



CERTIFICATION

STATE OF ARIZONA

Clean Water Act Section 401 Water Quality Certification

U.S. Army Corps of Engineers Public Notice / Application No.: **SPL-2008-00816-MB**

ADEQ LTF 55425

1. AUTHORIZATION

This State Water Quality Certification (Certification) is issued by the Arizona Department of Environmental Quality (ADEQ) under the authority of Section 401(a) of the federal Clean Water Act (CWA) (33 U.S.C. §1251 et seq.) and Arizona Revised Statutes Section 49-202. The conditions listed in Section 5.0 are in addition to conditions in the pending U.S. Army Corps of Engineers (CoE) Application No. SPL-2008-00816-MB. These Certification conditions are enforceable by the CoE and civil penalties, up to a maximum of \$37,500 per day of violation, may be levied if these Certification conditions are violated. Criminal penalties may also be levied if a person knowingly violates any provision of the CWA.

Subject to the conditions in Section 5, ADEQ certifies that based on the information in Section 3 and in consideration of comments received in response to the public notice of the draft Certification decision issued February 21, 2014, the activities proposed for the **Rosemont Copper Project** will not violate applicable surface water quality standards (SWQS) in the subject waterbodies including McCleary, Wasp, Trail, Barrel and Davidson Canyons, and Cienega Creek in the Santa Cruz River Watershed, near Greaterville, Pima County.

APPLICANT INFORMATION

Project Name: Rosemont Copper Project

Latitude/Longitude: 31° 49' 45.3"; 110° 44' 35.2"

Applicant: Rosemont Copper Company
Ms. Katherine Arnold, Vice President
Environmental & Regulatory Affairs

Applicant Address: 2450 W. Ruthrauff Road, #180
Tucson, AZ 85705

AUTHORIZING SIGNATURE



Michael A. Fulton, Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 3rd day of February, 2015

2. DESCRIPTION OF ACTIVITIES BEING CERTIFIED

NOTE: During the development of the Final Environmental Impact Statement (FEIS), changes were made to the project design that modified certain activities proposed in the CoE Public Notice/Application No. SPL-2008-00816-MB (Public Notice). This Certification is based on activities described in the Public Notice, with the exception of activities modified by the selected action in the USDA Forest Service's Record of Decision and FEIS. These modifications to the planned activities include the removal of the heap leach facility and process, elimination of fill in McCleary Canyon and the removal of the flow-through drain systems under the waste rock storage areas and dry stack tailings facilities.

The proposed Rosemont Copper Project will directly impact approximately 40.4 acres of waters of the U.S. (WUS) through the discharge of dredged/fill material. In addition, approximately 28.4 acres of WUS will be indirectly impacted by reduced flows in Barrel Canyon as well as downstream in Davidson Canyon, resulting from the development of the dry stack tailings and waste rock facilities in Barrel Canyon. Lastly, approximately 1.1 acres of WUS will be temporarily impacted by the water supply line crossing and road access for utility pole construction.

3. INFORMATION REVIEWED

During the development of this Certification, ADEQ had access to and reviewed the following documents (on file with ADEQ):

1. U.S. Army Corps of Engineers Public Notice / Application No. 2008-00816-MB. Comment period from December 6, 2011 through January 19, 2012.
2. CWA Section 401 Certification application package dated January 12, 2012, received by ADEQ on January 17, 2012; applicant: Katherine Arnold, Rosemont Copper; agent: Brian Lindenlaub, Westland Resources Inc. Review of application was suspended on January 25, 2012 pending completion of a federal action and reinitiated on January 3, 2014 following the publication of the draft Record of Decision for the Project by the USDA Forest Service, Southwest Region.
3. State of Arizona, Water Quality Standards for Surface Waters, A.A.C. Title 18, Chapter 11, Article 1. A portion of Davidson Canyon Wash and a portion of Lower Cienega Creek have segments that are designated as Outstanding Arizona Waters. The portion of Davidson Canyon designated as Outstanding Arizona Waters originates at an unnamed spring at 31°59'00"/110°38'49" (approximately 13 miles downstream from the subject project) and continues downstream from that point to its confluence with Cienega Creek at 32° 01' 05"/110° 38' 35". Available online at: http://www.azsos.gov/public_services/Title_18/18-11.htm
4. "Final Environmental Impact Statement for the Rosemont Copper Project", USDA Forest Service, Southwest Region, MB-R3-05-6, December, 2013. Available online at: <http://www.rosemonteis.us/>

