requirements, adopting emergency action plans, conducting mock flood drills, acquiring flood easements or other acquisitions of real property, or other actions appropriate to safeguard the CCR surface impoundment site and reservoir.

- ii. The owner or operator shall clear the reservoir storage area of logs and debris.
- iii. The owner or operator shall place borrow areas a safe distance from the upstream toe and the downstream toe of the CCR surface impoundment to prevent a piping failure of the CCR surface impoundment.
- iv. The owner or operator shall keep the top of the CCR surface impoundment and appurtenant structures accessible by equipment and vehicles for emergency operations and maintenance.”

**D.** 40 CFR 257.82(b) is amended by adding: “and as follows:

- (1) Emergency Spillway Requirements. An owner or operator of a new CCR surface impoundment with emergency spillways or a lateral expansion of a CCR surface impoundment with emergency spillways shall:
  - (i) Construct each spillway in a manner that avoids flooding in excess of the flooding that would have occurred in the same location under the same conditions before construction. The owner or operator of a CCR surface impoundment shall demonstrate that a spillway discharge would not result in incremental adverse consequences. In determining whether a spillway discharge of a CCR surface impoundment would result in incremental adverse consequences, the Director shall evaluate whether the owner or operator has taken any or all of the following actions: issuing public notice to downstream property owners, complying with flood insurance

requirements, adopting emergency action plans, conducting mock flood drills, acquiring flow easements or other acquisitions of real property, or other actions appropriate to safeguard the CCR surface impoundment site and flood channel.

- (ii) Provide each spillway and channel with a minimum width of 10 feet and suitable armor to prevent erosion during the discharge resulting from the inflow design flood.
  - (iii) Ensure that downstream spillway channel flows do not encroach on the CCR surface impoundment unless suitable erosion protection is constructed.
  - (iv) Ensure that each spillway, in combination with outlets, is able to safely pass the peak discharge flow rate, as calculated on the basis of the inflow design flood.
  - (v) Not construct bridges or fences across a spillway unless the construction is approved as part of the CCR facility permit. The CCR permit may include conditions regarding the design and operation of the spillway and fencing, based on safety concerns.
  - (vi) Not use a pipe or culvert as an emergency spillway unless specifically approved in the CCR permit following review of the CCR surface impoundment design and site characteristics.
- (2) Outlet Works Requirements. An owner or operator shall ensure that a CCR surface impoundment that has outlet works and is used primarily for water has a low level outlet works that:
- (i) Is capable of draining the reservoir to the sediment pool level. A low level outlet works for a high or significant hazard potential CCR surface impoundment shall be a minimum of 36 inches in diameter. A low level outlet works for a low hazard potential CCR surface impoundment shall be a minimum of 18 inches in diameter.
  - (ii) For a high or significant hazard potential CCR surface impoundment, has the capacity to evacuate 90% of the storage

capacity of the reservoir within 30 days, excluding reservoir inflows.

- (iii) Has a filter diaphragm or other current practice measures to reduce the potential for piping along the conduit.
- (iv) Has accessible outlet controls when the spillway is in use.
- (v) Has an emergency manual override system or can be operated manually.
- (vi) Is constructed of materials appropriate for loading condition, seismic forces, thermal expansion, cavitation, corrosion, and potential abrasion. The owner or operator shall not use corrugated metal pipes or other thin-walled pipes except as a form for a cast-in-place concrete conduit. The owner or operator shall construct outlet conduits of cast-in-place reinforced concrete. The owner or operator shall design each outlet to maintain water tightness. The owner or operator shall construct each outlet to prevent the occurrence of piping adjacent to the outlet.
- (vii) Has an operating or guard gate on the upstream end of any gated outlet.
- (viii) Has an outlet conduit near the base of one of the abutments on native bedrock or other competent material. The entire length of the conduit shall be supported on foundation materials of uniform density and consistency to prevent adverse differential settlement.
- (ix) Has an upstream valve or gate capable of controlling the discharge through all ranges of flow on any gated outlet conduit.
- (x) Has a trashrack designed for a minimum of 25% of the reservoir head to which it would be subjected if completely clogged at the upstream end of the outlet.
- (xi) Has an outlet conduit designed for internal pressure equal to the full reservoir head and for superimposed embankment loads, acting separately.

- E.** 40 CFR 257.83(a)(1)(i) is amended by adding: “The owner or operator shall increase the frequency of observation when the reservoir is full, during heavy rains or flooding, and following an earthquake.” *[R12-15-1205(B)(1)]*
- F.** 40 CFR 257.83, titled “Inspection requirements for CCR surface impoundments”, subsection (b)(1) is amended to read: “If the existing or new CCR surface impoundment or any lateral expansion of the CCR surface impoundment is subject to the periodic structural stability assessment requirements under § 257.73(d) or § 257.74(d), the CCR unit must additionally be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. [The owner or operator shall notify the Director and submit a written summary of the engineer’s qualifications at least 14 days before the scheduled inspection.] The inspection must, at a minimum, include:”
- G.** 40 CFR 257.83, titled “Inspection requirements for CCR surface impoundments”, subsection (b)(1) is amended by adding:
- “(iv) Inspection of any permanent monument or monitoring installations;
  - (v) Assessment of all parts of the CCR surface impoundment that are related to the CCR surface impoundment’s safety; and
  - (vi) A recommendation regarding the safe storage level of the impoundment.”
- [R12-15-1219(C)]*
- H.** 40 CFR 257.83, titled “Inspection requirements for CCR surface impoundments”, subsection (b)(5) is amended by adding:
- “In addition, the owner or operator shall notify the Department within 24 hours and in writing within five days if a deficiency or release could result in harm to human health or the environment or has resulted in a release. The owner or operator shall notify the Department in writing within 14 days of all other deficiencies under 40 CFR 257.83(b)(5).”
- I.** 40 CFR 257.83 is amended by adding paragraph (d) as follows: “(d) Notwithstanding 40 CFR 257.73(a)(2)(i) and (ii) and 40 CFR 257.74(a)(2)(i) and (ii), a qualified professional engineer shall review the hazard potential

classification of each CCR surface impoundment during each subsequent inspection under § 257.83(b)(4)(i) and revise the classification in accordance with current conditions.” *[R12-15-1206(B)(4)]*

**J.** 40 CFR 257.83 is amended by adding paragraph (e) as follows:

“(e) Maintenance and Repair

(i) An owner shall perform general maintenance and ordinary repairs that do not impair the safety of the CCR surface impoundment. General maintenance and ordinary repair activities listed under this subsection do not require prior approval of the Director. These repair activities include:

(A) Removing brush or tall weeds.

(B) Cutting trees and removing slash from the embankment or spillway. Small stumps may be removed provided no excavation into the embankment occurs.

(C) Exterminating rodents by trapping or other methods. Rodent damage may be repaired provided it does not involve excavation that extends more than 2 feet into the embankment and replacement materials are compacted as they are placed.

(D) Repairing erosion gullies less than 2 feet deep on the embankment or in the spillway.

(E) Grading the surface on the top of the CCR surface impoundment embankment or spillway to eliminate potholes and provide proper drainage, provided the freeboard is not reduced.

(F) Placing additional riprap and bedding on the upstream slope, or in the spillway in areas that have sustained minor damage and restoring the original riprap protection where the damage has not yet resulted in erosion and weakening of the CCR surface impoundment.

(G) Painting, caulking, or lubricating metal structures.

- (H) Patching or caulking spalled or cracked concrete to prevent deterioration.
  - (I) Removing debris, rock, or earth from outlet conduits or spillway channels and basins.
  - (J) Patching to prevent deterioration within outlet works.
  - (K) Replacing worn or damaged parts on outlet valves or controls to restore them to original condition or its equivalent.
  - (L) Repairing or replacing fences intended to keep traffic or livestock off the CCR surface impoundment or spillway.
- (ii) General maintenance and ordinary repair that may impair or adversely affect safety, such as excavation into or near the toe of the CCR surface impoundment, construction of new appurtenant structures for the CCR surface impoundment, and repair of damage that has already significantly weakened the CCR surface impoundment shall be performed in accordance with this Article. The Director shall determine pursuant to R18-13-1017 whether general maintenance and ordinary repair activities not listed in paragraph (i) will impair safety.

**K.** 40 CFR 257.83 is amended by adding paragraph (f) as follows: “Inspections by the Department *[R12-15-1219(F)]*

1. The Director or a designated representative may enter at reasonable times upon private or public property and the owner shall permit such entry, where a CCR surface impoundment is located, including a CCR surface impoundment under construction, reconstruction, repair, enlargement, alteration, breach, or removal, for any of the following purposes:
  - a. To enforce the conditions of approval of the construction drawings and specifications related to an application for construction, reconstruction, repair, enlargement, alteration, breach, or removal.
  - b. To inspect a CCR surface impoundment that is subject to this Article.

- c. To investigate or assemble data to aid review and study of the design and construction of CCR surface impoundments, reservoirs, and appurtenances or make watershed investigations to facilitate decisions on public safety to fulfill the duties of this Article and A.R.S. Title 49, Chapter 4.
    - d. To ascertain compliance with this Article and A.R.S. Title 49, Chapter 4.
  - 2. Upon receipt of a complaint that a CCR surface impoundment is endangering people or property:
    - a. The Director shall inspect the CCR surface impoundment unless there is substantial cause to believe the complaint is without merit.
    - b. If the complainant files a complaint in writing and deposits with the Director sufficient funds to cover the costs of the inspection, the Director shall make an inspection.
    - c. The Director shall provide a written report of the inspection to the complainant and the CCR surface impoundment owner.
    - d. If an unsafe condition is found, the Director shall cause it to be corrected and return the deposit to the complainant. If the complaint was without merit the deposit shall be paid into the general fund.”
- L. Subsections (B) through (K) of this Section are enhancements to 40 CFR 257, subpart D based on Arizona dam safety standards and do not apply to:
  - 1. CCR surface impoundments with a maximum height of less than 6 feet, regardless of storage capacity;
  - 2. CCR surface impoundments with a maximum height of between 6 and 25 feet and a storage capacity of less than 50 acre-feet; or
  - 3. CCR surface impoundments with a maximum height greater than 25 feet and a storage capacity of 15 acre-feet or less.

**R18-13-1005. Groundwater Monitoring and Corrective Action**

- A. 40 CFR 257.90 through 40 CFR 257.98, revised as of December 14, 2020 (and no future editions) is incorporated by reference, modified by the following



subsections, and on file with ADEQ, with the exception of 40 CFR 257.90(g), “Suspension of groundwater monitoring requirements”.

