



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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Dear Ms. Pintado:

I am writing to inform the Surface Water Quality Bureau (SWQB) of the Environmental Protection Agency Region 6 findings concerning the Freeport-MacMoRan Chino Mines Company's, Application of the Hydrology Protocol to Smelter Tailings Soils Investigation Unit (STSIU) Drainages (Chino Mines Report). The SWQB website describes the Chino Mines Report as including a Use Attainability Analysis (UAA) based on the SWQB's Hydrologic Protocol. The intent of the Report is to support proposed amendments to the state's surface water quality standards for the 5 STSIU drainages within the Chino Mine Investigation Area.

In its technical review, Region 6 considered the content of the Chino Mines Report and the supporting Hydrologic Protocol evaluations. Region 6 believes that determining the use attainment for waters in the STSIU drainages depends on understanding both the natural hydrologic and climatic conditions, as well other factors, like past or present mining activities may have on these waters is critical. Based on the information on prevailing climatic conditions, hydrology and other concerns described in the enclosed Technical Support Document, Region 6 could not draw the same conclusions concerning designated uses attainment for waters in the STSIU drainages as found in the Chino Mines Report. As a result, Region 6 has determined that it cannot technically approve the Chino Mines Report.

I appreciate the SWQB's involvement in the development of the Chino Mines Report and look forward to working with you to address the Region's concerns. If you have any questions concerning my comments, please call me at (214) 662-6641 or contact me at [nelson.russell@epa.gov](mailto:nelson.russell@epa.gov).

Sincerely,

Russell Nelson  
Regional Standards Coordinator

Enclosure

SWQB EXHIBIT 35

# **TECHNICAL SUPPORT DOCUMENT**

**EPA Technical Review of  
Use Attainability Analyses Supporting Amendments  
To the  
New Mexico's Standards For  
Interstate and Intrastate Surface Waters  
20.6.4 NMAC**

**Freeport-MacMoRan Chino Mines Company  
Smelter Tailings Soils Investigation Unit (STSIU) Drainages**

**U.S. EPA REGION 6  
WATER QUALITY PROTECTION DIVISION**

**June 2014**

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## I. Introduction

### Background

The purpose of this Technical Support Document (TSD) is to provide the results of Region 6's technical review of Freeport-MacMoRan Chino Mines Company (Chino Mines) report entitled *Application of the Hydrology Protocol to Smelter Tailings Soils Investigation Unit (STSIU) Drainages* (2013) to NMED. The Chino report which stands as a use attainability analyses (UAA) is intended as support for amendments to the New Mexico's Standards for Interstate and Intrastate Waters (20.6.4 NMAC). This technical review does not constitute a final action under §303(c) of the Clean Water Act (CWA), but is an interim action utilizing previously approved performance-based provisions (See 65 FR 24647, 24648 ((April 27, 2000))). This approach is intended to allow the state to make water quality management decisions for the water(s) addressed in the UAA prior to final action and submission to Region 6 by the New Mexico Water Quality Control Commission (Commission).

In, surface waters not included in 20.6.4.101-899 NMAC of the New Mexico Water Quality Standards are termed "unclassified" waters of the State (20.6.4.97-99 NMAC). Applicable standards for unclassified waters are dependent on the existing hydrologic condition. Unclassified waters are presumed to be able to support the marginal warm water and primary contact uses and associated criteria found in §20.6.4.98 NMAC unless the state shows that these uses cannot be supported consist with one of the factors in 40 CFR 131.10(g). Specific waters may be placed in 20.6.4.97 NMAC if a UAA confirms that the water is ephemeral and that the CWA §101(a)(2) uses are not attainable due to one of the factors listed in 40 CFR 131.10(g). Springs are separate hydrological features and are not included with any specific water listed in 20.6.4.97 NMAC.

### Chronology of Events

The procedures described in §20.6.4.15 D. NMAC provides for any person to submit notice to the New Mexico Environment Department (NMED) stating the intent to conduct a use attainability analysis (UAA). This state provision requires the proponent to develop a work plan to conduct a UAA and submit the work plan to NMED and EPA Region 6 for review and comment (although there is no federal requirement to do so unless EPA conducts the project directly, or funds the project under a grant, contract, or other agreement). On behalf of Chino Mines, ARCADIS-U.S., Inc. developed a work plan for the Chino report *Application of the Hydrology Protocol to Smelter Tailings Soils Investigation Unit (STSIU) Drainages*. The Chino report was submitted to NMED in May 2011.

The Surface Water Quality Bureau (SWQB) reported that it provided comments to Chino Mines in June 2011 concerning the proposed work plan objectives, survey and analysis plan, and made suggestions for study locations and areas that should be excluded. After Chino Mines implemented study design modifications recommended by the SWQB, Chino Mines agreed to incorporate work plan modifications and submitted a revised work plan on July 2011. During February 2012, a revised work plan with preliminary study results was submitted to NMED's for review. NMED made further suggestions to this work plan, and requested additional information

(April 2012); this information was provided by Chino Mines on August 2012. In September 2012 and November 2012, NMED staff from the Ground Water Quality Bureau (GWQB) and (SWQB) conducted field reconnaissance at the Chino Mines site, focusing on the Bolton Draw watershed. On January 13, 2013, NMED posted Chino Mines' draft HP UAA for 30-day public review.

