

**STATE OF ARIZONA  
AQUIFER PROTECTION PERMIT NO. P - 106095  
PLACE ID 35753, LTF 49572**

**1.0 AUTHORIZATION**

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A. A. C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, Coolidge Power, L.L.C is hereby authorized to operate the discharging facilities located at the Coolidge Generating Station, located within the city limit of Coolidge, Arizona, in Pinal County located over groundwater of the Eloy Sub-basin in the Pinal Active Management Area, Section 10, Township 6 South, Range 8 East of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods), unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below, or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant, and as determined at the applicable POC, occurs as a result of the discharge from the facility.

**1.1 PERMITTEE INFORMATION**

**Facility Name:** Coolidge Generating Station

<b>Permittee:</b>	<b>Mailing Address:</b>	<b>Facility's Street Address:</b>
Coolidge Power, L.L.C.	450 1 <sup>st</sup> Street S.W. Calgary, Alberta, Canada T2P5H1	859 E Randolph Road Coolidge, Arizona 85228

**Facility Contact:** Pat Drysdale (403) 936-3334

**Emergency Telephone Number:** 1.888.982.7222

**Latitude:** 32° 55' 3" North **Longitude:** 111° 30' 15" West

**Legal Description:** Section 10, Township 6 South, Range 8 East of the Gila and Salt River Base Line and Meridian.

**1.2 AUTHORIZING SIGNATURE**

\_\_\_\_\_  
**Henry R. Darwin, Acting Director**  
**Water Quality Division**  
**Arizona Department of Environmental Quality**

Signed this \_\_\_\_ day of \_\_\_\_\_, 2009

**2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]**

**2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]**

The proposed Coolidge Power, L.L.C. Coolidge Generating Station is located within the city limit of Coolidge, in Pinal County, Arizona. The generating station is a natural gas fired, simple-cycle peaking power plant capable of producing up to 576 megawatts (MW) and will be operated to produce power during periods of peak electricity demand. The project consists of 12 combustion turbine generators (CTG) each capable of producing 48 MW under optimal conditions.

The water required for this project will be supplied from on-site wells. Water use requirements at the facility include: water injection systems to control nitrogen oxide emissions; evaporative cooling system to increase air intake humidity; and the turbine Sprint system, which sprays atomized water into the turbine compressor reducing temperature and further improving efficiency. Process wastewater generated at the facility include: reverse osmosis wastewater; multi-media filter backwash; CTG evaporative cooler system blowdown; and a minor amount of contact stormwater that passes through an oil/water separator. Process wastewater shall be conveyed to West Evaporation Ponds and future proposed East Evaporation Ponds. The evaporation ponds shall be double-lined with a leak collection and removal system (LCRS) and designed to hold all wastewater generated at the facility.

Site stormwater shall be diverted away from the plant area through topographic measures and drainage ditches. The evaporation ponds will provide a raised berm to deter any run-on to the facility.

The site includes the following permitted discharging facilities:

Facility	Latitude	Longitude
West Evaporation Pond 1	32° 55' 3.60" North	111° 30' 30.19" West
West Evaporation Pond 2	32° 55' 3.71" North	111° 30' 24.22" West
Proposed East Evaporation Pond North	32° 55' 5.31" North	111° 30' 00.63" West
Proposed East Evaporation Pond South	32° 55' 2.47" North	111° 30' 00.63" West

**Annual Registration Fee [A.R.S. § 49-242]**

The annual registration fee for this permit is established by A.R.S. § 49-242 and is payable to ADEQ each year. The design flow is 696,000 gallons per day (gpd).

**Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]**

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee shall maintain financial capability throughout the life of the facility. The estimated closure and post-closure cost is \$7,367,900. The financial assurance mechanism was demonstrated through A.A.C. R18-9-A203(C)(1).

**2.2 Best Available Demonstrated Control Technology**

**[A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]**

Total containment of wastewater shall be employed to provide pollution control at this facility. The wastewater management systems and operational methods are included as part of the BADCT design. All quality assurance and control procedures applicable to construction of the containment structure and treatment components, as approved by the ADEQ, shall be followed.

**2.2.1 Engineering Design**

The pond shall be constructed in accordance with ADEQ approved plans as listed in Section 5.0 and containing the following design elements.

**2.2.1.1 Sub-grade Preparation**

The native soil sub-grade shall be a minimum of 6 inches, compacted to a minimum of 95 percent standard Proctor dry density (ASTM Method D698). The sub-grade shall be free of debris or angular material that could damage the synthetic liner.

**2.2.1.2 Liner Design**

The discharge system includes four interconnected ponds, with two sets of two ponds each. Each pond liner system shall include a 60 mil high density polyethylene (HDPE) primary liner with a permeability less than  $1 \times 10^{-10}$  cm/sec installed over a Leak Collection and Removal System (LCRS) and a secondary 60 mil HDPE liner. The liners shall be separated by a 300 mil perforated drain geonet fabric to allow any leakage that may pass through anomalies in the top liner, to flow to a perforated HDPE underdrain pipe connected to a leak collection sump. A combination of the geonet and underdrain shall provide a flow capacity equivalent to a 1-foot thick layer with a 3 percent slope and hydraulic conductivity of  $10^{-2}$  cm/sec. The liners shall be anchored in a 2 foot by 2 foot backfilled trench.

**2.2.1.3 Storage Capacity and Freeboard**

The plant design relies on evaporative flux from the discharge ponds. The West Ponds will allow an annual operation capacity of 1250 hours at an evaporation pond discharge rate of 696,000 gallons per day, or a monthly maximum of 21 million gallons. The West Ponds shall have a combined surface area of 12.36 acres and volume of 32 million gallons with a depth of 13 and 14 feet, respectively, and side slopes of 3 Horizontal (H): 1 Vertical (V). The East Ponds shall have a combined surface area of 16 acres and volume of 28 million gallons with a depth of 11 feet and side slopes of 3 Horizontal (H): 1 Vertical (V). The storage capacity of the ponds shall allow for 2 feet of freeboard, which shall be maintained at all times in each of the evaporation ponds, as well as an annual residual available storage volume of approximately 50 percent. Discharge limits for storage capacity and freeboard are presented in Section 2.3.

