Technical Memorandum

To: Kathy Arnold
From: Joel Carrasco; Francisco Barrios; Ashley Keepers
Company: Rosemont Copper Company
Re: Rosemont Copper Project
KOP Viewshed Analysis

CC: David Krizek (Tetra Tech)
Date: December 31, 2009
Doc #: 237/09-320832-5.3

1.0 Introduction
The following technical memorandum was prepared by Tetra Tech and presents a Viewshed Analysis based on the Key Observation Points (KOPs) associated with the proposed Rosemont Copper Project (Project).

The selected KOP locations were based on areas where Project operations and/or the final reclaimed features could possibly be viewed from State Route 83 (SR-83), from off-highway vehicle (OHV) trails and hiker trails, or from other prominent public access areas.

The Project is located on the east side of the Santa Rita Mountains, approximately 30 miles southeast of Tucson, Arizona and approximately 1.5 miles west of SR-83. Figure 1 provides a Project vicinity map.

2.0 KOP Locations
A total of 12 proposed KOP locations were identified outside the perimeter of the Project site. Four (4) of the KOPs are co-located at a trailhead (TH) for either an OHV or hiker trail. The location of each KOP in relation to Project is shown on Figures 2 and 3. The location number, corresponding coordinates, and a brief location description of each KOP location are presented in Table 1.0.
Rosemont Copper is pleased to transmit the *Rosemont Copper Project KOP Viewshed Analysis*, Tetra Tech dated December 31, 2009. We are transmitting three hard copies and two CDs of the report directly to the Forest Service. We are also transmitting two hard copies of the report and one a CD to SWCA.
<table>
<thead>
<tr>
<th>KOP Location Number</th>
<th>TH Location Number</th>
<th>TH Information</th>
<th>Coordinates</th>
<th>Location Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOP-1</td>
<td>TH-1</td>
<td>Rosemont OHV²</td>
<td>11561392.91 1734254.47</td>
<td>SR-83³, Milepost (MP) 46.6 at entrance to South Helvetia Road (Road 231). Approximately 0.35 miles southwest of SR-83 at the intersection of South Helvetia Road (Road 231) and the trailhead for the proposed portion of the Arizona Trail.</td>
</tr>
<tr>
<td>KOP-2</td>
<td></td>
<td></td>
<td>11560590 1732121</td>
<td>SR-83, near MP 44 and entrance to Road 4064.</td>
</tr>
<tr>
<td>KOP-3</td>
<td></td>
<td></td>
<td>11571299 1741289</td>
<td>SR-83, MP 43 at entrance to Arizona Trail.</td>
</tr>
<tr>
<td>KOP-4</td>
<td>TH-2</td>
<td>Arizona Trail</td>
<td>11546364 1730386</td>
<td>SR 83, MP 41.6 at entrance to Singing Valley Ranch Road.</td>
</tr>
<tr>
<td>KOP-5</td>
<td></td>
<td></td>
<td>11539874 1733585</td>
<td>Approximately 1.5 miles northwest of the intersection of SR-83 and Singing Valley Ranch Road.</td>
</tr>
<tr>
<td>KOP-6</td>
<td></td>
<td></td>
<td>11543782 1726411</td>
<td>Approximately 3 miles west-northwest of the intersection of SR-83 and Greaterville Road (Road 62); at the intersection of East Box Canyon Road (Road 62) and the Arizona Trail.</td>
</tr>
<tr>
<td>KOP-7</td>
<td>TH-3</td>
<td>Arizona Trail</td>
<td>11540301 1718930</td>
<td>Approximately 3.7 miles west-northwest of the intersection of SR-83 and Greaterville Road (Road 62); and 375 feet northeast of the intersection of East Box Canyon Road (Road 62) and Helvetia Road (Road 231).</td>
</tr>
<tr>
<td>KOP-8</td>
<td>TH-4</td>
<td>Box Canyon OHV</td>
<td>11542994 1715468</td>
<td>Approximately 4.2 miles northwest of the intersection of SR-83 and Greaterville Road (Road 62); and 150 feet northwest of the intersection of Helvetia Road (Road 231) and Road 4035.</td>
</tr>
<tr>
<td>KOP-9</td>
<td></td>
<td></td>
<td>11549207 1715341</td>
<td>At Gunsight Pass, approximately 3.7 miles west of the intersection of SR 83 and Helvetia Road (Road 231).</td>
</tr>
<tr>
<td>KOP10</td>
<td></td>
<td></td>
<td>11561493 1714459</td>
<td>Approximately 3 miles east-northeast of Road 70 on the Four Springs Trail (Trail 157) at the intersection of the Florida Canyon (Trail 145), Sawmill Canyon (Trail 146), and Cave Canyon (Trail 149) Trails.</td>
</tr>
<tr>
<td>KOP-11</td>
<td></td>
<td></td>
<td>115150061 1689071</td>
<td>Approximately 0.2 miles north of the Intersection of SR 82 and SR 83.</td>
</tr>
<tr>
<td>KOP-12</td>
<td></td>
<td></td>
<td>11500112 1747385</td>
<td></td>
</tr>
</tbody>
</table>