5. "Draft Record of Decision and Finding of Nonsignificant Forest Plan Amendment for the Rosemont Copper Project", USDA Forest Service, Southwest Region, MB-R3-05-9, December, 2013. Available online at: <http://www.rosemonteis.us/>
6. Davidson Canyon Unique Water Nomination, prepared by Pima Association of Governments for Pima County Regional Flood Control District, January, 2005. Available at <http://www.rosemonteis.us/documents/pag-watershed-planning-2005>
7. "Contribution of Davidson Canyon to Base Flows in Cienega Creek", prepared by Pima Association of Governments, November, 2003. Available at: http://www.pagnet.org/wq/reports/wq_report_94.html
8. "Water Resource Trends in the Cienega Creek Natural Preserve, Pima County, AZ" prepared by Brian Powell, Pima County Office of Sustainability and Conservation, August 2013. Available at: <http://www.rosemonteis.us/files/references/powell-2013.pdf>
9. Technical Memorandum, "Rosemont Surface Water Quality Baseline Analysis", prepared by Mike Thornbrue, Tetra Tech, April 13, 2010.
10. "Davidson Canyon Hydrogeologic Conceptual Model and Assessment of Spring Impacts", Tetra Tech, July, 2010.
11. Technical Memorandum, "Rosemont Conceptual Barrel Alternative Stormwater Control Alternatives", by Ronson Chee, Tetra Tech, January 31, 2012.
12. "Davidson Canyon Conceptual Surface Water Monitoring Plan", prepared by Water and Earth Technologies, Inc., March, 2012.
13. "Davidson Canyon Conceptual Groundwater Monitoring Plan", prepared by Engineering Analytics, Inc., March, 2012.
14. "Integrated Watershed Summary - Rosemont Project", Rosemont Copper, June 2012.
15. Memorandum, "Estimates of Phasing of Stormwater Reductions during Operations", prepared by Chris Garrett, SWCA, April 5, 2013.
16. Draft Memorandum "Revised Analysis of Surface Water Quality", prepared by Chris Garrett, SWCA, August 25, 2013.
17. Arizona Game and Fish Department letter to Marjorie Blaine, ACOE Project Officer, dated January 17, 2012 Re: Public Notice No. 2008-00816-MB.
18. Bureau of Land Management, Tucson Field Office, Comments on Rosemont Mine 404 Permit Application, undated.
19. EPA letter to Colonel R. Mark Toy, ACOE District Engineer, LA District, dated January 5, 2012 Re: Public Notice No. 2008-00816-MB.
20. EPA letter to Colonel R. Mark Toy, ACOE District Engineer, LA District, dated February 13, 2012 Re: Public Notice No. 2008-00816-MB.
21. EPA letter to Colonel Kim Colloton, ACOE District Engineer, LA District, dated November 7, 2012 Re: Analysis of updated draft CWA §404 Compensatory Mitigation Proposals for Rosemont Mine, Pima County, AZ.
22. Rosemont letter to Colonel Kim Colloton, ACOE District Engineer, LA District, dated December 13, 2013 Re: EPA Evaluation of Rosemont Mine Compensatory Mitigation.
23. Pima County Administrator's Office letter to Colonel Kim Colloton, ACOE District Engineer, LA District, dated December 30, 2013 Re: EPA November 7, 2013 letter and Rosemont December 13, 2013 letters.

24. Rosemont Copper Company letter to ADEQ dated February 25, 2014
Re: Water quality reports and data sharing.
25. Comments received in response to the public notice of the draft certification published on February 21, 2014 in the **Arizona Daily Star**. The public comment period closed on March 24, 2014 but was extended, upon request, for two additional weeks until April 7, 2014.
26. "Surface Water Mitigation Plan", prepared by Rosemont Copper Company, December, 2014.