**2.2.1.4 Stormwater Containment and Diversion**

The calculated freeboard and holding capacity of the evaporation ponds include containment of the 100-year, 24-hour storm event. Run-on from the 100-year, 24-hour storm event shall be diverted around the evaporation ponds.

**2.2.1.5 Oil/Water Separator**

An oil/water separator shall be installed at the site to receive contact stormwater from drains collected from various areas of the plant. The sludge from the separator shall be cleaned as necessary and will be disposed of off-site in accordance with local, state and federal waste disposal requirements. The separator shall meet the requirements of the manufacturer's specifications.

**2.2.1.6 Wastewater and Liner System Compatibility**

All solutions discharged to the lined evaporation ponds shall be compatible with the synthetic liner.

**2.2.1.7 Quality Assurance/Quality Control Plan and Final Construction Report**

A Quality Assurance/Quality Control (QA/QC) Plan, final construction report, and Construction Certification, including as-built plans sealed by an Arizona-registered professional engineer, shall be submitted to the ADEQ no later than 90 days after completion

of any of the evaporation ponds construction (including liner testing) in accordance with Section 2.2.3, (Pre-operational Requirements). The report shall include the results of compaction testing and shall verify that the evaporation pond and sub-grade were constructed in accordance with ADEQ-approved plans and this permit and that seams and welds have passed required testing. The report shall document liner installation QA/QC procedures (including seam or weld testing) and final as-built plans and inspection results for all pollution control components relating to the wastewater discharge and treatment processes.

**2.2.1.8 Leak Collection and Removal System**

Each discharge pond shall be designed as a double lined system with a leak collection and removal system (LCRS) that shall consist of a geonet layer, a leak detection sump and a vertical monitoring well. The fluid level in the wells shall be monitored daily with an electronic fluid level sensor. The base of each of the evaporation ponds will be graded with variable bottom topography and shall include a series of two linear troughs that run the length of the pond. A 2 percent slope will be contoured between the centerline of the trough and the bounding peak elevation. Underlying the centerline of the trough, between the HDPE layers, will be an 8-inch diameter perforated HDPE underdrain pipe. The underdrain pipe will be encased within 1-inch diameter smooth rock between the geonet and lower HDPE liner. The underdrain will be graded across the length of the pond at a 0.5 percent slope towards LCRS monitoring well. Each pond will include two underdrains, and two LCRS monitoring wells. Each LCRS monitoring well will consist of a vertical 16-inch diameter HDPE pipe that will be fusion welded 2 feet above the base of the well to the 8-inch pond underdrain pipe. Fluid levels shall be monitored daily in the LCRS wells using an electronic fluid level sensor. In the event fluids are detected in a LCRS well at one of the discharge ponds, a portable pump system shall be used. The pump system will be equipped with a meter capable of recording instantaneous and total flow.

**2.2.2 Site-specific Characteristics**

Site specific characteristics were not considered as part of the BADCT demonstration.

**2.2.3 Pre-operational Requirements**

The permittee shall comply with all pre-operational and monitoring requirements as described in Section 3.0 (Compliance Schedule).

**2.2.3.1 West Evaporation Pond 1 and 2**

Within 60 days of completing construction (including liner testing) of the West Evaporation Ponds, and prior to the initial discharge of wastewater into the evaporation ponds, the permittee/operator shall inspect all wastewater management systems to verify that all components function as designed; and to ensure that the installation of the liner and the LCRS meets the manufacturer's quality assurance and quality control requirements and the liner system is completed in accordance with ADEQ-approved plans.

Within 90 days of completing construction (including liner testing) of the West Evaporation Ponds, the permittee shall provide a final construction report to the ADEQ Groundwater Section and the ADEQ Water Quality Compliance Section. The construction report shall include verification that the evaporation pond was constructed in accordance with ADEQ-approved plans, documentation of the QA/QC procedures completed for the installation of the liner and LCRS, subgrade preparation, and the final as-built plans and inspection results for all pollution control components relating to wastewater discharge and treatment processes. The final construction report shall be certified by the on-site construction manager and shall be sealed by an Arizona registered professional engineer.

**2.2.3.2 East Evaporation Pond North and South**

Within 60 days of completing construction (including liner testing) of the East Evaporation

Ponds, and prior to the initial discharge of wastewater into the evaporation ponds, the permittee/operator shall inspect all wastewater management systems to verify that all components function as designed; and to ensure that the installation of the liner and the LCRS meets the manufacturer's quality assurance and quality control requirements and the liner system is completed in accordance with ADEQ-approved plans.

Within 90 days of completing construction (including liner testing) of the East Evaporation Ponds, the permittee shall provide a final construction report to the ADEQ Groundwater Section and the ADEQ Water Quality Compliance Section. The construction report shall include verification that the evaporation pond was constructed in accordance with ADEQ-approved plans, documentation of the QA/QC procedures completed for the installation of the liner and LCRS, subgrade preparation, and the final as-built plans and inspection results for all pollution control components relating to wastewater discharge and treatment processes. The final construction report shall be certified by the on-site construction manager and shall be sealed by an Arizona registered professional engineer.

#### **2.2.4 Operational Requirements**

The evaporation ponds shall be designed and maintained with sufficient volume to contain and dispose of through evaporation, the total inflow of wastewater into the evaporation ponds in a typical year with 2 feet of freeboard maintained to accommodate the storm water expected from a 100-year, 24-hour storm event. If damage to the liner is identified the area will be isolated and repaired in accordance with the manufacturer's methods and specifications. Any leakage through the primary liner in the evaporation pond shall be conveyed through a drainage geonet layer to a LCRS Monitor well for extraction. The LCRS Monitor wells and leakage removal pump shall be sized and operated to prevent leakage from overflowing the LCRS sump and to maintain flow to the LCRS sump. Leakage flow rates shall be calculated based on the amount of liquid removed in gallons per day (gpd) for comparison with alert levels (ALs) specified in Section 4.2, Table 2.

Oil and sludge removed from the oil/water separator shall be properly characterized and transported off-site for disposal in accordance with all applicable local, State, and Federal waste disposal rules and regulations. If damage to the oil/water separator is identified during an inspection and it could cause or contribute to an unauthorized discharge, proper repairs shall be promptly performed. The oil/water separator shall be inspected and maintained according to Section 4.2, Table 4.