- B.** 40 CFR 257.94(a) is amended as follows: “(a)The owner or operator of a CCR unit must conduct detection monitoring at all groundwater monitoring wells consistent with this section. At a minimum, a detection monitoring program must include groundwater monitoring for all constituents listed in appendix III to this part. [The Director may require monitoring for constituents or pollutants not listed in appendix III based on information that non-CCR waste has been placed in a CCR unit.]
- C.** 40 CFR 257.94(e)(2) is amended as follows: “(2) The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. [An owner or operator that is investigating whether to submit an alternative source demonstration under this section, shall notify the Director in writing within seven days of that decision.] The owner or operator shall complete the written demonstration within 90 days of [determining that there is] a statistically significant increase over background levels to include obtaining a certification from a qualified professional engineer verifying the accuracy of the information in the report, [and submit the demonstration and certification to the Director for approval.] If the owner or operator completes a successful demonstration, as supported by a certification from a qualified professional engineer, within the 90-day period, the owner or operator may continue with a detection monitoring program, [unless such demonstration is subsequently disapproved by the Director. In any event, the Director shall issue an approval or a disapproval of each alternative source demonstration provided under this section.] If a successful demonstration was not completed within the 90-day period [or if the Director disapproves the demonstration,] the owner or operator shall initiate an assessment monitoring program as required under § 257.95. The owner or operator also shall include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer [and Director approval.]”

- D.** 40 CFR 257.95(g)(3)(ii) is replaced by: “Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. [An owner or operator that is investigating whether to submit an alternative source demonstration under this section, shall notify the Director in writing within seven days of that decision.] Any such demonstration shall be supported by a report that includes the factual or evidentiary basis for any conclusions, and shall be certified to be accurate by a qualified professional engineer. [The demonstration, report and certification shall be submitted to the Director for approval.] If a successful demonstration is made, the owner or operator shall continue monitoring in accordance with the assessment monitoring program pursuant to this section, and may return to detection monitoring if the constituents in Appendix III and Appendix IV of this part are at or below background as specified in paragraph (e) of this section, [unless such demonstration is subsequently disapproved by the Director. In any event, the Director shall issue an approval or a disapproval of each alternative source demonstration provided under this section.] The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer [and Director approval.]
- E.** 40 CFR 257.95(g)(4) is replaced by: “(4) If a successful demonstration has not been made at the end of the 90 day period provided by paragraph (g)(3)(ii) of this section, [or if the Director disapproves the demonstration,] the owner or operator of the CCR unit shall initiate the assessment of corrective measures requirements under § 257.96.”
- F.** 40 CFR 257.95(h) is amended as follows:
- (h) The owner or operator of the CCR unit shall establish a groundwater protection standard for each constituent in appendix IV to this part and each pollutant identified pursuant to subsection (B) detected in the groundwater. The groundwater protection standard shall be:

(1) For constituents [for which an Aquifer Water Quality Standard has been established under 18 A.A.C. 11, Article 4, either the Aquifer Water Quality Standard for that constituent, or the maximum contaminant level (MCL) that has been established under §§ 141.62 and 141.66 of this title, whichever is more stringent. For constituents for which no Aquifer Water Quality Standard exists, and] for which a maximum contaminant level (MCL) has been established under §§ 141.62 and 141.66 of this title, the MCL for that constituent.

(2) [For constituents for which no Aquifer Water Quality Standard exists, and for which a maximum contaminant level (MCL) has not been established under 40 CFR 141.62 and 141.66, the background concentration established from wells in accordance with § 257.91.]

(3) For constituents for which the background level is higher than the levels identified under [paragraph (h)(1)] of this section, the background concentration.

- G.** 40 CFR 257.97, titled “Selection of remedy”, paragraph (a) is amended as follows: “(a) Based on the results of the corrective measures assessment conducted under § 257.96, the owner or operator must, as soon as feasible, select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. This requirement applies in addition to, not in place of, any applicable standards under the Occupational Safety and Health Act. The owner or operator must prepare a semiannual report describing the progress in selecting and designing the remedy. Upon selection of a remedy, the owner or operator must prepare a final report describing the selected remedy and how it meets the standards specified in paragraph (b) of this section. The owner or operator shall obtain a certification, from a qualified professional engineer, [which shall be submitted to the Director for approval,] that the remedy selected meets the requirements of this section. The report has been completed when it is placed in the operating record as required by § 257.105(h)(12). [The remedy selected shall be incorporated into the initial CCR facility permit, or added to it as a major permit modification.]”

- H.** 40 CFR 257.98, titled “Implementation of the corrective action program” paragraph (e) is amended as follows: “(e) Upon completion of the remedy, the owner or operator must prepare a notification stating that the remedy has been completed. The owner or operator must obtain a certification, from a qualified professional engineer, [which shall be submitted to the Director for approval,] attesting that the remedy has been completed in compliance with the requirements of paragraph (c) of this section. The [notification] has been completed when it is placed in the operating record as required by § 257.105(h)(13).”

**R18-13-1006. Closure and Post-Closure Care**

40 CFR 257.100 through 40 CFR 257.104, revised as of December 14, 2020 (and no future editions) is incorporated by reference, and on file with ADEQ.

**R18-13-1007. Recordkeeping, Notification, and Posting of Information to the Internet**

- A.** 40 CFR 257.105 through 40 CFR 257.107, revised as of December 14, 2020 (and no future editions) is incorporated by reference, modified by the following subsections, and on file with ADEQ.
- B.** § 257.105 is amended by adding paragraph (k) as follows: “By March 15 of each calendar year, the owner or operator of a CCR facility shall determine and place in the operating record the amount of CCR beneficially used. The amount shall be measured based on when the product leaves the facility site.”
- C.** § 257.105 is amended by adding paragraph (l) as follows: “The financial assurance cost estimate and financial assurance mechanisms used to satisfy R18-13-1020.”
- D.** § 257.106 is amended by adding paragraph (k) as follows: “The owner or operator of a CCR unit subject to this subpart shall notify the Director when information has been placed in the operating record under § 257.105(k).”

**R18-13-1008. 40 CFR 257, Appendices III and IV**

40 CFR 257, Appendices III and IV, revised as of December 14, 2020 (and no future editions) are incorporated by reference and on file with ADEQ.

**R18-13-1009. Reserved**

**R18-13-1010. Permit Application Requirements for CCR Facilities**

- A.** The owner or operator of a CCR unit that meets the applicability requirements in 40 CFR 257.50 shall submit to the Director a complete application for an initial CCR facility permit, any new CCR unit, or any lateral expansion to a CCR unit, on an application form, as described in this Section.
- B.** The application shall be submitted at one of the following times:
1. For an initial CCR facility permit, within 180 days after the effective date of CCR program approval.
  2. After the effective date of these rules, the owner or operator of a CCR unit may submit an application for an initial CCR facility permit, at any time before CCR program approval.
  3. After CCR program approval, before beginning construction of any new CCR unit or lateral expansion.
- C.** An owner or operator applying for a CCR permit shall provide the Department with the following information in the application and shall clearly identify any confidential business information that if made public, would divulge the trade secrets of the person as defined in A.R.S. § 49-201, or other information likely to cause substantial harm to the person's competitive position: *[1-6(e) below follow EPA's February 2020 proposed rule for CCR permits, except for italics, which are added by ADEQ.]*
1. Sufficient information about the facility for the Director to establish permit conditions to ensure compliance with, including to assess the applicability of, applicable provisions in A.R.S Title 49, Chapter 4, and this Article. Such information includes but is not limited to physical location; description; operations; operating history; *the address of the facility's CCR website; a list of other federal or state environmental permits issued to the owner or operator for the facility where the CCR unit is located; and for a surface impoundment, the current ADWR license.*

2. Sufficient information about the owners and operators for the Director to identify, contact, communicate with them and determine compliance with A.R.S. Title 49, Chapter 4 and this Article. Such information includes, but is not limited to contact information, ownership status (e.g., private, governmental) of each CCR unit and CCR-related solid waste management operations at the facility; *and a description of allocated responsibilities among owners and operators of CCR units at the facility. Both the owner and operator of a CCR unit shall sign and certify the accuracy of the application, unless an agreement is provided that one speaks for the other.*
3. Sufficient technical information about each CCR unit at the facility necessary for the Director to establish permit conditions to require compliance with, including to assess the applicability of, applicable provisions in A.R.S. Title 49, Chapter 4 and this Article. Such information includes, but is not limited to the location, design, construction, operation, maintenance, closure and retrofit of each CCR unit, descriptions of all CCR and non-CCR wastestreams placed into a CCR unit, as well as liners, controls, monitoring approaches, the groundwater monitoring system, and corrective action or remedial measures.
4. Sufficient technical and other information about the geologic and hydrogeologic characteristics and features of the area surrounding each CCR unit, including subsurface characteristics, to support decisions by the Director to establish permit conditions to require compliance with, including to assess the applicability of, applicable provisions of this Article, and to evaluate the compliance approaches proposed in the permit application. The owner and operator shall provide, at a minimum, information about the following in proximity to the CCR unit(s): floodplains and wetlands, fault lines or unstable areas, groundwater and surface water, soil and subsoil characteristics, groundwater well locations and uses, adjacent land uses, and other similar information.
5. Sufficient technical and other information characterizing conditions surrounding each CCR unit for the Director to establish permit conditions

to require compliance with, including to assess the applicability of, applicable provisions in this Article. This includes but is not limited to groundwater, aquifers, soil, or other sampling data; date and procedures used to characterize background concentrations; well construction diagrams and drill logs; hydrogeologic cross-sections; information about the activities that yielded the sampling data, including quality assurance data; delineation of contaminant plumes; and other relevant information required to make technical assessments to characterize the presence or absence of leakage or releases from the CCR unit.

6. Plans, maps, drawings, diagrams, and other visual information, in addition to narrative information, including, at a minimum:
  - a. A site map, depicting the location of the CCR unit(s) and surrounding features representing site conditions, monitoring wells, and other pertinent information, including all known property lines, structures, water wells, injection wells, drywells and their uses, topography, the location of points of discharge, and all known borings.
  - b. A topographic map, depicting each CCR unit, surrounding geologic and hydrogeologic features, surface water features, access and haul roads, and other pertinent information. Information in these maps must be provided to allow the Director to understand site conditions and evaluate compliance strategies proposed by the owner and operator, to draft terms and conditions that will achieve compliance with the requirements of this Article.
  - c. Potentiometric maps depicting groundwater flow direction, all CCR units at the facility, any delineated plumes of contamination from releases from CCR units, all groundwater monitoring wells or other monitoring points where water level data were gathered, potable wells on the facility property or nearby property, and other pertinent information. A sufficient number and quality of maps are required

to represent seasonal or temporal changes in groundwater flow direction.