4. NOTIFICATION PROVISIONS

For any correspondence regarding this project, the ADEQ mailing address is:

Arizona Department of Environmental Quality
Nicole Coronado
Surface Water Section / State 401 Certification / mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

For questions or general comments:

email: nm1@azdeq.gov
Voice: (602) 771-4245

In any correspondence, reference:

Rosemont Copper Project
CoE File No.: **2008-00816-MB**
ADEQ LTF No.: **55425**
401 cert reading file: **rs314:005**

5. CONDITIONS FOR STATE 401 WATER QUALITY CERTIFICATION

For the purposes of this Certification the following definitions apply:

- "Waters of the United States" (WUS) as defined by the CoE and U.S. Environmental Protection Agency (EPA) under the Clean Water Act. This Certification applies only to activities conducted within the ordinary high water mark.
- "Temporary degradation" is defined as degradation that is six months or less in duration, i.e., water quality returns to baseline water quality within six months after the discharge commences; short-term degradation.
- "Native material/fill" is defined as soil, sand, gravel or similar material from the streambed or banks in the immediate area of the permitted work.

GENERAL CONDITIONS

1. The applicant is responsible to ensure certified activities do not cause or contribute to an exceedance of SWQS in any WUS.
2. If data collected by the applicant, ADEQ or others, demonstrates that, as a result of the certified activities, one or more conditions of this Certification have been violated, ADEQ may request the CoE modify, suspend or revoke the CWA 404 permit.
3. This State 401 Water Quality Certification of the CWA 404 permit activities does not affect or modify in any way the obligations or liability of any person for any damages, injury, or loss, resulting from these activities. This Certification is not intended to waive any other federal, state or local laws.
4. Issuance of this Certification does not imply or suggest that requirements for other permits including, but not limited to Aquifer Protection Permits, Arizona Pollutant Discharge Elimination System Permits, or Reclaimed Water Permits are met or superseded.
5. This Certification applies only to the activities described in Section 2 and is based upon the information listed in Section 3. This Certification is valid for the same period as the CWA 404 permit, when issued by the CoE. The applicant must apply for renewal, modification or extension of this Certification if the CWA 404 permit is renewed, extended or there is a modification to the certified activities. This Certification may be reopened, by ADEQ, at any time due to a change in a SWQS (i.e., a standard is lowered or becomes more stringent) for a pollutant likely to result from project activities. ADEQ may add or modify conditions in this Certification to ensure that the applicant's activities comply with the most recent SWQS.
6. This Certification does not authorize the discharge of mining, construction or demolition wastes, wastewater, process water, residues or other pollutants to any WUS except as specified in the application and supporting documents and allowed or not prohibited in the CWA 404 permit or elsewhere in this Certification.
7. The applicant shall provide a copy of this Certification to all appropriate contractors and subcontractors and post and maintain a legible copy in a location and manner as to not to be damaged by weather conditions at the construction site where it may be seen by the workers.
8. The applicant shall notify ADEQ within 30 days following suspension or stoppage of the project for a period greater than 30 days or upon project completion. The applicant shall notify ADEQ within 7 days of re-initiating activities following a suspension or stoppage of the project for 30 days or more.
9. The applicant shall provide ADEQ with a copy of the monitoring results report on a quarterly basis and notification of data not in compliance with SWQS in accordance with the USDA Forest Service "Draft Record of Decision and Finding of Nonsignificant Forest Plan Amendment for the Rosemont Copper Project" (ROD) General Stipulation #15.

10. The applicant shall provide ADEQ with a copy of the annual report in accordance with ROD General Stipulation #16.

SPECIFIC CONDITIONS

Except as specified in the application and supporting documents and allowed, specified or not prohibited in the CWA 404 permit or elsewhere in this Certification, the following specific conditions apply.

SURFACE WATER MITIGATION PLAN

1. The applicant has prepared, and ADEQ has approved, a Surface Water Mitigation Plan, December, 2014, to maintain aquatic and riparian resources at pre-project levels in the Outstanding Waters portions of Davidson Canyon Wash and Lower Cienega Creek. The purpose of the plan is to detail the measures that will be taken to offset predicted reductions in surface water flows and sediment, resulting from the construction and operation of the Rosemont Copper Project, and a schedule for implementation of such measures.

Upon issuance of this Certification, the applicant shall begin implementing the Surface Water Mitigation Plan. Any proposed changes to this plan by the applicant shall be submitted in writing to ADEQ. ADEQ shall coordinate with the USDA Forest Service and CoE to determine if the changes are warranted and they should be approved.