### **2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]**

#### **2.3.1 Holding Capacity and Freeboard**

A freeboard of 2 feet shall be maintained in the evaporation pond at all times. Total maximum design holding capacity for the West Evaporation Ponds shall be 32 million gallons allowing 2 feet of freeboard and the future proposed East Evaporation Ponds shall be 28 million gallons allowing 2 feet of freeboard.

#### **2.3.2 Authorized and Unauthorized Materials**

Authorized discharge to the evaporation pond shall consist of and be restricted to process wastewater generated at the facility which includes: reverse osmosis wastewater; multi media filter backwash; CTG evaporative cooler system blowdown; and a minor amount of contact stormwater that passes through an oil/water separator. The discharge to the evaporation pond shall not contain any organic solvents, or hazardous substances (A.R.S. § 49-201(19)) that are not associated with aforementioned routine operations and the authorized waste streams. In the event of an unauthorized discharge or accidental spill, the permittee shall initiate the contingency requirements as described in Section 2.6.3 (Discharge Limit Violations) and 2.6.5 (Emergency Response and Contingency Requirements for Spills and Unauthorized Discharges).

#### **2.3.3 Evaporation Pond Maintenance**

The permittee shall maintain the evaporation pond to the maximum extent practicable to ensure that there are no liner failures, uncontrollable leaks, overtopping, berm breaches, accidental spills, or other unauthorized discharges into the environment.

**2.3.4 Evaporation Pond Monitoring Requirements**

The evaporation ponds shall be inspected and the discharge monitored in accordance with Section 2.5 (Monitoring Requirements) and Section 4.0 (Tables of Monitoring Requirements) of this permit. The LCRS shall be monitored in accordance with Section 4.2, Table 2.

**2.3.5 Oil/Water Separator**

Treated effluent from the oil/water separator shall be directed to the evaporation pond. Sludge collected from the oil/water separator shall be properly characterized and disposed of at a state approved facility. Discharge water from the separator shall contain less than 50 mg/L in oil and/or total petroleum hydrocarbons (TPH) content. Discharge monitoring is not required for this permit. Discharge quality is subject to verification by ADEQ inspectors.

**2.4 Point of Compliance [A.R.S. § 49-244]**

The POC is designated as an existing well at the northern boundary of the property. The location of the well is appropriate for a POC, but its construction is not. However, the well construction is currently not an issue because groundwater monitoring is not required at this time.

The POC is established by the following monitoring location:

Description	Location	Latitude	Longitude
POC #1	Located along the northern boundary of the facility north of the West Evaporation Ponds	32° 55' 08.15" North	111° 30' 26.90" West

If groundwater monitoring is necessary in the future, the groundwater flow conditions shall be reassessed to determine if the designated POC is appropriately located and constructed. The Director may amend the permit, as necessary, to reflect a revised POC location and may designate additional POCs if information on groundwater gradients or groundwater usage indicates the need.

**2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]**

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and chain of custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and EPA 40 CFR PART 136 for guidance in this regard. Copies of laboratory analyses and chain of custody forms shall be maintained at the permitted facility. Upon request these documents shall be made immediately available for review by ADEQ personnel.

**2.5.1 Discharge Monitoring**

The initial discharge shall be characterized and the results used as the basis for contingency discharge monitoring.

**2.5.1.1 Initial Discharge Characterization**

The permittee shall initially characterize the wastewater potentially discharging to the evaporation pond within 60 days of the start of operation. A representative sample of the wastewater shall be collected from at the end of the pipe that is discharging into the evaporation pond that is actively receiving wastewater at the time of sample collection. The sample shall be analyzed for all parameters specified in Section 4.2, Table 3.

**2.5.1.2 Routine Discharge Quality Monitoring**

Routine discharge monitoring is not required at time of permit issuance.

**2.5.1.3 Contingency Discharge Monitoring**

Section 2.6 of this permit contains provisions for collection of samples from the LCRS and wastewater in the evaporation pond in the event of AL2 exceedance.

**2.5.2 Facility / Operational Monitoring**

The permittee shall maintain and inspect the evaporation pond and the oil/water separator that treats wastewater directed to the evaporation ponds according to Section 4.2, Table 1 and Table 4. The facilities shall be maintained to insure that performance levels in Section 4.2, Table 1 are met.

The permittee shall monitor on a weekly basis the fluid levels in the evaporation ponds to ensure that a sudden release of wastewater to the subsurface does not occur. A sudden drop in fluid level, overtopping, or berm failure shall be considered a permit violation.

The permittee shall inspect the evaporation ponds to verify that all systems are functioning properly. At a minimum the pond shall be inspected for the parameters listed in Section 4.2, Table 1. The evaporation ponds shall be inspected following every significant rainfall or storm event. The leak collection and removal system shall be monitored on a daily basis for any exceedance of an alert level 1 (AL1) and AL2 according to Section 4.2, Table 2.

If any damage to an evaporation pond is identified during an inspection or if a pollution control system is rendered inoperable, the permittee shall perform the necessary repairs or maintenance to return the evaporation pond or system to operating condition, or remove the evaporation pond or system from service. The permittee shall document facility monitoring activities, and all repair procedures, methods, and materials used to return the system to operating condition in the Annual Report described in Section 2.7 of this permit.

**2.5.3 Groundwater Monitoring and Sampling Protocols**

Routine groundwater monitoring is not required under the terms of this permit. If groundwater monitoring is necessary in the future, the groundwater flow conditions shall be reassessed to determine if the designated POC is appropriate.

**2.5.4 Surface Water Monitoring and Sampling Protocols**

Routine surface water monitoring is not required at time of permit issuance.

**2.5.5 Analytical Methodology**

All samples collected for compliance monitoring shall be analyzed using Arizona state approved methods. If no state approved method exists, then any appropriate EPA approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona state-certified laboratories can be obtained at the address below:

Arizona Department of Health Services  
Office of Laboratory Licensure and Certification  
250 North 17<sup>th</sup> Avenue  
Phoenix, AZ 85007  
Phone: (602) 364-0720

**2.5.6 Installation and Maintenance of Monitoring Equipment**

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the ADEQ Groundwater Section for approval prior to installation and the permit shall be amended to include any new points of compliance.