- d. Other documents, including: hydrogeologic cross-sections depicting subsurface conditions, drill logs, CCR unit construction diagram(s), and groundwater monitoring well construction diagrams.
- e. All site-specific compliance plans and assessments required by this Article (e.g., fugitive emissions/dust control plan required by § 257.80, emergency action plan required by § 257.73, run-on and run-off control system plan required by § 257.81(c), inflow design flood control system plan required by § 257.82(c), closure plan or retrofit plan required by § 257.102, and post-closure care plan required by § 257.104).
- f. *All certifications and other documentation of decisions made or actions taken such as:*
  - i. *Certifications concerning the initial and periodic structural stability assessments required by §§ 257.73(d) and 257.74(d).*
  - ii. *Certifications concerning the initial and periodic safety factor assessments required by §§ 257.73(e) and 257.74(e).*
  - iii. *Certifications from a qualified professional engineer that existing and any planned groundwater monitoring systems meet the requirements of § 257.91;*
  - iv. *Documentation supporting a groundwater monitoring program meeting all requirements of 257.91 and 257.93 including certifications that the design and construction of the system meets the requirements of 257.91 and that the statistical method for evaluating groundwater monitoring data is appropriate pursuant to § 257.93(f)(6). The groundwater monitoring program shall also demonstrate compliance with 257.94, 257.95, or 257.98, as applicable;*



- v. *The most recent annual groundwater monitoring and corrective action report prepared pursuant to 257.90(e);*
  - vi. *Any notice of return to detection monitoring from assessment monitoring pursuant to § 257.95(e);*
  - vii. *Any alternative source demonstration pursuant to § 257.94(e)(2) or § 257.95(g)(3)(ii);*
  - viii. *Any assessment of corrective measures pursuant to § 257.96, along with the certification for any extension of time to complete the assessment and documentation of the public meeting required by § 257.96(e);*
  - ix. *Any selection of remedy required by § 257.97; and*
  - x. *Documentation supporting implementation of the corrective action programs as required by § 257.98.*
  - xi. *A report describing any CCR units that the facility has closed since October 19, 2015. The report shall demonstrate that closure complied with the requirements of 40 CFR 257, subpart D at the time of closure, and be certified by a qualified professional engineer.*
  - xii. *Technical data, such as design drawings and specifications, cost estimates, and engineering studies shall be certified by a qualified professional engineer.*
7. *The expected operational life of each CCR unit. (R18-9-A201(B))*
  8. *If submitting financial responsibility as provided by A.R.S. § 49-770(C), a detailed, written cost estimate, in current dollars, for corrective action, closure, and post-closure for each CCR unit consistent with the corrective action, closure and post-closure plan activities submitted under § 257.102. The cost estimates shall be based on the costs to the owner or operator of hiring a third party using regional fair market costs to conduct corrective action, closure and post-closure care activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator.*
  9. *The applicable fee established in R18-13-1021.*

10. Certification in writing that the information submitted in the application is true and accurate to the best of the knowledge of *the owner or operator*.
11. For any new CCR surface impoundment and any lateral expansion of a CCR surface impoundment, the information required by R18-13-1003.01, this Section, and R18-13-1010.01 prepared by or under the supervision of a qualified professional engineer, is required to be submitted.
  - a. A construction quality assurance plan describing all aspects of construction supervision. *[R12-15-1208(A)(8)]*
  - b. The following may be submitted with the application or during construction. *[R12-15-1208(B)]*
    - i. An emergency action plan as prescribed in 40 CFR 257.73 and 257.74 and R18-13-1003.02.
    - ii. An operation and maintenance plan to accomplish the annual maintenance.
    - iii. An instrumentation plan regarding instruments that evaluate the performance of the CCR surface impoundment.
12. For a CCR surface impoundment, a statement by a qualified professional engineer that determines the CCR surface impoundment's hazard class in accordance with this Article. The qualified professional engineer shall submit a map of the area that would be inundated by failure or improper operation of the CCR surface impoundment. The qualified professional engineer shall demonstrate whether failure or improper operation of the CCR surface impoundment would result in:
  - a. Loss of human life. The demonstration may be based on an emergency action plan for persons who may be in the area of inundation;
  - b. Significant incremental adverse consequences; or
  - c. Significant intangible losses, as defined in R18-13-1001 and identified and evaluated by a public natural resource management or protection agency. *[R12-15-1210(A)(5)]*

13. The Department may require additional information as necessary for the protection of human life, property, human health and the environment.
- D. **Completeness.** When the Director receives an application form containing the information required by this Section for all applicable CCR units and CCR-related solid waste management operations at the facility, completed to his or her satisfaction, the Director shall notify the owner or operator that the application is complete. The Department shall post a notice on the Department’s website pursuant to R18-13-1018.
  - E. After a permit application is determined by the Director to be complete, and before permit issuance, the owner or operator shall notify the Director if any application components have changed or need to be added.
  - F. The owner or operator of a CCR unit that has submitted an application for dam modification to the Arizona Department of Water Resources related to a CCR surface impoundment after *{insert publication date of this proposed rule}* shall notify the Department within 30 days of submittal or the effective date of this rule, whichever is later. For the purposes of this subsection, an “application for dam modification” means an application submitted to the Arizona Department of Water Resources under A.A.C. R12-15-1208 through R12-15-1211.

**R18-13-1010.01. Additional requirements for constructing or modifying CCR surface impoundments**

- A. Applications to Breach or Remove a High or Significant Hazard Potential CCR Surface Impoundment *[Added all of R12-15-1209]*
  1. An applicant shall excavate the CCR surface impoundment down to the level of the natural ground at the maximum section. Upon approval of the Director, additional breaches may be made. This provision shall not be construed to require more than total removal of the CCR surface impoundment regardless of the flood magnitude. The breach or breaches shall be of sufficient width to pass the greater of:
    - a. The 100 year flood at a depth of less than 5 feet, or

- b. The 100 year flood at a normal flood depth of not more than 2 feet at a distance of 2,000 feet downstream of the CCR surface impoundment.
2. The sides of each breach shall be excavated to a slope ratio that is stable and not steeper than 1 horizontal to 1 vertical.
3. Each breach shall be designed to prevent silt that has previously been deposited on the reservoir bottom and the excavated material from the breach from washing downstream.
4. Before breaching the CCR surface impoundment, the reservoir shall be emptied in a controlled manner that will not endanger lives or damage downstream property. The applicant shall obtain approval from the Director for the method of breaching or removal.
5. An application to breach or remove a high or significant hazard potential CCR surface impoundment shall include the following prepared by or under the supervision of a qualified professional engineer:
  - a. The construction drawing or drawings for the breach or removal of a CCR surface impoundment, including the location, dimensions, and lowest elevation of each breach.
  - b. A construction quality assurance plan describing all aspects of construction supervision.
6. Reduction of a high or significant hazard potential CCR surface impoundment to a low hazard or size shall be approved pursuant to R18-13-1017 under the following circumstances:
  - a. The owner or operator shall submit a completed application form and construction drawings for the reduction and the appropriate specifications, prepared by or under the supervision of an qualified professional engineer.
  - b. The construction drawings and specifications shall contain sufficient detail to enable a contractor to bid on and complete the project.

- c. The plans shall comply with all requirements of this subsection (A) except that the breach is not required to be to natural ground.
  - d. Upon completion of an alteration to nonregulated size, the qualified professional engineer shall file as constructed drawings and specifications with the Department.
- B.** Applications to Construct, Reconstruct, Repair, Enlarge, or Alter a High or Significant Hazard Potential CCR Surface Impoundment. An application to construct, reconstruct, repair, enlarge, or alter a high or significant hazard potential CCR surface impoundment shall include the following prepared by or under the supervision of a qualified professional engineer:
  - 1. Two complete sets of construction drawings as prescribed in subsection (F)(3) of this Section.
  - 2. Two complete sets of construction specifications as prescribed in subsection (F)(3) of this Section.
  - 3. An engineering design report that includes information needed to evaluate all aspects of the design of the CCR surface impoundment and appurtenances, including references with page numbers to support any assumptions used in the design, as prescribed in subsection (F)(3) of this Section. The engineering design report shall recommend a safe storage level for existing CCR surface impoundments being reconstructed, repaired, enlarged, or altered.
  - 4. A construction quality assurance plan describing all aspects of construction supervision.
- C.** Applications to Construct, Reconstruct, Repair, Enlarge, Alter, Breach, or Remove a Low Hazard Potential CCR Surface Impoundment *(from 1210(A)(6)(7)(8), 1210(B)(1), (B)(3), (I)(3), and (I)(4))*
  - 1. An application package to construct, reconstruct, repair, enlarge, or alter a low hazard potential CCR surface impoundment shall include the following prepared by or under the supervision of a qualified professional engineer:  
*(1210.A)*

- a. Two complete sets of construction drawings as prescribed by subsection (F)(3) of this Section.
  - b. Two complete sets of construction specifications as prescribed by subsection (F)(3) of this Section.
  - c. An engineering design report that includes information needed to evaluate all aspects of the design of the CCR surface impoundment and appurtenances, including references with page numbers to support any assumptions used in the design, as prescribed in subsection (F)(3) of this Section. *(1210.A.8)*
2. An application package for the breach or removal of a low hazard potential CCR surface impoundment shall include the following:
- a. A completed application filed in duplicate on forms provided by the Director that contains the following information:
    - i. The name and address of the owners and operators of the CCR surface impoundment.
    - ii. A description of the proposed removal.
    - iii. The proposed time for beginning and completing the removal.
  - b. A statement by a qualified professional engineer demonstrating both of the following:
    - i. That the CCR surface impoundment will be excavated to the level of natural ground at the maximum section; and
    - ii. That the breach or breaches will be of sufficient width to pass the greater of:
      - (1) The 100 year flood at a depth of less than 5 feet, or
      - (2) The 100 year flood at a normal flood depth of not more than 2 feet at a distance of 2,000 feet downstream of the CCR surface impoundment,
      - (3) This paragraph (ii) shall not be construed to require more than a total removal of the CCR surface impoundment regardless of flood magnitude.

