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## Technical Memorandum

<b>To:</b>	Kathy Arnold	<b>From:</b>	David Krizek
<b>Company:</b>	Rosemont Copper Company	<b>Date:</b>	August 30, 2010
<b>Re:</b>	Rosemont Infiltration, Seepage, and Fate and Transport Report Update	<b>Doc #:</b>	234/10-320877-5.3
<b>CC:</b>	Amy Hudson (Tetra Tech)		

### 1.0 Introduction

This Technical Memorandum serves as a transmittal of an updated *Infiltration, Seepage, and Fate and Transport Modeling Report – Revision 1* (Tetra Tech, 2010b) prepared for the three (3) major facilities at the proposed Rosemont Copper Project (Project) in Pima County, Arizona:

- *Dry Stack Tailings Facility;*
- *Waste Rock Storage Area; and*
- *Heap Leach Facility.*

The report titled *Infiltration, Seepage, and Fate and Transport Modeling Report* (Tetra Tech, 2010a), dated February 2010, was transmitted to the Arizona Department of Environmental Quality (ADEQ) in June 2010. This February 2010 report was submitted to ADEQ in response to the April 14, 2010 Comprehensive Request for Additional Information from ADEQ to Rosemont Copper Company (Rosemont) as part of the aquifer protection permit (APP) application submitted to ADEQ in February 2009 (Tetra Tech, 2009a). Specifically, the submittal of the February 2010 *Infiltration, Seepage, and Fate and Transport Modeling Report* was in response to item no. 1 on pages 1 and 2 of 18.

- *The application and supporting documents identify a number of reports that are either pending or completed, but do not appear to have been submitted for review. The following documents are necessary to continue the review of the application. They are identified by title, with the location if the reference indicated in parentheses:*

*Infiltration, Seepage, and Fate and Transport Modeling for the Heap Leach Pad, including the Waste Rock Storage Facility (Rosemont Heap Leach Facility Permit Design Report May 2009)*

Updates to the February 2010 *Infiltration, Seepage, and Fate and Transport Modeling Report* were required based on updated facility information and material test data as indicated below.

## 2.0 Modeling Updates

In general, the results of the updated modeling report (Tetra Tech, 2010b) are similar to the results obtained in the original report (Tetra Tech, 2010a). However, the Revision 1 report (Tetra Tech, 2010b) supersedes the February 2010 version report (Tetra Tech, 2010a) and contains the most current facility design considerations and geochemical testing data. The major differences between the two (2) reports are the following:

- Updated seepage quality from the Dry Stack Tailings Facility was based on additional tailings geochemical testing; and
- Modeling of the Heap Leach Facility was performed on the Phase 1 and Phase 2 Heap Leach Pad arrangement shown in the *Rosemont Heap Leach Permit Design Report* dated May 2009 (Tetra Tech, 2009b). Modeling of the Heap Leach Facility in the February 2010 *Infiltration, Seepage, and Fate and Transport Modeling Report* was based on single expanded pad arrangement. Rosemont is moving forward with the two (2) phase leach pad design.



## REFERENCES

Tetra Tech (2009a). *Aquifer Protection Permit (APP) Application*. Prepared for Rosemont Copper Company. Report Dated February 2009.

Tetra Tech (2009b). *Rosemont Heap Leach Facility Permit Design Report*. Prepared for Rosemont Copper Company. Report Dated May 2009.

Tetra Tech (2010a). *Infiltration, Seepage, and Fate and Transport Modeling Report – Rosemont Copper Project*. Prepared for Rosemont Copper Company. Report Dated February 2010.

Tetra Tech (2010b). *Infiltration, Seepage, and Fate and Transport Modeling Report – Revision 1 – Rosemont Copper Project*. Prepared for Rosemont Copper Company. Report Dated August 2010.

**ATTACHMENT 1**  
**INFILTRATION, SEEPAGE, AND FATE AND**  
**TRANSPORT MODELING REPORT – REVISION 1**  
**(AUGUST 2010)**  
(MODELING REPORT PROVIDED SEPARATELY TO  
CNF)

# Rosemont Copper Project

## Locator Sheet

Record # 013382

Document Date 2010 08

Document Title: Infiltration, Seepage, Fate and Transport Modeling Report  
Revision 1

Author/Recipient Tetra Tech

Description Presents the results of the infiltration & seepage, & fate & transport modeling for the proposed Waste Rock Storage Area, Heap Leach Facility, & the Dry Stack Tailings Facility.

Other Notes Attachment 1 of 013381.

This document is located in the following: [CIRCLE THE CATEGORY (from the list below) IN WHICH THIS ITEM IS FILED]

1. **Project Management**
  - a. Formal recommendations & Directions
  - b. Formal meeting minutes & memos
  - c. General Correspondence
  - d. Contracts, Agreements, & MOUs (Rosemont, Udall, SWCA)
  - e. Other
2. **Public Involvement**
  - a. Announcements & Public Meetings
  - b. Mailing Lists
  - c. Scoping Period Comments
  - d. Udall Foundation Working Group
  - e. Scoping Reports
  - f. Comments after Scoping Period
  - g. DEIS Public Comments
3. **Agency Consultation & Permits**
  - a. Army Corps of Engineers (404 permit)
  - b. US Fish & Wildlife Service (Sec. 7 T&E)
  - c. State Historic Preservation Office (Sec. 106)
  - d. Tribes (Sec. 106)
  - e. Advisory Council on Historic Preservation (Sec. 106)
  - f. Other
  - g. AZ Dept of Environmental Quality (APP)
4. **Communication**
  - a. Congressional
  - b. Cooperating Agencies
  - c. Organizations
  - d. Individuals
  - e. FOIA
  - f. Internal
  - g. Proponent
5. **Proposed Action**
  - a. Mine Plan (including compilation)
  - b. Supporting Documents
  - c. Detailed Designs
  - d. References
6. **Alternatives**
- a. Cumulative Effects Catalog
- b. Connected Actions
- c. Dismissed from Detailed Analysis
- d. Analyzed in Detail
  - i. Barrel McCleary
  - ii. Barrel Only
  - iii. Scholefield McCleary
7. **Resources**
  - a. Air Quality & Climate Change
  - b. Biological
  - c. Dark Skies
  - d. Fuels & Fire Management
  - e. Hazardous Materials
  - f. Heritage
  - g. Land Use
  - h. Livestock Grazing
  - i. Noise & Vibration
  - j. Public Health & Safety
  - k. Recreation & Wilderness
  - l. Riparian
  - m. Socioeconomics & Environmental Justice
  - n. Soils & Geology
  - o. Transportation & Access
  - p. Visual
  - q. Water
8. **Reclamation**
  - a. Plans & Reports
  - b. Notes & Correspondence
  - c. References
  - d. Other
9. **DEIS**
  - a. DEIS
  - b. References
10. **FEIS**
11. **Geospatial Analysis (GIS Data)**
12. **FOIA Exempt Documents**
13. **ROD (including BLM & ACOE)**