## **2.6 Contingency Plan Requirements**

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

### **2.6.1 General Contingency Plan Requirements**

At least one copy of the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and knowledgeable of the contingency and emergency plans.

Any AL that is exceeded or any violation of an aquifer quality limit (AQL), DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

### **2.6.2 Exceeding of Alert Levels and Performance Levels**

#### **2.6.2.1 Exceeding of Performance Level Set for Operational Conditions**

1. If the performance level for an operational indicator set in Section 4.2, Table 1 has been exceeded, the permittee shall reduce or cease discharge whichever is necessary to perform proper repair procedures and prevent releases to the subsurface within 30 days.
2. Within 5 days of discovery, notify ADEQ Water Quality Compliance Section in accordance with Section 2.7.3(1) (Permit Violation and AL Status Reporting).
3. Within 30 days of discovery, submit a written report documenting the steps taken to correct the performance standard exceedance (if any were necessary) to ADEQ according to Section 2.7.3(2).
4. A log of all repair work shall be maintained according to the reporting requirements set in Section 2.7.2 (Operation Inspection/Log Book Recordkeeping) and shall remain on site for 10 years.
5. The facility is no longer on alert status once the operational indicator no longer indicates that a performance level or AL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

#### **2.6.2.1.1 Exceeding of Performance Level Set for Freeboard**

The permittee shall notify the ADEQ Water Quality Compliance Section within 72 hours of discovery.

1. Immediately upon becoming aware of exceeding the freeboard for the evaporation pond set in Section 4.2, Table 1, the permittee shall cease discharging to the pond. Remove and properly dispose of, or transfer water to a temporary storage container, all excess water in the evaporation pond until the water level is restored at or below the required freeboard. If

the freeboard is less than two foot as a result of significant rainfall or storm event, the excess water may be allowed to evaporate until the water level is restored below the 2-foot freeboard unless there is any potential for overtopping.

2. Evaluate the operational and maintenance procedures and make needed adjustments to avoid future exceedances. Records documenting each freeboard incident and actions taken to correct the problem shall be included in the annual report as required in Section 2.7.4.
3. The facility is no longer on alert status once the operational indicator performance level is no longer being exceeded. The permittee shall complete all tasks necessary to return the facility to the pre-alert operating condition.
4. The facility is no longer on alert status once the operational indicator no longer indicates that the-freeboard performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

**2.6.2.1.2 Exceeding Performance Level Set for Operation of the Oil/Water Separator**

If a performance level specified in Section 4.2, Table 4 has been exceeded the permittee shall:

1. Within five days of the discovery, investigate the cause of the incident, including an evaluation of the facility operational practices, and an inspection of the oil/water separator.
2. Immediately correct or modify any operational or maintenance problems identified by the investigation and perform activities as necessary to return the facility to its pre-alert operating condition and to avoid future exceedances.
3. If performance standards for the operation of the oil/water separator are exceeded for more than one week and have not been corrected the permittee shall cease discharging to the evaporation pond, properly characterize the effluent and begin disposal of the wastewater to an approved waste disposal facility in accordance with federal, state, and local rules and regulations. No discharges shall be directed to the evaporation pond until the condition that led to the exceedance of the performance standard is corrected and the permittee is no longer exceeding the performance standard.
4. Record in the facility log the findings of the investigation, and a description of the activities performed to correct the problem. The facility log shall be maintained according to Section 2.7.2. Records documenting each incident and actions taken to correct the problem shall be included in the annual report as required in Section 2.7.4 of this permit.
5. Upon review of the report, the ADEQ may request additional monitoring or remedial actions.

**2.6.2.2 Exceeding of Alert Levels Set for Discharge Monitoring**

Routine discharge monitoring is not required at time of permit issuance.

**2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring**

Routine groundwater monitoring is not required at time of permit issuance.

**2.6.2.4 Exceeding of Alert Levels for Leak Collection and Removal System Monitoring**

**2.6.2.4.1 Exceeding AL1 for Normal Liner Leakage**

If AL1 as specified in Part 4.2, Table 2 has been exceeded, the permittee shall take the following actions:

1. Within 5 days of discovery, determine if the fluid in the collection sump is wastewater from the evaporation pond by measuring the pH and conductivity of fluids in the evaporation pond and in the sump to allow direct comparison in wastewater quality.
2. Within 5 days, notify the ADEQ Water Quality Compliance Section, in accordance with Section 2.7.3, and include in the notification an assessment of the type of water in the sump based on the measurements taken according to item 1 listed above.
3. Within 15 days, assess the condition of the liner system using visual methods, electrical leak detection, or other methods as applicable.
4. Monitor fluid removal from the LCRS on a daily basis until the daily volume of fluid quantified either remains below AL1 for 30 days, or the ADEQ completes a review of a Liner Leakage Assessment Report and determines that the permittee must perform repairs.
5. Within 30 days of discovery of exceeding AL1, the permittee shall submit an initial report to the ADEQ Water Quality Compliance Section to address problems identified from the initial assessment of the liner system, the source of the fluid, any remedial actions taken and any remedial actions scheduled to be taken to minimize the future occurrences. The report shall include the results of the initial liner evaluation, methods used to locate the leak(s) if applicable, any repair procedures implemented to restore the liner to optimal operational status if required, and other information necessary to ensure the future occurrence of the incidence shall be minimized.
6. For leakage rates that continue to exceed AL1 and are below the AL2, a Liner Leakage Assessment Report shall be included in the next annual report described in Section 2.7.4 of this permit. The permittee may also submit the Liner Leakage Assessment Report to the ADEQ prior to the annual report due date. This Liner Leakage Assessment Report shall be submitted to the ADEQ Water Quality Compliance Section and the ADEQ Groundwater Section.
7. The ADEQ shall review the Liner Leakage Assessment Report and may require that the permittee take additional action to address the problems identified from the assessment of the liner and perform other applicable repair procedures as directed by the ADEQ, including repair of the liner or addressing and controlling infiltration of non-operational water detected in the LCRS.
8. Once the ADEQ determines that the detected leakage rate is normal and a permit amendment is required to revise the AL, then daily fluid removal monitoring shall no longer be required.