3. Within 90 days after completing removal of a low hazard potential CCR surface impoundment, the owner or operator shall file the following:
    - a. A brief completion report, including a description of the causes for any changes or deviations from the approved application package prepared by the qualified professional engineer who supervised the construction, in accordance with A.R.S. Title 32, Chapter 1. The qualified professional engineer shall certify that the as removed drawings and the report accurately represent the actual removal of the CCR surface impoundment.
    - b. As-removed drawings prepared and sealed by the qualified professional engineer who supervised the removal. The owner or operator and the qualified professional engineer shall maintain a record of the drawings.
- D.** Construction of a High, Significant, or Low Hazard Potential CCR surface impoundment. *added all of 1212*
1. Before commencement of construction activities, the owner or operator shall invite to a pre-construction conference all involved regulatory agencies, the prime contractor, and all subcontractors. At this meeting the Department shall identify, to the extent possible, the key construction stages at which an inspection will be made. At least 48 hours before each key construction stage identified for inspection, the owner or operator or the owner's qualified professional engineer shall provide notice to the Department.
  2. The owner or operator's qualified professional engineer shall oversee construction of a new CCR surface impoundment or reconstruction, repair, enlargement, alteration, breach, or removal of an existing CCR surface impoundment.
  3. A qualified professional engineer shall supervise or direct the supervision of construction in accordance with the construction quality assurance plan.

4. The owner or operator's qualified professional engineer shall submit summary reports of construction activities and test results according to a schedule approved by the Department.
5. The owner or operator shall immediately report to the Department any condition encountered during construction that requires a deviation from the approved plans and specifications.
6. The owner or operator shall promptly submit a written request for approval of any necessary change with sufficient information to justify the proposed change. The owner or operator shall not commence construction without the written approval of the Director unless the change is a minor change. A minor change is a change that complies with the requirements of this Article and provides equal or better safety performance.
7. Upon completion of construction, the owner or operator shall notify the Department in writing. The Department shall make a final inspection. The owner or operator shall correct any deficiencies noted during the inspection.

**E.** Completion Documents for a Significant or High Hazard Potential CCR Surface Impoundment. Within 90 days after completion of the construction or removal work for a significant or high hazard potential CCR surface impoundment and final inspection by the Department, the owner or operator shall file the following: *added 1213(3)-(8)*

1. One set of full sized as constructed drawings prepared and sealed by the qualified professional engineer who supervised the construction. If changes were made during construction, the owner or operator shall file supplemental drawings showing the CCR surface impoundment and appurtenances as actually constructed.
2. Construction records, including grouting, materials testing, and locations and baseline readings for permanent bench marks and instrumentation, initial surveys, and readings.
3. Photographs of construction from exposure of the foundation to completion of construction.



4. A brief completion report summarizing the salient features of the project, including a description of the causes for any changes or deviations from the approved drawings and specifications that were made during the construction phase.
  5. A schedule for filling the impoundment, specifying fill rates, liquid level elevations to be held for observation, and a schedule for inspecting and monitoring the CCR surface impoundment.
  6. An operating manual for the CCR surface impoundment and its appurtenant structures. The operating manual shall include a process for safety inspections prescribed in R18-13-1004. The operating manual shall include schedules for surveillance activities and baseline information for any installed instrumentation as follows:
    - a. The frequency of monitoring,
    - b. The data recording format,
    - c. A graphical presentation of data, and
    - d. The person who will perform the work.
- F.** Construction Drawings, Construction Specifications, and Engineering Design Report for a High, Significant, or Low Hazard Potential CCR Surface Impoundment. The owner or operator and qualified professional engineer are responsible for complete and adequate design of a CCR surface impoundment and for including in the application all aspects of the design pertaining to the safety of the CCR surface impoundment. *added 1215;*
1. Construction Drawing Requirements. The construction drawings required by subsections (A), (B), and (C) of this Section shall include the following:
    - a. The seal and signature of a qualified professional engineer.
    - b. One or more topographic maps of the CCR surface impoundment, spillway, outlet works, and reservoir on a scale large enough to accurately locate the CCR surface impoundment and appurtenances, indicate cut and fill lines, and show the property lines and ownership status of the land. Contour intervals shall be compatible with the

height and size of the CCR surface impoundment and its appurtenances and shall show design and construction details.

- c. A reservoir area and capacity curve that reflect area in acres and capacity in acre-feet in relation to depth of water and elevation in the reservoir. The construction drawings shall show the spillway invert and top of CCR surface impoundment elevations. The construction drawings shall also show the reservoir volume and space functional allocations. The construction drawings may include alternate scales as required for the owner or operator's use.
- d. Spillway and outlet works rating curves and tables at a scale or scales that allow determination of discharge rate in cubic feet per second at both low and high flows as measured by depth of water passing over the spillway control section.
- e. A location map showing the CCR surface impoundment footprint and all exploration drill holes, test pits, trenches, adits, borrow areas, and bench marks with elevations, reference points, and permanent ties. This map shall use the same vertical and horizontal control as the topographic map.
- f. Geologic information including 1 or more geologic maps, profile along the centerline, and other pertinent cross sections of the CCR surface impoundment site, spillway or spillways, and appurtenant structures, aggregate and material sources, and reservoir area at 1 or more scales compatible with the site and geologic complexity, showing logs of exploration drill holes, test pits, trenches, and adits.
- g. One or more plans of the CCR surface impoundment to delineate design and construction details.
- h. Foundation profile along the CCR surface impoundment centerline at a true scale where the vertical scale is equal to the horizontal scale, showing the existing ground and proposed finished grade at cut and fill elevations, including anticipated geologic formations. The foundation profile shall include any proposed grout and drain holes.

- i. Profile and a sufficient number of cross sections of the CCR surface impoundment to delineate design and construction details. The drawings shall illustrate and show dimensions of camber, details of the top, core zone, interior filters and drains, and other zone details. The profile of the CCR surface impoundment may be drawn to different horizontal and vertical scales if required for detail. A maximum section of the CCR surface impoundment shall be drawn to a true scale, where the vertical scale is equal to the horizontal scale. The outlet conduit may be shown on the maximum section if this is typical of the proposed construction.
  - j. One or more CCR surface impoundment foundation plans showing excavation grades and cut slopes with any proposed foundation preparation, grout and drain holes, and foundation dewatering requirements.
  - k. Plan, profile, and details of the outlet works, including the intake structure, the gate system, conduit, trashrack, conduit filter diaphragm, conduit concrete encasement, and the downstream outlet structure. The drawings shall include all connection and structural design details.
  - l. Plan, profile, control section, and cross sections of the spillway, including details of any foundation preparation, grouting, or concrete work that is planned. A complex control structure, a concrete chute, or an energy dissipating device for a terminal structure shall include both hydraulic and structural design details.
  - m. Hydrologic data, drainage area and flood routing, and diversion criteria.
2. Construction Specification Requirements. The construction specifications required by subsections (A), (B) and (C) of this Section shall include the following:
    - a. The seal and signature of a qualified professional engineer.

- b. The statement that the construction drawings and specifications shall not be materially changed without the prior written approval of the Director under the provisions of R18-13-1017.
- c. A detailed description of the work to be performed and a statement of the requirements for the various types of materials and installation techniques that will enter into the permanent construction.
- d. The statement that construction shall not be considered complete until the Director has approved the construction in writing.
- e. The statement that the owner or operator's qualified professional engineer shall control the quality of construction.
- f. The following construction information:
  - i. All earth and rock material descriptions, placement criteria, and construction requirements for all elements of the CCR surface impoundment and related structures.
  - ii. All concrete, grout, and shotcrete material and mix descriptions, placement and consolidation criteria, temperature controls, and construction requirements for all elements of the CCR surface impoundment and related structures.
  - iii. Material criteria and material testing, cleaning, and treatment. If foundation or curtain grouting is required, the specifications shall describe the type of grout, grouting method, special equipment necessary, recording during grouting, and foundation monitoring to avoid disturbance from grouting.
  - iv. All materials testing that will be performed by the contractor for pre-qualification of materials, including special performance testing, such as water pressure tests in conduits. The Director shall accept materials that are pre-tested successfully and constructed in-place in accordance with specifications.

- v. A plan for control or diversion of surface water during construction. The design qualified professional engineer may determine frequency of storm runoff to be controlled during construction, commensurate with the risk of economic loss during construction.
  - vi. Criteria for blast monitoring and acceptable blast vibration levels, including particle velocities for the CCR surface impoundment and other critical appurtenances. Monitoring equipment and monitoring locations shall be specified.
  - vii. Instrumentation material descriptions, placement criteria, and construction requirements and a statement that instrumentation shall be installed by experienced specialty subcontractors.
3. Engineering Design Report Requirements. The engineering design report required by subsections (A), (B) and (C) of this Section shall include the following:
- a. The seal and signature of a qualified professional engineer.
  - b. The classification under 40 CFR 257.74(a)(2) of the proposed CCR surface impoundment, or for the proposed lateral expansion of an existing CCR surface impoundment.
  - c. Hydrologic considerations, including calculations and a summary table of data used in determining the required emergency spillway capacity and freeboard, and design of any diversion or detention structures. The design report shall include input and output listings.
  - d. Hydraulic characteristics, engineering data, and calculations used in determining the capacities of the outlet works and emergency spillway. The design report shall include input and output listings.
  - e. Geotechnical investigation and testing of the CCR surface impoundment site and reservoir basin. Results and analysis of subsurface investigations, including logs of test borings and geologic cross sections.

- f. Guidelines and criteria for blasting to be used by the contractor in preparing the blasting plan.
- g. Details of the plan for control or diversion of surface water during construction.
- h. Details of the dewatering plan for subsurface water during construction.
- i. Testing results of earth and rock materials, including the location of test pits and the logs of these pits.
- j. Discussion and design of the foundation blanket grouting, grout curtain, and grout cap based on foundation stability and seepage considerations.
- k. Calculations and basic assumptions on loads and limiting stresses for reinforced concrete design. The design report shall include input and output listings.
- l. A discussion and stability analysis of the CCR surface impoundment including appropriate seismic loading, safety factors, and embankment zone strength characteristics. Analyses shall include both short-term and long-term loading on upstream and downstream slopes. The design report shall include input and output listings.
- m. A discussion of seismicity of the project area and activity of faults in the vicinity. The design report shall use both deterministic and statistical methods and identify the appropriate seismic coefficient for use in analyses.
- n. Discussion and design of the cutoff trench based on seepage and other considerations.
- o. Permeability characteristics of foundation and CCR surface impoundment embankment materials, including calculations for seepage quantities through the CCR surface impoundment, the foundation, and anticipated in the internal drain system. The design report shall include input and output listings. The design report shall include copies of any flow nets used.