Should the results of monitoring by ADEQ, the applicant or others and/or revised hydrologic modeling (ROD Mitigation Measures FS-BR-22, FS-BR-27, FS-GW-02, FS-SR-05) demonstrate that, as a result of the certified activities, water quality upstream of or in the OAW segments in Davidson Canyon Wash and/or Lower Cienega Creek has been degraded, ADEQ will request that the CoE suspend the CWA 404 Permit in order for ADEQ to evaluate the issues and require additional mitigation measures should the impacts be more than temporary degradation.

Any unauthorized material changes in, or failure to implement the Surface Water Mitigation Plan, as it is currently approved or as amended in the future by the applicant and approved by ADEQ, may be grounds for ADEQ requesting the CoE modify, suspend or revoke the CWA 404 permit pursuant to 33 CFR 325.4(a)(2).

STORMWATER MANAGEMENT

2. Industrial stormwater discharges covered under Arizona's Mining Multi-Sector General Permit (Mining MSGP) and allowable non-stormwater discharges, identified in Part 1.1.3

of ADEQ's Mining MSGP, must not cause or contribute to an exceedance of an Arizona SWQS.

3. Stormwater that comes into contact with mine drainage that is subject to 40 CFR Part 440, Subpart J is not authorized to be discharged under this Certification.
4. Stormwater that has not been in contact with mine operations (e.g., unimpacted) may be diverted directly to surface water.

EROSION PREVENTION AND HYDRAULIC ALTERATIONS

5. Clearing, grubbing, scraping or otherwise exposing erodible surfaces shall be minimized to the extent necessary for each construction phase or location.
6. Dredged or fill material shall be placed in WUS so that it is stable after placement and not showing signs of excessive erosion. Indicators of excess erosion include but are not limited to: gullyng, head cutting, caving, block slippage, and material sloughing.
7. Erosion control, sediment control and/or bank protection measures shall be installed before construction and pre-operation activities, and shall be maintained during construction and post-construction periods to minimize channel or bank erosion, soil loss and sedimentation. Control measures shall not be constructed of uncemented or unconsolidated imported soil, or other materials easily transported by flow.
8. The effectiveness of all pollution control measures, including those preventing erosion and affecting sedimentation, shall be re-evaluated after each flow event and repaired/modified as needed.
9. Direct runoff of water used for irrigation or dust control shall be limited to the extent practicable and shall not cause downstream erosion or flooding nor cause an exceedance of applicable SWQS.
10. Except where the certified activities are intended to permanently alter any WUS, all disturbed areas within WUS shall be restored and (re)vegetated as indicated in the application documents if approved by the CoE. Denuded areas shall be revegetated as soon as physically practicable. Vegetation shall be maintained on unarmored banks and slopes to stabilize soil and prevent erosion. Fill used to support vegetation rooting or growth shall be protected from erosion.
11. If retention/detention basins are included in or added to the project, applicant will complete the grading necessary to direct runoff towards retention/detention basins immediately following initial land clearing or rough grading.
12. Retention/detention basins shall be sized to accept storm runoff and capture sediment prior to it entering any WUS. Detention basins will provide detention through the use of controlled outflow spillways and shall cause no significant change to the hydraulic conditions of the downstream WUS outside of the project boundaries. The basins shall be maintained as needed to maintain functionality.
13. Certified activities shall, as much as practicable, be performed during periods of no flow in any WUS. No work shall be done, nor shall any equipment or vehicles enter any WUS while flow is present, unless all conditions in this Certification are met.

14. When flow is present in any WUS downstream of the certified activities, neither the applicant nor any contractor will alter the flow by any means except to prevent erosion or pollution of any WUS.
15. The applicant will take measures necessary to prevent approaches to any WUS crossing from causing erosion or contributing sediment to any WUS.
16. The applicant shall ensure that the certified activities will not cause any adverse change in the stability of any WUS, with respect to stream hydraulics, erosion and sediment load downstream from the project. If the monitoring activities described in the Surface Water Mitigation Plan show such change has occurred as a result of the certified activities, the applicant shall propose and initiate steps to restore the pre-project stability of any impacted segments.