**2.6.2.4.2**

**Exceeding AL2 for Liner Rip or Failure in the Evaporation Pond**

If AL2 specified in Part 4.2, Table 2 has been exceeded, the permittee shall:

1. Within 24 hours of discovery, determine if water in the collection sump is wastewater water from the evaporation pond by measuring the pH and conductivity of fluids contained in the evaporation pond and in the sump to allow direct comparison in water quality.
2. Cease all discharges into the evaporation pond.
3. Within 5 days of discovery, notify the ADEQ Water Quality Compliance Section, in accordance with Section 2.7.3 and include an assessment regarding the type of water in the sump based upon the measurements taken according to (1) listed above.

4. Within 5 days of discovery, initiate the assessment of the condition of the liner system using visual methods, electric leak detection, or other methods as applicable.
5. Within 5 days of discovery, collect samples from the liquid contained in the collection sump and analyze the samples in accordance with Section 4.2, Table 3. Within 30 days of exceeding AL2, submit the analytical data to the ADEQ Water Quality Compliance Section.
6. Within 60 days of exceeding AL2, submit for approval to the ADEQ, a corrective action plan to address all problems identified from the assessment of the liner system and surface releases, if any. At the direction of the ADEQ, the permittee shall implement the approved plan.
7. Within 30 days of completion of corrective actions, submit to the ADEQ, a written report as specified in Section 2.6.6.

## **2.6.3 Discharge Limitations (DL) Violations**

### **2.6.3.1 Discharge of Unauthorized Materials**

If unauthorized materials are discharged to the oil water separator or the evaporation pond the permittee shall follow the requirements of Section 2.7.3 and shall take the following actions:

1. Within 24 hours of discovery, notify the ADEQ Water Quality Compliance Section of the incident.
2. Within 5 days, sample the evaporation pond and characterize for the parameters listed in Section 4.2, Table 3 (and additional parameters if needed for the specific discharge), identify the source of the unauthorized material and eliminate the discharge immediately. Repair equipment if applicable and necessary, or adjust the operation to avoid future occurrences. The permittee shall evaluate the ability of the oil/water separator to treat the discharge with respect to the oil/water separator's treatment performance capacity and specifications for discharges to the evaporation pond.
3. Within 60 days submit a report describing the actions taken in (1) and (2) above, and the information specified in Section 2.7.3, to the ADEQ Water Quality Compliance Section. Upon review of the report, the ADEQ may request additional monitoring or corrective action that the permittee shall perform.

### **2.6.3.2 Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid (Leakage into the Vadose Zone)**

If there is unexpected loss of fluid in the evaporation pond, any failure of the containment structure, or leakage through the liner system such that fluids are released to the ground surface or vadose zone, the permittee shall follow the requirements of Section 2.7.3 and shall take the following actions:

1. Notify the ADEQ Water Quality Compliance Section within 24 hours of discovery.
2. Immediately cease all discharges into the evaporation pond as necessary to prevent any further releases to the environment.
3. Within 5 days of discovery, remove the remaining liquid in the evaporation pond as necessary to prevent further releases to the subsurface and/or to perform repairs. Record in the facility log, the amount of wastewater removed, a description of the removal method, and the disposal arrangements. The facility log shall be maintained according to Section 2.7.2.
4. Within 5 days of discovering a failure that resulted in a release to the subsurface, collect representative sample of the remaining wastewater in the evaporation pond. The samples shall be analyzed for the parameters specified Section 4.2, Table 3. A copy of the analytical results shall be submitted to the ADEQ Water Quality Compliance Section within 30 days of the incident.
5. Within 30 days of discovery, initiate an evaluation to determine the cause for the

incident. Identify the circumstances that resulted in the failure and assess the condition of the structure and liner system. Implement any corrective actions necessary to resolve the problems identified in the incident.

6. Within 30 days of discovery, conduct an assessment of the impacts to the subsoil and/or groundwater resulting from the incident. If soil or groundwater contamination is evidenced, within 60 days the permittee shall submit a corrective action plan to the ADEQ Water Quality Compliance Section for approval. The plan shall identify the releases to the environment, address problems identified from assessment of the structure and/or liner system, and propose remedial actions and/or monitoring and a schedule for completion of activities. At the direction of the ADEQ, the permittee shall implement the approved plan.
7. The permittee shall not resume discharging into the evaporation pond until appropriate repairs of any failed liner or structure are performed. Repair procedures, methods, and materials used to restore the evaporation pond to proper operation shall be described in the facility log and available to the ADEQ for review.
8. Within 30 days of discovery of an incidence that resulted in a release to the subsurface, submit a report describing the actions taken in (1) through (7) above, and include all applicable information specified in Section 2.7.3. The report shall be submitted to the ADEQ Water Quality Compliance Section. Upon review of the report, the ADEQ may request additional monitoring or remedial actions.

#### **2.6.3.3 Overtopping of the Evaporation Pond**

If overtopping of the evaporation pond occurs, the permittee shall follow the reporting requirements of Section 2.7.3 in addition to the following requirements:

1. Notify the ADEQ Water Quality Compliance Section within 24 hours of discovery.
2. Immediately cease discharging to the pond, remove and properly dispose of the liquid in the pond until the applicable freeboard is restored.
3. Record in the facility log the amount of wastewater removed, a description of the removal method, and the disposal arrangements. The facility log shall be maintained according to Section 2.7.2.
4. Within 5 days of discovery, evaluate the cause of the overtopping and make needed operational adjustments to avoid future occurrences.
5. Within 5 days of discovery, collect representative samples of the wastewater contained in the evaporation pond. Samples shall be analyzed for the parameters specified in Section 4.2, Table 3. A copy of the analytical results shall be submitted to the ADEQ Water Quality Compliance Section within 30 days of the incident.
6. Within 30 days of discovery, conduct an assessment of the impact to the subsoil, groundwater, or surface water resulting from the incident, where applicable. If any contamination is evidenced, the permittee shall submit within 60 days to the ADEQ Water Quality Compliance Section, a corrective action plan that identifies the releases to the environment, and proposes remedial actions and/or monitoring and a schedule for completion of activities. At direction of the ADEQ, the permittee shall implement the approved corrective action plan.
7. Within 60 days of discovery, submit a report describing the actions taken in (1) through (6) above and the information specified in Section 2.7.3 to the ADEQ Water Quality Compliance Section. Upon review of the report, the ADEQ may request additional monitoring or remedial actions.