- p. Discussion and design of internal drainage based on seepage quantity calculations. The design report shall include instrumentation necessary to monitor the drainage system and filter design calculations for protection against piping of foundation and embankment.
- q. Erosion protection against waves and rainfall runoff for both the upstream and downstream slopes, as appropriate.
- r. Discussion and design of foundation treatment to compensate for geological weakness in the CCR surface impoundment foundation and abutment areas and in the spillway foundation area.
- s. Post-construction vertical and horizontal movement systems.
- t. Discussion of foundation conditions including the potential for subsidence, fissures, dispersive soils, collapsible soils, and sink holes.

**G.** This Section consists of enhancements to 40 CFR 257, subpart D based on Arizona dam safety standards and does not apply to:

- 1. CCR surface impoundments with a maximum height of less than 6 feet, regardless of storage capacity;
- 2. CCR surface impoundments with a maximum height of between 6 and 25 feet and a storage capacity of less than 50 acre-feet; or
- 3. CCR surface impoundments with a maximum height greater than 25 feet and a storage capacity of 15 acre-feet or less.

**R18-13-1011. Permit Contents**

- A.** Standard permit conditions for CCR facility permits. The following conditions shall be incorporated into all CCR permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations shall be provided in the permit.
  - 1. Duty to comply. The owner or operator shall comply with all conditions of this CCR permit, except to the extent and for the duration any noncompliance is authorized by the Director. Any unauthorized permit

noncompliance constitutes a violation of this Article and is subject to enforcement action, permit termination, or denial of a permit application.

2. Duty to submit periodic review certification. The owner or operator shall review the application materials submitted for this permit no less frequently than every five years after the issuance date of this permit.
  - a. Any information in the original application that is no longer accurate at the time of review, as well as any recent or new information not included in the original application, shall be submitted in a revised application in accordance with R18-13-1010. If the changes reflected in the revised application meet the criteria for a permit modification in R18-13-1017, the revised application shall specify the type of modification requested and include information required for a modification in accordance with that Section.
3. Need to halt or reduce activity not a defense. It shall not be a defense for an owner or operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. Requirement to mitigate impacts of noncompliance. In the event of noncompliance with this permit, the owner or operator shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as necessary to reduce reasonable probability of adverse impacts on health and the environment.
5. New statutory requirements or regulations. If the standards or regulations on which this permit is based change through changes to statute, promulgation of new or amended regulations, or by judicial decision, and this results in failure of the permit terms and conditions to ensure compliance with the revised standard or regulation, the owner or operator shall apply for a permit modification. The owner or operator shall submit an application to modify this permit to include the revised requirements within 180 days after the change becomes effective.



6. Proper operation and maintenance. The owner or operator shall ensure the proper operation and maintenance of all units, ancillary equipment and systems of treatment and control, which are installed or used to achieve compliance with the conditions of this permit. Failure to properly operate and maintain such equipment does not excuse failure to comply with requirements in this permit. The term “Proper operation and maintenance” includes effective performance, adequate funding, adequate staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Operation of back-up or auxiliary equipment or similar systems is required only when necessary to achieve compliance with the conditions of this permit.
7. Permit actions. This permit may be modified, or terminated for cause. The application by the owner or operator for a permit modification, or termination, or anticipated noncompliance, does not stay any permit condition.
8. Property rights. The permit does not convey any property rights of any sort, nor any exclusive privilege.
9. Duty to provide information. The owner or operator shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
10. Inspection and entry. The owner or operator shall allow the Director or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
  - a. Enter at reasonable times upon the permitted premises where a regulated unit or activity is located or conducted, or where records that must be kept under the conditions of this permit are located;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any units, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by this Article, any substances or parameters at any location.

11. Monitoring and records.

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. The owner or operator shall retain records of all monitoring information, including all calibration, maintenance, and quality assurance records; all original monitoring data; copies of all reports and certifications required by this permit; and records of all data for a period of at least ten years from the date of the sample, measurement, report, certification, or application. This period may be extended by request of the Director at any time. The owner or operator shall maintain records and data used to support a permit application for the lifetime of the permit. The owner or operator shall maintain records of all groundwater monitoring, including records of groundwater well construction and groundwater elevation measurements, throughout the active life of the unit, the post-closure care period and until completion of all corrective action.

12. Signatory requirements. All applications, reports, or information required to be submitted to the Director by this permit shall be signed and certified by the owner and operator of a CCR unit in accordance with the procedures of R18-13-1010(C)(2).

13. Reporting requirements.

- a. Anticipated noncompliance. The owner or operator shall provide written or electronic notice to the Director as soon as possible, but no later than 60 days in advance of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- b. The owner or operator shall report by phone or electronically any noncompliance or release which has a reasonable probability of adverse effects on health or the environment as soon as possible, and no later than 24 hours after the time the owner or operator first becomes aware of the circumstances. The notification shall include the following:
  - i. Information concerning release of any CCR that may endanger public drinking water supplies.
  - ii. Any information about a release of CCR that could have a reasonable probability of adverse effects on health or the environment outside the facility.
  - iii. The description of the release and its cause shall include:
    - (A) Name, business address, business email address, and business telephone number of the owner and operator;
    - (B) Name, address, email address, and telephone number of the facility;
    - (C) Date, time, and type of release;
    - (D) Name and quantity of material(s) involved;
    - (E) The extent of injuries, if any;
    - (F) An assessment of actual or potential hazards to the environment and human health outside the facility, where applicable;
    - (G) Estimated quantity and disposition of recovered material that resulted from the release; and

- (H) Action taken to mitigate the risk, including any preparation in advance of a severe weather event
  - iv. A narrative shall also be posted on the facility CCR website no later than five days after the time the owner or operator becomes aware of the circumstances. The narrative shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the five-day notice requirement in favor of posting a written report within fifteen days.
  - c. Where the owner or operator becomes aware that they failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, the owner or operator shall promptly submit such facts or corrected information to the Director.
- 14. Severability. Invalidation of a portion of this permit does not necessarily render the whole permit invalid. ADEQ intends that this permit remains in effect to the extent possible. In the event that any part of this permit is invalidated, the Director will advise the owner or operator as to the effect of such invalidation.
- B.** In addition to the standard conditions in subsection (A), the Director shall establish permit terms and conditions in a CCR facility permit, on a case-by-case basis, in accordance with the requirements and procedures of A.R.S. Title 49, Chapter 4 and this Article. At a minimum, each CCR facility permit shall include all permit terms and conditions necessary to ensure compliance with ARS Title 49, Chapter 4 and this Article. *(from proposed 257.141)*
- C.** Each CCR facility permit shall contain, either expressly or by reference, all requirements of this Article that are applicable to the permitted CCR units and

CCR-associated solid waste management activities at the facility. In satisfying this provision, the Director may incorporate the applicable requirements directly into terms and conditions in the permit or incorporate them by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements shall be provided in the permit. *(from proposed 257.141)*

- D.** Protectiveness. Each CCR facility permit shall contain such terms and conditions as the Director determines are necessary to ensure there is no reasonable probability of adverse effects on safety, health or the environment from the solid waste management of CCR at the facility. *(from proposed 257.141)*
- E.** The owner or operator of a CCR surface impoundment shall install, maintain, and monitor instrumentation to evaluate the performance of the CCR surface impoundment. The Director shall require site-specific instrumentation that the Director deems necessary for monitoring the safety of the CCR surface impoundment when failure may endanger human life and property. Conditions that may require monitoring include land subsidence, earth fissures, embankment cracking, phreatic surface, seepage, and embankment movements. *[R12-15-1205(C)]*
- F.** The permit shall contain a safe storage level for each CCR surface impoundment.
- G.** A CCR facility permit is issued for a fixed term of ten years. The term of a permit shall not be extended by modification of the permit beyond the maximum duration specified in this subsection. *[40 CFR 270.50(a) and (b)]*

#### **R18-13-1012. Compliance Schedules**

- A.** The Director may include compliance schedules in the CCR permit according to subsection (B) or (C) below, or both.
- B.** The owner or operator shall follow a timeline for future compliance, if established in the CCR facility permit, that provides for action from the owner or operator that is not required until after the date of permit issuance. The timeline shall establish dates for their achievement.
  - 1. If the time necessary for completion of an interim requirement is more than one year and is not readily divisible into stages for completion, the permit

shall contain interim dates for submission of reports on progress toward completion of the interim requirement and shall indicate a projected completion date.

2. Unless otherwise specified in the permit, within 30 days after the applicable date specified in a compliance schedule, the owner or operator shall submit to the Department a report documenting that the required action was taken within the time specified.

C. When an owner or operator that has applied for a CCR permit will not be in compliance with one or more applicable requirements in A.R.S. Title 49, Chapter 4, or this Article at the time of permit issuance, the Director may include in the CCR permit a schedule of compliance. The schedule of compliance shall include an enforceable sequence of actions leading to compliance. This schedule of compliance shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the owner or operator is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements in A.R.S. Title 49, Chapter 4 or this Article on which it is based.

1. Time for compliance. Any schedule of compliance established in a CCR permit under subsection (C) shall require compliance as soon as feasible.
2. Interim dates. If a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.
  - a. The time between interim dates shall not exceed one year.
  - b. The permit shall require posting on the facility's CCR website of reports of progress toward completion of the interim requirements and indicate a projected completion date. The time between progress reports shall not exceed six months.
3. Reporting. The permit shall require that, no later than 30 days following each interim milestone deadline and the final deadline of the schedule of compliance, the owner or operator shall submit a report to the Director documenting that the required action was taken within the time specified

and shall post a notification on the facility's CCR website of its compliance or noncompliance with the interim or final requirement.

- D.** After reviewing the activity pursuant to any schedule established under this Section, the Director may modify the CCR permit, based on changed circumstances relating to the required action.

**R18-13-1013. CCR Facility Permit Issuance or Denial**

- A.** The Director shall issue a CCR permit based upon the information obtained by or made available to the Department, if the Director determines that the owner or operator will comply with A.R.S. Title 49, Chapter 4 and this Article. *[R18-9-A201(G)(1)]*
- B.** The Director shall provide the owner or operator with written notification of the final decision to grant or deny the permit within the applicable licensing time frames requirements and include the following: *[R18-9-A201(G)(2)]*
1. The owner or operator's right to appeal the final permit determination, including the number of days the owner or operator has to file an appeal and the name and telephone number of the Department contact person who can answer questions regarding the appeals process;
  2. If the permit is denied, the reason for the denial with reference to the statute or rule on which the denial is based; and
  3. The owner or operator's right to request an informal settlement conference under A.R.S. §§ 41-1092.03(A) and 41-1092.06.
- C.** The Director may deny a CCR permit if the Director determines upon completion of the application process that the owner or operator has:
1. Failed or refused to correct a deficiency in the CCR permit application;
  2. Failed to demonstrate that the CCR units and their operation will comply with the requirements of A.R.S. Title 49, Chapter 4 and this Article. The Director shall base this determination on:
    - a. The information submitted in the CCR permit application,
    - b. Any information submitted to the Department following a public hearing, or

- c. Any relevant information that is developed or acquired by the Department; or
- 3. Provided false or misleading information.
- D. Upon denying a CCR permit, the Director shall issue an order directing the owner or operator to begin closure of all CCR units at the facility according to § 257.101.