SEDIMENT LOADS

17. When flow is sufficient to erode, carry or deposit material, certified activities in WUS shall cease until the flow decreases below the point where sediment movement ceases, or control measures have been undertaken; e.g., equipment and materials easily transported by flow are protected with non-erodible barriers or moved outside the flow area.
18. Silt-laden or turbid water resulting from certified activities shall be settled, filtered or otherwise treated to ensure no exceedence of, or reduction from, natural background levels of sediment occurs in any WUS.
19. Any washing or dewatering of fill material must occur outside of any WUS prior to placement and the rinseate from such washing shall be settled, filtered or otherwise treated to prevent migration of pollutants, including sediment, or from causing erosion to any WUS. Other than replacement of native fill or material used to support vegetation rooting or growth, fill placed in locations subject to scour must resist washout whether such resistance is derived via particle size limits, presence of a binder, vegetation, or other armoring.

POLLUTION PREVENTION

20. Construction material and/or fill (other than native fill or that necessary to support re-vegetation) placed in any WUS, shall not include pollutants in amounts or concentrations that can cause or contribute to an exceedance of a SWQS.
 - Acceptable construction materials that will or may contact water in any WUS are: untreated logs and lumber; natural stone (crushed or not), crushed clean concrete (recycled concrete); native fill; precast, sprayed or cast-in-place concrete (including soil cement and unmodified grouts); steel (including galvanized); plastic and aluminum.
 - Other materials allowed for this project, only if placed in accordance with application and supporting documents, are mining residues including tires, waste rock, gangue and tailings.

21. The applicant shall erect barriers, covers, shields and other protective devices as necessary to prevent any construction materials, equipment or contaminants from falling into or otherwise entering any WUS downstream of the certified activities.
22. Area(s) for equipment staging, maintenance and storage must be located entirely outside of any WUS. In addition, the applicant must designate areas, located entirely outside of any WUS, for fuel, oil and other petroleum product storage and for solid waste containment. All precautions shall be taken to avoid the release of wastes, fuel or other pollutants to any WUS.
23. Upon completion of the certified activities (except as noted in Condition 24 below - concrete curing), areas within any WUS shall be promptly cleared of all construction related forms, piling, construction residues, equipment, and debris.
24. If fully, partially or occasionally submerged structures are constructed of cast-in-place concrete instead of pre-cast concrete, applicant will take steps to prevent contact between surface water (instream and runoff) and the concrete (e.g., sheet piling or temporary dams) until it cures and until any curing agents have evaporated or otherwise cease to be a pollutant threat.
25. Washout of concrete handling equipment must not take place in or be allowed to enter any WUS.

TEMPORARY AND PERMANENT STRUCTURES

26. Permanent pipes, temporary pipes and culvert crossings shall be adequately sized to handle expected flow and properly set with end section, splash pads, headwalls or other structures that dissipate water energy to control erosion.
27. Debris will be cleared as needed from culverts, ditches, dips and other drainage structures in any WUS to prevent clogging or conditions that may lead to washout.
28. Any temporary crossing, other than fords on native material, shall be constructed in such a manner so as to provide armoring of the stream channel. Materials used to provide this armoring shall not include anything easily transportable by flow. Examples of acceptable materials include steel plates, untreated wooden planks, pre-cast concrete planks or blocks; examples of unacceptable materials include clay, silt, sand and gravel finer than cobble (roughly fist-sized). The armoring must, via mass, anchoring systems or a combination of the two, resist washout.
29. All temporary structures constructed of imported materials and all permanent structures, including but not limited to, access roadways; culvert crossings; staging areas; material stockpiles; and berms, dikes and pads, shall be constructed so as to accommodate overtopping and resist washout by streamflow.
30. Any ford, other than fords on native material, shall be designed, and maintained as necessary, to carry the proposed traffic without causing erosion or sedimentation of the stream channel while dry or during a flow event equivalent to or less than the design flow event for the crossing.

31. No unarmored ford shall be subject to heavy-truck or equipment traffic after a flow event until the stream bed is dry enough to support the traffic without disturbing streambed material to a greater extent than in dry conditions.
32. Temporary structures constructed of imported materials are to be removed no later than upon completion of the certified activity.
33. Temporary structures constructed of native materials that obstruct flow, can contribute to or cause erosion, or can cause changes in sediment load, are to be removed no later than upon completion of the certified activity