#### **2.6.3.4 Slope and Berm Failures**

If a slope or berm failure involving the liners, surface impoundments or retention structures (dams) occurs that affects the ability of the facility to operate safely or results in an unauthorized discharge, the permittee shall promptly close the active area in the vicinity of the failure, and conduct a field investigation of the failure to analyze its origin and extent, its impact on the facility operations, temporary and permanent repairs and changes in operational

plans considered necessary. Within 30 days of a slope or berm failure, the permittee shall submit a written report which includes the documentation specified in Section 2.7 of this permit. The permittee shall initiate the actions necessary to mitigate the impacts of the failure, consistent with Department approval.

**2.6.4 Aquifer Quality Limit Violation**

Not applicable to this permit at the time of issuance.

**2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. §49-201(12) and pursuant to A.R.S. § 49-241**

**2.6.5.1 Duty to Respond**

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

**2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants**

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the ADEQ Water Quality Compliance Section at (602) 771-4497 within 24-hours upon discovering the discharge of hazardous material which: a) has the potential to cause an AWQS or AQL to be exceeded; or b) could pose an endangerment to public health or the environment.

**2.6.5.3 Discharge of Non-hazardous Materials**

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Water Quality Compliance Section at (602) 771-4497 within 24-hours upon discovering the discharge of non-hazardous material which: a) has the potential to cause an AQL to be exceeded; or b) could pose an endangerment to public health or the environment.

**2.6.5.4 Reporting Requirements**

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the ADEQ Water Quality Compliance Section within thirty days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

**2.6.6 Corrective Actions**

Specific contingency measures identified in Section 2.6 have already been approved by ADEQ and do not require written approval to implement. With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Section prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;

4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the ADEQ Water Quality Compliance Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

## **2.7 Reporting and Recordkeeping Requirements**

[A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

### **2.7.1 Self-monitoring Report Form (SMRF)**

1. The permittee shall complete the SMRF provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a quarter, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.
3. The tables contained in Sections 4.0 list the parameters to be monitored and the frequency for reporting results for groundwater compliance monitoring. Analytical methods shall be recorded on the SMRF.
4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

### **2.7.2 Operation Inspection / Log Book Recordkeeping**

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book, and
7. Monitoring records for each measurement shall comply with R18-9-A206(B)(2).

### **2.7.3 Permit Violation and Alert Level Status Reporting**

1. The permittee shall notify the Water Quality Compliance Section in writing within 5 days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation or of an alert level being exceeded.
2. The permittee shall submit a written report to the Water Quality Compliance Section within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:
  - a. Identification and description of the permit condition for which there has been a violation and a description of its cause.
  - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue.
  - c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation.
  - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard.

- e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring.
- f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

**2.7.4 Operational, Other or Miscellaneous Reporting**

The permittee shall submit an annual report in narrative and/or tabular form to the ADEQ Water Quality Compliance Section that briefly summarizes the status of compliance under this permit. The report shall identify any contingency actions taken, violations of this permit, or any alert levels or discharge limitations that have been exceeded; shall summarize the findings of the wastewater containment structure monitoring identified in Section 4.2, Table 1 and LCRS monitoring identified in Section 4.2, Table 2; and shall include any other information specifically requested by permit condition to be submitted in the annual report. The annual report is to be submitted by January 30 of each year to cover activities from January 1 through December 31st of the previous year.

**2.7.5 Reporting Location**

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality  
 Water Quality Compliance Section, Data Unit  
 Mail Code: 5415B-1  
 1110 W. Washington Street  
 Phoenix, AZ 85007  
 Phone (602) 771-4513

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to:

Arizona Department of Environmental Quality  
 Water Quality Compliance Section  
 Mail Code: 5415B-1  
 1110 W. Washington Street  
 Phoenix, AZ 85007  
 Phone (602) 771-4497

All documents required by this permit to be submitted to the Groundwater Section shall be directed to:

Arizona Department of Environmental Quality  
 Groundwater Section  
 Mail Code: 5415B-3  
 1110 W. Washington Street  
 Phoenix, AZ 85007  
 Phone (602) 771-4428

**2.7.6 Reporting Deadline**

The following table lists the quarterly report due dates:

Monitoring conducted during quarter:	Quarterly Report due by:
January-March	April 30

April-June	July 30
July-September	October 30
October-December	January 30

The following table lists the annual report due date:

Monitoring conducted during the year:	Annual Report due by:
January-December	January 30

**2.7.7 Changes to Facility Information in Section 1.0**

The Groundwater Section and Water Quality Compliance Section shall be notified within 10 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Emergency Telephone Number.

**2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]**

The permittee shall give written notice to the Water Quality Compliance Section before ceasing operation of the facility for a period of 60 days or greater.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ’s approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the Water Quality Compliance Section of the operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

The Coolidge Generating Station is primarily a peaking power plant. The facility will be placed into a stand-by mode for periods of time that could last several months. During these stand-by periods, electrical production may not take place, but the facility and site personnel are prepared to begin operations as needed. The permittee shall not be required to notify the ADEQ under the conditions of this section during these stand-by periods.

**2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]**

For a facility addressed under this permit, the permittee shall give written notice of closure to the Water Quality Compliance Section of the permittee’s intent to cease operation without resuming activity for which the facility was designed or operated.

**2.9.1 Closure Plan**

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Section, a Closure Plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean closure immediately, the ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean closure configuration at a future date, the ADEQ may incorporate any part of the schedule as an amendment to this permit.

**2.9.2 Closure Completion**

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Section indicating that the approved Closure Plan has been implemented fully and providing

supporting documentation to demonstrate that clean closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean closure has been achieved, the ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

1. Clean closure cannot be achieved at the time of closure notification or within 1 year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with aquifer water quality standards at the applicable point of compliance;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remedial or mitigative measures are necessary to achieve compliance with Title 49, Ch. 2;
5. Further action is necessary to meet property use restrictions.

**2.10 Post-closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(C)]**

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Section.