**R18-13-1014. CCR Permit Transfer**

- A. The owner or operator of a CCR unit shall notify the Department 30 days prior to the planned transfer of any portion of ownership or operational control of a CCR unit or facility. If prior notice is impractical, the owner or operator shall notify the Department as soon as practical. The new owner and operator shall submit an application for a permit modification prior to the transfer of ownership or operational control or as soon as practicable thereafter.
- B. The new owner or operator:
  - 1. Shall include a written agreement between the previous and new owner or operator indicating a specific date for transfer of all permit responsibility, coverage, and liability;
  - 2. Submit the applicable initial fee for a minor permit modification established in R18-13-1021;
  - 3. Demonstrate technical capability necessary to fully carry out the terms of the permit and financial capability according to R18-13-1020; and
  - 4. Submit a signed statement that it has reviewed the permit and agrees to the terms of the permit including any compliance schedules or new terms needed as a result of the transfer.
- C. An owner or operator shall continue to comply with all permit conditions until the Director modifies/transfers the permit, regardless of whether ownership or operational control has already been transferred.

**R18-13-1015. CCR Permit Termination**

The Director may, after notice and opportunity for a hearing, terminate a CCR facility permit for any of the following causes: *[from proposed 257.153 with modifications]*



1. Significant noncompliance by the owner or operator with the permit;
2. Failure by the owner or operator in the permit application or during the permit issuance process to fully disclose all relevant facts,
3. Misrepresentation by the owner or operator of any relevant facts at any time;
4. A determination by the Director that the permit fails to ensure there is no reasonable probability of adverse effects to health or the environment and the permitted activity can only be regulated to acceptable levels by permit termination.
5. The Director has determined that all permitted activities have ceased and the owner or operator has completed closure, the required post-closure care and any required corrective action.

#### **R18-13-1016. Permit Renewals**

- A. To renew a CCR permit, the owner or operator shall submit an application under R18-13-1010 at least 180 days before the expiration date of the effective permit. *[40 CFR 270.10(h)]*
- B. If the owner or operator has submitted a timely and complete application for renewal under R18-13-1010, the terms and conditions of the existing CCR permit continue in force beyond the expiration date of the permit, but only until the effective date of the issuance or denial of a revised CCR permit. *[40 CFR 270.51(d)]*
- C. The owner or operator shall renew the CCR permit as long as any CCR unit remains operational or is closing, in corrective action or post-closure care.

#### **R18-13-1017. Modification of a CCR Facility Permit**

- A. The Director may modify a CCR facility permit upon the request of the facility owner or operator or upon the Director's initiative. *[R18-9-A211(A)]*
  1. The owner or operator may submit a request for CCR facility permit modification in writing on a form provided by the Department with the applicable fee established in R18-13-1021, explaining the facts and reasons justifying the request. *[R18-9-A211(A)(1)]*

2. The Department may modify a permit, classify the modification, and collect the appropriate fee if:
  - a. There are alterations, additions, or changes in the operation or condition of the permitted facility which occurred after permit issuance and require permit conditions or terms that are different or absent from those in the existing permit;
  - b. The Director has received new information after the permit has been issued that:
    - i. Was not available to the Director at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the inclusion of different permit conditions at the time of issuance to ensure compliance with A.R.S. Title 49, Chapter 4 and this Article, or
    - ii. Otherwise shows that modification is necessary to ensure that there is no reasonable probability of adverse effects on safety, health or the environment.
  - c. There is a change in an underlying regulatory or statutory requirement
  - d. An error or omission is discovered that makes the permit inconsistent with regulatory or statutory requirements.
- B.** Upon receiving a request from an owner or operator, the Department shall determine whether the application is complete and whether the modification would be major, minor, or administrative.
- C.** The Department shall process modification requests following the applicable licensing time-frames. *[R18-9-A211(A)(2)]*
- D.** A modified CCR permit supersedes the previous CCR permit upon the effective date of the modification, except as provided in R18-13-1011(F). *[R18-9-A211(A)(3)]*
- E.** Major permit modifications. A major modification is a modification that makes a material change to a substantive term, provision, requirement, or a limiting

parameter of a permit or that could substantially impact human health or the environment. The owner or operator shall not make any change that requires a major permit modification without approval from the Director. The list below contains examples of major modifications:

1. Add a new CCR unit including a new landfill unit, a lateral expansion, or a new surface impoundment unit not already authorized by a CCR permit, including replacing a CCR unit. *[EPA proposed 257.151(c)(4)]*
2. Reduce the post-closure care period. *[modified from EPA proposed 257.151(c)(7)]*
3. Increase the maximum permissible operating storage level of CCR and liquids at a CCR surface impoundment or raising the embankment.
4. Selection of a remedy under § 257.97.

**F.** Minor permit modifications. *[R18-9-A211(D) with some modifications]* A minor modification is a modification that makes a routine change to a substantive term, provision, requirement, or a limiting parameter of a permit. The Director shall follow procedures for a minor modification to a CCR permit for those nonmajor alterations, additions, or changes in the operation or condition of the permitted facility which occurred after permit issuance and which require permit conditions that are different or absent from those in the existing permit. The owner or operator shall not make any change that requires a minor permit modification without approval from the Director. Minor permit modifications include, but are not limited to, the following:

1. Incorporate a change to an Aquifer Water Quality Standard in 18 A.A.C. 9, or a Maximum Contaminant Level under 40 CFR §§ 141.62 and 141.66, which serves as the underlying basis for a permit condition; *[EPA proposed 257.151(a)(4)]*
2. Change a construction requirement, treatment method, or operational practice, if the alteration complies with the requirements of A.R.S. Title 49, Chapter 4 and this Article and provides equal or better performance; *[R18-9-211(D)(2)(a)]*

3. Change to a groundwater sampling and analysis program including a change in the statistical method for evaluating groundwater monitoring data required by § 257.93(f)(6);
4. Change an interim or final compliance date in a compliance schedule, if the Director determines just cause exists for changing the date; *[R18-9-211(D)(2)(b)]*
5. Change the owner or operator's financial assurance mechanism or estimates under R18-13-1020;
6. Transfer a permit under R18-13-1014;
7. Replace monitoring equipment, including a well, if the replacement results in equal or greater monitoring effectiveness; *[R18-9-211(D)(2)(e)]*
8. Breaching or removing a surface impoundment. These activities shall be performed according to R18-13-1011(A), (B) and (C).
9. Reduce the frequency or stringency of requirements for inspection, groundwater monitoring, sampling, analysis, recordkeeping, reporting, web posting, or maintenance activities by the owner or operator provided there is equal or better protection for safety, human health or the environment. *[EPA proposed 257.151(c)(1) modified]*
10. Changes to an approved groundwater monitoring system, including reducing the number, or making changes in location, depth, or design of groundwater monitoring wells required by the permit, or changing to an alternative groundwater sampling and analysis frequency. *[EPA proposed 257.151(c)(3)]*
11. Any extension of time under § 257.96(a) to complete the assessment of corrective measures.
12. Add a corrective action program or make material changes to the corrective action requirements in the permit. *[EPA proposed 257.151(c)(6)]*
13. Change a permit condition that is based on a change in an underlying regulatory or statutory requirement, unless it requires substantial changes to the design, operation, or compliance strategies established in the permit and

requires the application of significant technical judgment or discretion.  
*[EPA proposed 257.151(c)(9)]*

14. In the closure plan, increases to estimates of the maximum extent of operations or the maximum inventory of waste. *[EPA proposed 257.151(a)(9)]*
15. Provide notification of completion of closure activities of a CCR unit. *[257.102(h)]*
16. Modify a CCR unit, including physical changes or changes in management practices which are not administrative modifications under subsection (G) or major modifications under subsection (E).

**G.** Administrative permit modifications. The Director shall follow procedures for an administrative modification to a CCR permit to: *[R18-9-A211(C) with some modifications]*

1. Correct a typographical error;
2. Change nontechnical administrative information, excluding a permit transfer;
3. Correct minor technical errors, such as errors in calculation, locational information, citation of laws and citations of construction specifications;
4. Increase the frequency, duration, or stringency of the requirements for inspections, maintenance activities, monitoring, reporting, recordkeeping, or web posting or to revise a laboratory method;

**H.** The Director may change the categorization of a CCR permit modification.

**I.** An owner or operator may request a permit modification based on actions from more than one category of permit modification. Where possible, the Director may combine several requested permit modifications into one modification from the highest category.

#### **R18-13-1018. Public Notice Requirements for Permit Actions**

**A.** The Director shall provide notice as described after determining an application complete for the following permit actions. The notice shall contain information

about the licensing timeframes for the permit action and describe how a person can inspect all permit application materials, either in person or online.

1. An initial or renewed CCR facility permit;
  - a. On the ADEQ website;
  - b. To anyone requesting such notice;
  - c. To the entities listed in A.R.S. § 49-111.
2. A major modification to a CCR facility permit;
  - a. On the ADEQ website;
  - b. To anyone requesting such notice;
  - c. To the entities listed in A.R.S. § 49-111.
3. A minor modification to a CCR facility permit;
  - a. On the ADEQ website;
  - b. To anyone requesting such notice.

**B.** The Director shall provide notice as described when proposing to issue or deny the following:

1. An initial or renewed CCR facility permit;
  - a. Once, in a daily or weekly newspaper of general circulation where the facility is located;
  - b. On the ADEQ website;
  - c. To anyone requesting such notice;
  - d. By requiring the owner or operator to place paper copies of a notice and supplemental information in a local library or community center.
2. A major modification to a CCR facility permit;
  - a. Once, in a daily or weekly newspaper of general circulation where the facility is located;
  - b. On the ADEQ website;
  - c. To anyone requesting such notice;
  - d. By requiring the owner or operator to place paper copies of a notice and supplemental information in a local library or community center.