**Explanation**

1 Coordinates are presented in Universal Transverse Mercator (UTM), Zone 12. Datum: NAD 83.
2 OHV = Off-Highway Vehicle (i.e., 4WD/ATV/Motorcycle)
3 SR-83 = Scenic Road 83 (also known as the South Sonoita Highway)
3.0 Viewshed Analysis

Figures 2 and 3 show the location of the proposed KOPs while Figures 4 through 15 present the results of the Viewshed Analysis associated with each KOP. The analysis was performed assuming the viewer was at a standing height of approximately six (6) feet off the ground. The analysis was also performed with the final reclaimed Rosemont Ridge Landform (Landform) and the ultimate Open Pit configuration.

For each KOP, planned disturbance areas, as seen from each location, are highlighted in yellow (Figures 4 through 15). Additionally, undisturbed areas along the Santa Rita Mountain ridgeline are also highlighted within the general limits of the proposed project.
FIGURES
Figure Title: VIEWshed ANALYSIS VICINITY MAP
Figure No: 1
Project: ROSEMONT COPPER PROJECT
Date: 12/18/09
Revision: A
Figure Title: KEY OBSERVATION POINT 1 (MILEPOST 46.6)

Legend:
- Rosemont Facilities
- Arizona Trail
- Primary Trailhead with Parking
- Trailhead with limited/No Parking
- Key Observation Point
- Visible Area from KOP (typ.)

Project: ROSEMONT COPPER PROJECT
Legend
- Rosemont Facilities
- Arizona Trail
- Primary Trailhead with Parking
- Trailhead with limited/No Parking
- Key Observation Point
- Visible Area from KOP (typ.)

Figure Title: KEY OBSERVATION POINT 3 (MILEPOST 44)

Project: ROSEMONT COPPER PROJECT

Revision A

Date: 12/18/09

Figure No: 6

Revised: 12/18/09

Contour Interval: 20 Feet
Legend

- Rosemont Facilities
- Arizona Trail
- Primary Trailhead with Parking
- Trailhead with limited/No Parking
- Key Observation Point
- Visible Area from KOP (typ.)

Figure Title: KEY OBSERVATION POINT 4 (MILEPOST 43)

Figure No: 7

Date: 12/18/09

Revision A

Project: ROSEMONT COPPER PROJECT
TH
Arizona Trail
Primary Trailhead with Parking
Trailhead with limited/No Parking
Key Observation Point
Visible Area from KOP (typ.)

Legend

Rosemont Facilities
Arizona Trail
Primary Trailhead with Parking
Trailhead with limited/No Parking
Key Observation Point
Visible Area from KOP (typ.)

Date: 12/18/09
Figure No: 9
Revision A

Figure Title: KEY OBSERVATION POINT 6
(SINGING VALLEY RANCH ROAD)

Project: ROSEMONT COPPER PROJECT
Arizona Trail
Primary Trailhead with Parking
Trailhead with limited/No Parking
Key Observation Point
Visible Area from KOP (typ.)
Figure Title: KEY OBSERVATION POINT 9
(NORTHEAST OF HELVETIA ROAD)

Legend
- Rosemont Facilities
- Arizona Trail
- Primary Trailhead with Parking
- Trailhead with limited/No Parking
- Key Observation Point
- Visible Area from KOP (typ.)