In the event clean closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Section a Post-closure Plan that addresses post-closure maintenance and monitoring actions at the facility. The Post-closure Plan shall meet all requirements of A.R.S. §§ 49-201(30) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the Post-closure Plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the Post-closure Plan.

**3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]**

For each compliance schedule item listed below, the permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Groundwater Section. A copy of the cover letter must also be submitted to the Water Quality Compliance Section.

Description	Completion/Submittal Date	Comments
<p>Final Construction Report and QA/QC documentation, including final design or as-built plans for the West Evaporation Ponds</p> <p>Refer to Section 2.2.4 (Pre-Operational Requirements)</p>	<p>Submit within 90 days of completion of construction of the West Evaporation Ponds and LCRS.</p>	<p>Include certification that facility was constructed in accordance with plans approved by ADEQ and QA/QC documentation completed for liner and LCRS installation, and subgrade preparation. The final construction report shall be certified by the on-site construction manager and shall be sealed by an Arizona registered professional engineer.</p> <p>Include piping layout and connections from the various wastewater source areas to the pond.</p>
<p>Final Construction Report and QA/QC documentation, including final design or as-built plans for the future proposed East Evaporation Ponds</p> <p>Refer to Section 2.2.4 (Pre-Operational Requirements)</p>	<p>Submit within 90 days of completion of construction of the East Evaporation Ponds and LCRS.</p> <p>Submit no later than 5 years from date of permit issuance</p>	<p>Include certification that facility was constructed in accordance with plans approved by ADEQ and QA/QC documentation completed for liner and LCRS installation, and subgrade preparation. The final construction report shall be certified by the on-site construction manager and shall be sealed by an Arizona registered professional engineer.</p> <p>Include piping layout and connections from the various wastewater source areas to the pond.</p> <p>If the East Evaporation Ponds are not constructed within 5 years of permit issuance the permittee shall submit an amendment request for BADCT review to ADEQ. A.A.C. R18-9-A213</p>
<p>Discharge Characterization The permittee shall collect a sample of the effluent at the discharge pipe to the wastewater evaporation pond for characterization of the discharge.</p>	<p>Collect a representative sample approximately 60 days from the commencement of discharge into the basin. Submit a laboratory report to ADEQ within 60 days of the date of sample collection.</p>	<p>Refer to Section 2.5.1 (Discharge Monitoring)</p> <p>Collection of a representative sample of the effluent and analyze for the constituents in Section 4.2, Table 3.</p>

#### **4.0 TABLES OF MONITORING REQUIREMENTS**

##### **4.1 PRE-OPERATIONAL MONITORING (or CONSTRUCTION REQUIREMENTS)**

Refer to Pre-operational Requirements specified in Section 2.2.4.

##### **4.2 COMPLIANCE (or OPERATIONAL) MONITORING**

Table 1 - Containment Structure Monitoring

Table 2 - Leak Collection and Removal System Monitoring

Table 3 - Discharge Monitoring – Wastewater Characterization

Table 4 - Performance Level for Operation of the Oil/Water Separator

DRAFT

**Table 1**  
**Containment Structure Monitoring**

<b>Parameter</b>	<b>Performance Level</b>	<b>Monitoring Frequency</b>	<b>Reporting Frequency</b>
Evaporation Pond Freeboard	Minimum of 2.0 feet	Weekly	Annually and as otherwise required by Section 2.7
Evaporation Pond Fluid Level	No unexpected or sudden loss	Weekly and after a significant storm or other natural disaster	Annually and as otherwise required by Section 2.7
Upper Liner Integrity	No visible tears, punctures, cracks, deformities, or other damage due to sunlight, wind, weather, debris, vegetation, animals, or other adverse conditions	Weekly and after a significant storm or other natural disaster	Annually and as otherwise required by Section 2.7
Berm Integrity	No visible structural damage, breach, erosion of embankments, or seepage	Weekly and after a significant storm or other natural disaster	Annually and as otherwise required by Section 2.7
Evidence of Overtopping of the Evaporation Pond	Discharge to the land surface surrounding the pond	Weekly and after a significant storm or other natural disaster	Annually and as otherwise required by Section 2.7
Leak Collection and Removal System (LCRS)	No obstruction in the inspection sump, fluid level maintained below sump capacity, pump(s) maintained in good operational condition	Weekly and after a significant storm or other natural disaster	Annually and as otherwise required by Section 2.7
Flow Meter, Solution-Level Sensor, Chart Recorder, or Other Measuring Device	Maintained for operational conditions	Weekly	Annually and as otherwise required by Section 2.7

**Table 2**  
**Leak Collection and Removal System Monitoring**

Note: The alert level 1 (AL1) or alert level 2 (AL2) shall be exceeded when the amount of leakage pumped from the sump for the evaporation pond is greater than the applicable quantity below. For reporting purposes on the SMRF, the AL1 is equivalent to the alert level (AL) and AL2 is equivalent to the discharge limit (DL). An exceedance of the DL is not a violation of the permit unless the permittee fails to perform as required under Section 2.6.2.4.2

A LCRS system shall be installed for each pond. Response actions are based on volume of fluid pumped from an individual LCRS Monitoring Well. The specific alert levels for each LCRS Monitoring Well are listed below.

Discharge Pond	LCRS Well	Parameter <sup>1</sup>	AL1 gallons per day (gpd)	AL2 gallons per day (gpd)	Monitoring Method	Monitoring Frequency	Reporting Frequency
West Evaporation Pond 1	Well 1	Liquid Pumped	417	13,124	Manually	Daily	Quarterly
	Well 2	Liquid Pumped	417	13,124	Manually	Daily	Quarterly
West Evaporation Pond 2	Well 1	Liquid Pumped	417	13,124	Manually	Daily	Quarterly
	Well 2	Liquid Pumped	417	13,124	Manually	Daily	Quarterly
East Evaporation Pond North	Well 1	Liquid Pumped	531	17,118	Manually	Daily	Quarterly
	Well 2	Liquid Pumped	531	17,118	Manually	Daily	Quarterly
East Evaporation Pond South	Well 1	Liquid Pumped	531	17,118	Manually	Daily	Quarterly
	Well 2	Liquid Pumped	531	17,118	Manually	Daily	Quarterly

<sup>1</sup>The “Liquid Pumped” value to be reported as the amount of liquid pumped from the LCRS sump in gallons per day (gpd).