- C.** The Director shall provide notice as described when issuing or denying the following:
1. An initial or renewed CCR facility permit;
    - a. To anyone who commented on the proposed initial or renewed CCR facility permit;
    - b. On the ADEQ website;
    - c. To anyone requesting such notice.
  2. A major modification to a CCR facility permit;
    - a. To anyone who commented on the proposed major modification;
    - b. On the ADEQ website;
    - c. To anyone requesting such notice.
  3. A minor modification to a CCR facility permit;
    - a. On the ADEQ website;
    - b. To anyone requesting such notice.
  4. An administrative permit modification;
    - a. To anyone requesting such notice.
- D.** The Director shall provide notice as described when terminating a CCR facility permit:
1. On the ADEQ website;
  2. To anyone requesting such notice.
- E.** The notice for a permit action under subsection (B)(1) or (B)(2) shall:
1. Include a brief summary of the draft document,
  2. Contain information about the licensing timeframes for the permit action and explain where further information on the permit action can be obtained,
  3. Describe when and how comments may be made,
  4. Provide at least 30 days for comments from publication of the notice, and
  5. Explain how a public hearing may be requested.
- F.** After a notice is issued under subsection (B)(1) or (B)(2), the Department shall schedule a public hearing if requested and if the Director determines there is sufficient public interest. The Director shall provide notice of the hearing as provided in subsection (B)(1)(a) or (B)(2)(a) at least 30 days before the hearing.

The Department may conduct a public hearing for a CCR permit or major modification virtually.

- G.** The Department shall respond to comments received on the proposed CCR permit or major modification when the final decision is made under subsection (C). The Department shall send a copy of the comment responses to all commenters and notify commenters of their potential rights under A.R.S § 41-1092.03(B). The Department shall send the comment responses to commenters and anyone requesting a copy and post the comment responses on the Department’s website.

**R18-13-1019. Compliance, ADEQ Inspections, Violations and Enforcement**

- A.** ADEQ Inspection and Entry. For purposes of ensuring compliance with the provisions of Title 49 and this Article, the owner or operator of a CCR facility, shall, upon request of any representative of ADEQ designated by the Director, furnish information pertaining to such CCR facility and allow such person at reasonable times: *[R18-8-280A]*

1. To enter any establishment or other place maintained by such person where such CCR units are or have been operated;
2. To have access to, and to copy all records relating to CCR units;
3. To inspect any facilities, equipment (including monitoring and control equipment), practices, and operations, relating to CCR units;
4. To inspect, monitor, and obtain samples from such person of any CCR units and monitoring and control equipment; and
5. To record any inspection by use of written, electronic, magnetic and photographic media.

- B.** Penalties. A person who violates any CCR permit, provision of this Article, or order issued pursuant to a CCR permit is subject to civil and/or criminal penalties pursuant to A.R.S. §§ 49-783 and 791, as amended. Nothing in this Article shall be construed to limit the Director’s or Attorney General’s enforcement powers authorized by law including but not limited to the seeking or recovery of any civil or criminal penalties. *[R18-8-280B, modified]*



- C. A certification statement may be required on written submittals to ADEQ in response to Compliance Orders or in response to information requested pursuant to subsection (B) of this Section. In addition, ADEQ may request in writing that a certification statement appear in any written submittal to ADEQ. The certification statement shall be signed by a person authorized to act on behalf of the company or empowered to make decisions on behalf of the company on the matter contained in the document. *[R18-8-280C]*
- D. The Director shall conduct a CCR surface impoundment safety inspection annually or more frequently for each high hazard potential CCR surface impoundment, triennially for each significant hazard potential CCR surface impoundment, and once every five years for each low hazard potential CCR surface impoundment. *[R12-15-1219(A)]*

#### **R18-13-1020. Financial Assurance Requirements**

The owner or operator of a CCR unit shall comply with the financial assurance requirements of this Section and Article 17 of this Chapter.

- 1. If not already submitted with a permit application before CCR program approval, the owner or operator of a CCR unit shall submit the following third-party cost estimates that are representative of regional fair market costs for each CCR unit at the facility within 180 days after CCR program approval:
  - a. The estimate for the cost of closure that meets the requirements in 40 CFR §§ 257.102 and 257.103, consistent with the closure plans submitted thereunder;
  - b. The estimate for the cost of post-closure monitoring and maintenance according to 40 CFR § 257.104, consistent with the post-closure plan submitted thereunder;
  - c. The estimate for any corrective action as a result of any known releases from the facility as provided under §§ 257.97 and 257.98 and any compliance schedules in the facility permit.

2. The cost estimates shall be dated and updated every 3 years and as necessary whenever closure plans or post-closure plans are amended pursuant to §§ 257.102(b)(3) or 257.104(d)(3), or corrective action costs change under § 257.98.
3. The owner or operator shall demonstrate financial assurance for the total amounts in subsection (1) using one or more mechanisms in Article 17 of this Chapter.

**R18-13-1021. Fees**

- A.** After CCR program approval, the Department shall send an invoice to each CCR facility and the owner or operator of a CCR facility shall pay to ADEQ an annual registration fee as shown in Table A. The invoice shall have a due date of the first of a month that is at least 30 days after CCR program approval and the fee shall be due on that date and annually thereafter on the first of that month.

**Table A. Facility Annual Registration Fees**

<b>CCR Unit</b>	<b>Annual Fee</b>
CCR Surface Impoundment	\$17,450 each*
CCR Landfill	\$13,150 each*
Closed CCR Unit subject to post-closure	\$10,200 each*

*\*Adjust by CPI annually, see R18-8-260(M)(4)*

- B.** When submitting an application for any of the license types in Table B below, an owner or operator shall remit to ADEQ an initial application fee as shown in the Table.

**Table B. CCR Permitting Application Fees and Maximum Fees\***

<b>License Type</b>	<b>Initial Fee*</b>	<b>Maximum Fee*</b>
CCR Facility Permit (new or renewal)	\$20,000	\$200,000
Major Modification	\$10,000	\$100,000
Minor Modification	\$5,000	\$50,000
Administrative Modification	\$500	\$5,000

*\*Adjust by CPI periodically*

- C.** If the total cost of processing the application identified in the Table B is less than the initial fee listed in the Table, the Department shall refund the difference between the total cost and the amount listed in the Table to the owner or operator.
1. Permits and permit modifications. If the total cost of processing the application is greater than the initial fee received plus other amounts paid, the Department shall bill the owner or operator for the difference upon permit approval. The owner or operator shall pay the difference in full before ADEQ issues the permit or modification.
  2. Withdrawals. In the event of a withdrawal of the permit application by the owner or operator, if the total costs of processing the application are less than the amount paid, the Department shall refund the difference. If the total costs are greater than the amount paid, the Department shall bill the owner or operator for the difference, and the owner or operator shall pay the difference within 45 days of the date of the bill.
- D.** The Department shall provide the owner or operator itemized bills at least quarterly for the expenses associated with evaluating the application and approving or denying the permit or permit modification. The invoice shall be paid within 30 days of receipt. The following information shall be included in each bill:
1. The dates of the billing period;
  2. The date and number of review hours itemized by employee name, position type and specifically describing:
    - a. The review task performed CCR permitting service performed,
    - b. Each CCR unit involved, and
    - c. The hourly rate;
  3. A description and amount of review-related costs as described in subsection (E)(2); and
  4. The total fees paid to date, the total fees due for the billing period, the date when the fees are due, and the maximum fee for the project.
- E.** Fees shall consist of processing charges and review-related costs as follows:
1. Processing charges. The Department shall calculate the processing charges using a rate of \$268\* per hour, multiplied by the number of review hours,

including pre-application meetings, used to evaluate and approve or deny the permit or permit modification. *\*Adjust by CPI annually, see R18-8-260(M)(4)*

2. Review-related costs means any of the following costs applicable to a specific application:
  - a. Per diem expenses,
  - b. Transportation costs,
  - c. Reproduction costs,
  - d. Laboratory analysis charges performed during the review of the permit or permit modification,
  - e. Public notice advertising and mailing costs,
  - f. Presiding officer expenses for public hearings on a permitting decision,
  - g. Court reporter expenses for public hearings on a permitting decision,
  - h. Facility rentals for public hearings on a permitting decision
  - i. Costs related to the public notice required by R18-13-1018.
  - j. Other reasonable and necessary review-related expenses documented in writing by the Department and agreed to by the owner or operator.
  
3. Total itemized billings for an application shall not exceed the maximum amounts listed in Table B in this Section

**R18-13-1023. Licensing Timeframes for CCR Facility Permits** *(this Section will be a separate rulemaking in 18 A.A.C. 1, Article 5)*

**Table 23. Coal Combustion Residuals (CCR) Facility Permits**  
**Subject to A.R.S. § 41-1073(A) Licensing Time Frame Requirements**

Permit Action	Authority	Administrative Completeness Review	Substantive Review	Overall Time-Frame
CCR Facility Permit	A.R.S. § 49-891			
No public hearing	R18-13-1010	84	418	502
Public hearing		84	376	460
Major permit modification	A.R.S. § 49-891 R18-13-1017	84	376	

Major permit modification with no public hearing	A.R.S. § 49-891 R18-13-1017	84	334	
Minor permit modification	A.R.S. § 49-891 R18-13-1017	50	150	
Administrative permit modification	A.R.S. § 49-891 R18-13-1017	30	60	

**ARTICLE 17. FINANCIAL ASSURANCE**

R18-13-1701. Financial Demonstration

R18-13-1702. Reserved

R18-13-1703. Financial Demonstrations for CCR Facilities

R18-13-1704. Financial Assurance Mechanisms

**ARTICLE 17. FINANCIAL ASSURANCE**

**R18-13-1701. Definitions**

1. “Book net worth” means the net difference between total assets and total liabilities.
2. “Face amount” means the total amount the insurer is obligated to pay under the policy.
3. “Net working capital” means current assets minus current liabilities.
4. “Substantial business relationship” means a pattern of recent or ongoing business transactions to the extent that a guaranty contract issued incident to that relationship is valid and enforceable.
5. “Tangible net worth” means an owner or operator’s book net worth, plus subordinated debts, less goodwill, patent rights, royalties, and assets and receivables due from affiliates or shareholders.