**Table 3**  
**Discharge Monitoring – Effluent Characterization**

Sampling Point Number	Identification	Latitude	Longitude
1	Discharge port prior to discharge to the evaporation ponds	32° 54' 65" N	111° 30' 10.98" W

Parameter <sup>2,3</sup>	Monitoring Frequency	Reporting Frequency
pH (Standard Units)	Within 60 days from the commencement of discharge into the basin	Submit laboratory report within 60 days of the date of sample collection
Alkalinity	“	“
Total Dissolved Solids (TDS)	“	“
Specific Conductance (µmohs/cm)	“	“
Hardness (Standard Units)	“	“
Nitrate as (N)	“	“
Nitrite as (N)	“	“
Nitrate+Nitrite as (N)	“	“
Calcium	“	“
Chloride	“	“
Fluoride	“	“
Magnesium	“	“
Potassium	“	“
Sodium	“	“
Sulfate	“	“
Antimony	“	“
Arsenic	“	“
Barium	“	“
Beryllium	“	“
Cadmium	“	“
Chromium	“	“
Lead		

<sup>2</sup> Report all parameters in milligrams per liter (mg/l) unless otherwise noted.

<sup>3</sup> Monitor metals for dissolved concentrations.

Parameter <sup>2,3</sup>	Monitoring Frequency	Reporting Frequency
	Within 60 days from the commencement of discharge into the basin	Submit laboratory report within 60 days of the date of sample collection
Mercury	“	“
Nickel	“	“
Selenium	“	“
Thallium	“	“
Zinc	“	“
<b>Volatile Organic Compounds</b>		
	Within 60 days from the commencement of discharge into the basin	Submit laboratory report within 60 days of the date of sample collection
Benzene	“	“
Ethylbenzene	“	“
Toluene	“	“
Total Xylene	“	“

<sup>2</sup> Report all parameters in milligrams per liter (mg/l) unless otherwise noted.

<sup>3</sup> Monitor metals for dissolved concentrations.

**Table 4**  
**Performance Levels for Operation of the Oil/Water Separator**

<b>Parameter</b>	<b>Performance Level</b>	<b>Monitoring Method</b>	<b>Monitoring Frequency</b>	<b>Reporting Frequency</b>
Oil/Water Separator Integrity	No Damage or Leakage	Observation	Quarterly	Annually and as otherwise required by Section 2.7
Sediment Removal	Sludge accumulation shall not impede effective operation	Observation	Quarterly	Annually and as otherwise required by Section 2.7
Oil/Water Separator effluent	No oil sheen or petroleum odor	Observation	Quarterly	Annually and as otherwise required by Section 2.7
All Piping, pumps, valves, controls and gauges as applicable.	Documented to be in proper working order	Observation	Quarterly	Annually and as otherwise required by Section 2.7

DRAFT

**5.0 REFERENCES AND PERTINENT INFORMATION**

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1. APP application dated February 2009.
2. Response to Notice of Administrative Deficiencies prepared by Schlumberger Water Services, dated March 18, 2009.
3. Response to Comprehensive Request for Additional Information prepared by Schlumberger Water Services, dated July 20, 2009.
4. Design Drawing as listed.
  - a. Design drawing titled *Coolidge Generating Station Site Plan (drawing G1)*, prepared by PB, final APP design document dated 3/9/09, signed and sealed by Colin L. McRae, Arizona Registered Professional Engineer.
  - b. Design drawing titled *Transcanada Peaking Facility Grading Plan (drawing C2.1)*, prepared by PB, final APP design document dated 3/9/09, signed and sealed by Mark Grodzki, Arizona Registered Professional Engineer.
  - c. Design drawing titled *Transcanada Peaking Facility Grading Plan (drawing C2.2)*, prepared by PB, final APP design document dated 3/9/09, signed and sealed by Mark Grodzki, Arizona Registered Professional Engineer.
  - d. Design drawing titled *Transcanada Peaking Facility Aquifer Protection Permit Plan, Western Evaporation Pond Plan (formerly drawing C2.4, revised to drawing C2.4)*, prepared by PB, final APP design document dated 3/9/09, issued for construction dated 6/5/09, revised per ADEQ APP Unit comments dated 7/10/09, signed and sealed by Mark Grodzki, Arizona Registered Professional Engineer.
  - e. Design drawings titled *Transcanada Peaking Facility Evaporation Pond Details (formerly drawing C2.6, revised to drawing C2.5)*, prepared by PB, final APP design document dated 3/9/09, issued for construction dated 6/5/09, revised per ADEQ APP Unit comments dated 7/10/09, signed and sealed by Mark Grodzki, Arizona Registered Professional Engineer.
  - f. Design drawing titled *Transcanada Peaking Facility Eastern Evaporation Pond Plan (formerly drawing C2.5, revised to drawing C2.5A)*, prepared by PB, issued for construction dated 6/5/09, revised per ADEQ APP Unit comments dated 7/10/09, signed and sealed by Mark Grodzki, Arizona Registered Professional Engineer.
5. ADEQ Technical Review Memos dated June 2, 2009, June 23, 2009, August 17, 2009, August 21, 2009, and
3. Public Notice, dated \_\_\_\_\_.

## 6.0 NOTIFICATION PROVISIONS

### 6.1 Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons per day as established by A.R.S. § 49-242.

### 6.2 Duty to Comply [A.R.S. §§ 49-221 through 49-263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

### 6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

### 6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an aquifer water quality standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

### 6.5 Technical and Financial Capability

[A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

### 6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the permittee.
2. The entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

### 6.7 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

### 6.8 Inspection and Entry [A.R.S. §§ 41-1009, 49-203(B) and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

### 6.9 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices specified by this permit.

**6.10 Permit Action: Amendment, Transfer, Suspension & Revocation**

[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, renewed, or revoked for cause, under the rules of the Department.

The permittee shall notify the Groundwater Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached.

The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

**7.0 ADDITIONAL PERMIT CONDITIONS**

**7.1 Other Information [A.R.S. § 49-243(K)(8)]**

Where the permittee becomes aware that it 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 permittee shall promptly submit the correct facts or information.

**7.2 Severability**

[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

**7.3 Permit Transfer**

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).