**R18-13-1702. Reserved**

**R18-13-1703. Financial Demonstrations for CCR Facilities** *(based on R18-9-A203)*

- A. Financial demonstration. The owner or operator of a CCR unit applying for a CCR facility permit shall demonstrate financial capability to close, ensure proper post-closure care of the CCR units at the facility, and if necessary, perform any corrective action as a result of known releases from the CCR units at the facility, in

compliance with A.R.S. Title 49, Chapter 4, and Article 10 of this Chapter. The owner or operator shall: *[R18-9-A203(B)]*

1. Submit a letter signed by the chief financial officer stating that the owner or operator is financially capable of meeting the costs described in R18-13-1020(1);
2. For a state or federal agency, county, city, town, or other local governmental entity, submit a statement specifying the details of the financial arrangements used to meet the estimated costs submitted under R18-13-1020(1), including any other details that demonstrate how the owner or operator is financially capable of meeting the costs described in R18-13-1020(1);
3. For other than a state or federal agency, county, city, town, or other local governmental entity, submit the information required for at least one of the financial assurance mechanisms listed in R18-13-1704 that covers the closure, post-closure, and corrective action costs submitted under R18-13-1020(1), including:
  - a. The selected financial mechanism or mechanisms;
  - b. The amount covered by each financial mechanism;
  - c. The institution or company that is responsible for each financial mechanism used in the demonstration;
  - e. Any other details that demonstrate how the owner or operator is financially capable of meeting the costs described in R18-13-1020(1).

**R18-13-1704. Financial Assurance Mechanisms**

The owner or operator of a CCR unit may use any of the following mechanisms to cover the financial assurance obligations under *R18-13-1020*: *[R18-9-A203(C)]*

1. Financial test for self-assurance. If an owner or operator uses a financial test for self-assurance, the owner or operator shall not consolidate the financial statement with a parent or sibling company. The owner or operator shall

make the demonstration in either subsection (1)(a) or (b) and submit the information required in subsection (1)(c):

- a. The owner or operator may demonstrate:
  - i. One of the following:
    - (1) A ratio of total liabilities to net worth less than 2.0 and a ratio of current assets to current liabilities greater than 1.5;
    - (2) A ratio of total liabilities to net worth less than 2.0 and a ratio of the sum of net annual income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; or
    - (3) A ratio of the sum of net annual income plus depreciation, depletion, and amortization to total liabilities greater than 0.1 and a ratio of current assets to current liabilities greater than 1.5;
  - ii. The net working capital and tangible net worth of the owner or operator each are at least six times the closure, post-closure and corrective action cost estimates; and
  - iii. The owner or operator has assets in the U.S. of at least 90 percent of total assets or six times the closure, post-closure and corrective action cost estimates; or
- b. The owner or operator may demonstrate:
  - i. The owner or operator's senior unsecured debt has a current investment-grade rating as issued by Moody's Investor Service, Inc.; Standard and Poor's Corporation; or Fitch Ratings;
  - ii. The tangible net worth of the owner or operator is at least six times the closure, post-closure and corrective action cost estimates; and

- iii. The owner or operator has assets in the U.S. of at least 90 percent of total assets or six times the closure, post-closure and corrective action cost estimates; and
  - c. The owner or operator shall submit:
    - i. A letter signed by the owner or operator's chief financial officer that identifies the criterion specified in subsection (1)(a) or (b) and used by the owner or operator to satisfy the financial assurance requirements of this Section, an explanation of how the owner or operator meets the criterion, and certification of the letter's accuracy, and
    - ii. A statement from an independent certified public accountant verifying that the demonstration submitted under subsection (1)(c)(i) is accurate based on a review of the owner or operator's financial statements for the latest completed fiscal year or more recent financial data and no adjustment to the financial statement is necessary.
- 2. Performance surety bond. The owner or operator may use a performance surety bond if all the following conditions are met:
  - a. The company providing the performance bond is listed as an acceptable surety on federal bonds in Circular 570 of the U.S. Department of the Treasury;
  - b. The bond provides for performance of all the covered items listed in R18-13-1020(1) by the surety, or by payment into a standby trust fund of an amount equal to the penal amount if the owner or operator fails to perform the required activities;
  - c. The penal amount of the bond is at least equal to the amount of the cost estimate developed in R18-13-1020(1) if the bond is the only method used to satisfy the requirements of this Section or a pro-rata amount if used with another financial assurance mechanism;
  - d. The surety bond names the Arizona Department of Environmental Quality as beneficiary;



- e. The original surety bond is submitted to the Director;
  - f. Under the terms of the bond, the surety is liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond; and
  - g. The surety payments under the terms of the bond are deposited directly into the Standby Trust Fund.
3. Certificate of deposit. The owner or operator may use a certificate of deposit if the following conditions are met:
- a. The owner or operator submits to the Director one or more certificates of deposit made payable to or assigned to the Department to cover the owner or operator's financial assurance obligation or a pro-rata amount if used with another financial assurance mechanism;
  - b. The certificate of deposit is insured by the Federal Deposit Insurance Corporation and is automatically renewable;
  - c. The bank assigns the certificate of deposit to the Arizona Department of Environmental Quality;
  - d. Only the Department has access to the certificate of deposit; and
  - e. Interest accrues to the owner or operator during the period the owner or operator gives the certificate as financial assurance, unless the interest is required to satisfy the requirements in R18-13-1020(1).
4. Trust fund. The owner or operator may use a trust fund if the following conditions are met:
- a. The trust fund names the Arizona Department of Environmental Quality as beneficiary, and
  - b. The trust is initially funded in an amount at least equal to:
    - i. The cost estimate for the items submitted under R18-13-1020(1),
    - ii. The amount specified in a compliance schedule approved in a CCR facility permit, or

- iii. A pro-rata amount if used with another financial assurance mechanism.
5. Letter of credit. The owner or operator may use a letter of credit if the following conditions are met:
- a. The financial institution issuing the letter is regulated and examined by a federal or state agency;
  - b. The letter of credit is irrevocable and issued for at least one year in an amount equal to the cost estimate submitted under R18-13-1020(1) or a prorata amount if used with another financial assurance mechanism. The letter of credit provides that the expiration date is automatically extended for a period of at least one year unless the issuing institution has canceled the letter of credit by sending notice of cancellation by certified mail to the owner or operator and the Director 90 days in advance of cancellation or expiration. The owner or operator shall provide alternate financial assurance within 60 days of receiving the notice of expiration or cancellation;
  - c. The financial institution names the Arizona Department of Environmental Quality as beneficiary for the letter of credit; and
  - d. The letter is prepared by the financial institution and identifies the letter of credit issue date, expiration date, dollar sum of the credit, the name and address of the Department as the beneficiary, and the name and address of the owner or operator.
6. Insurance policy. The owner or operator may use an insurance policy if the following conditions are met:
- a. The insurance is effective before signature of the permit or substitution of insurance for other extant financial assurance instruments posted with the Director;
  - b. The insurer is authorized to transact the business of insurance in the state and has an AM BEST Rating of at least a B+ or the equivalent;
  - c. The owner or operator submits a copy of the insurance policy to the Department;

- d. The insurance policy guarantees that funds are available to pay costs for all items listed under R18-13-1020(1) without a deductible. The policy also guarantees that once cleanup steps begin that the insurer will pay out funds to the Director or other entity designated by the Director up to an amount equal to the face amount of the policy;
- e. The policy guarantees that while closure, postclosure, or corrective action activities are conducted the insurer will pay out funds to the Director or other entity designated by the Director up to an amount equal to the face amount of the policy;
- f. The insurance policy is issued for a face amount at least equal to the current cost estimate submitted to the Director for performance of all items listed under R18-13-1020(1) or a pro-rata amount if used with another financial assurance mechanism. Actual payments by the insurer will not change the face amount, although the insurer's future liability is reduced by the amount of the payments, during the policy period;
- g. The insurance policy names the Arizona Department of Environmental Quality as additional insured;
- h. The policy contains a provision allowing assignment of the policy to a successor owner or operator. The transfer of the policy is conditional upon consent of the insurer and the Department; and
- i. The insurance policy provides that the insurer does not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy, at a minimum, provides the insured with a renewal option at the face amount of the expiring policy. If the owner or operator fails to pay the premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the owner or operator and to the Director 90 days in advance of the cancellation. If the insurer cancels the policy, the owner or operator shall provide alternate financial assurance within 60 days of receiving the notice of cancellation.

7. Cash deposit. The owner or operator may use a cash deposit if the cash is deposited with the Department to cover the financial assurance obligation under R18-13-1020(1).
8. Guarantees.
  - a. The owner or operator may use guarantees to cover the financial assurance obligations under R18-13-1020(1) if the following conditions are met:
    - i. The owner or operator submits to the Department an affidavit certifying that the guarantee arrangement is valid under all applicable federal and state laws. If the owner or operator is a corporation, the owner or operator shall include a certified copy of the corporate resolution authorizing the corporation to enter into an agreement to guarantee the owner or operator's financial assurance obligation;
    - ii. The owner or operator submits to the Department documentation that explains the substantial business relationship between the guarantor and the owner or operator;
    - iii. The owner or operator demonstrates that the guarantor meets conditions of the financial mechanism listed in subsection (1). For purposes of applying the criteria in subsection (1) to a guarantor, substitute "guarantor" for the term "owner or operator" as used in subsection (1);
    - iv. The guarantee is governed by and complies with state law;
    - v. The guarantee continues in full force until released by the Director or replaced by another financial assurance mechanism listed under subsection (1);
    - vi. The guarantee provides that, if the owner or operator fails to perform closure, post-closure care or corrective action of a facility covered by the guarantee, the guarantor shall perform or pay a third party to perform closure, post-closure

- care or corrective action, as required by the permit, or establish a fully funded trust fund as specified under subsection (4) in the name of the owner or operator; and
- vii. The guarantor names the Arizona Department of Environmental Quality as beneficiary of the guarantee.
- b. Guarantee reporting. The guarantor shall notify or submit a report to the Department within 30 days of:
    - i. An increase in financial responsibility during the fiscal year that affects the guarantor's ability to meet the financial demonstration;
    - ii. Receiving an adverse auditor's notice, opinion, or qualification; or
    - iii. Receiving a Department notification requesting an update of the guarantor's financial condition.
9. An owner or operator may use a financial assurance mechanism not listed in subsections (1) through (8) if approved by the Director.
- B.** Loss of coverage. If the Director believes that an owner or operator will lose financial capability under this section, the owner or operator shall, within 30 days from the date of receipt of the Director's request, submit evidence that the financial demonstration under R18-13-1703 is being met or provide an alternative financial assurance mechanism. *[R18-9-A203(D)]*
  - C.** Financial assurance mechanism substitution. An owner or operator may substitute one financial assurance mechanism for another if the substitution is approved by the Director through a modification under R18-13-1017. *[R18-9-A203(E)]*