The SWQB also reported that in March 2013, the GWQB carried out additional field evaluations in several areas based on input from the New Mexico Department of Game and Fish (NMDGF) to determine if critical habitat for endangered species was in the study area. Based on this field reconnaissance, the SWQB determined that some reaches proposed as ephemeral should be excluded in the final HP UAA. In April 2013, NMED SWQB staff held a conference call with Region 6 staff to discuss the final recommendations. The SWQB reported that Chino Mines was advised of resulting recommendations and revised the HP UAA accordingly.

### **Summary of the State's Findings and Submission to Region 6**

The SWQB reported that it based its conclusions on the Chino report, which relied on NMED's *Hydrology Protocol for the Determination of Uses Supported by Ephemeral, Intermittent, and Perennial Waters* (NMED 2011) and following the procedures described in §20.6.4.15 C. NMAC. This methodology was used to distinguish between ephemeral, intermittent, and perennial streams in the STSIU drainages. The initial findings in the Chino report concluded that CWA §101(a)(2) uses were attainable in Rustler Canyon and Martin Canyon drainages and their tributaries, and the remaining 5 subwatershed drainages that were assessed.

The Chino report's findings were modified based on input from the SWQB, GWQB and NMDGF. The SWQB concluded based on the Chino report that CWA §101(a)(2) uses could be attained in a number of waters that were initially determined to be ephemeral. These include Rustler Canyon and Martin Canyon drainages and their tributaries, the upper portions of Subwatershed C that includes critical habitat for endangered species in the Bolton Canyon drainage, the southeast tributary of Drainage D1 that contains Brown Spring and the northwest tributary in the upper portion of Subwatershed B that contains Ash Spring. The SWQB submitted the revised Chino report to EPA Region 6 for technical review on June 26, 2013.

## **II. Region 6 Review and Comments**

Following the performance-based process outlined in the New Mexico's water quality standards, Chino Mines/ARCADIS developed the Chino report identified above relying on NMED's *Hydrologic Protocol* (HP or Protocol), historical data and NMED and NMDGF staff input. The Protocol itself is a methodology that can be used to distinguish among ephemeral, intermittent, and perennial streams and rivers in New Mexico. As such, the Protocol relies on hydrological, geomorphic and biological indicators to identify where water is persistent. Data collected and recorded in the field is used to evaluate and confirm homogeneity throughout the individual stream reach being evaluated to determine the applicability of the results for an entire reach. The Protocol is organized into Level 1 and Level 2 Evaluations. Level-2 Evaluations may be conducted when Level-1 Evaluations are inconclusive.

## **1. Introduction and Background**

The Chino report refers to the ongoing mining, enforcement and corrective actions at the mine site, but does not provide a clear explanation of what these actions are, to the point of failing to identify all the acronyms used. This type of information is important to an understanding of the Chino Mines site and should be part of the Chino report, but the lack of detail makes it difficult to understand the activities at the site and if they may or may not affect use attainment in individual waters in the STSIU drainages.

The Chino report refers to an undated and unreferenced 303(d)/305(b) Integrated Report that suggests Whitewater Creek, the receiving stream for most STSIU drainages is ephemeral. Based on a word search of New Mexico's 2006-2008, 2008-2010, 2010-2012 and 2012-2014 Integrated Reports, no specific reference to the assessment of Whitewater Creek was found. The Chino report also refers to previous site investigations that concluded that the majority of STSIU surface waters are likely ephemeral based on observations of water persistence and lack of aquatic habitat within drainages (Newfields 2006 and Newfields 2007). However, EPA has reported data in its 305(b) Assessed Waterbody History Report (2006) that Whitewater Creek (Mimbres River to headwaters) is perennial. In addition, the United States Fish and Wildlife Service (USFWS) preassessment screen for Chino Mine site describes Whitewater Creek as an intermittent stream; draining both the north and south mine areas (USFWS, 2003). The preassessment document also notes that tailings from concentrators at the mine site are deposited in Whitewater Creek. The Chino report does not speak to these tailings or their possible effect on water quality in the STSIU waters although groundwater has been identified as a media of concern at Chino Mines.

## **2. Purpose and Objectives**

Here, the Chino report describes results from the Level 1 application of NMED HP. The Chino report also states that the intent is to support determinations regarding the appropriate hydrologic classification of surface waters through an "expedited" UAA process as described in section §20.6.4.15 (2) NMAC. There is no reference to an "expedited" UAA in §20.6.4.15 (2) NMAC. 40 CFR 131.3(g) defines a use attainability analysis as a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in §131.10(g). There is no reference to the term "expedited" UAA in either EPA regulation or guidance and the term should not be used.

## **3. Site Setting**

The Chino report provides a general regional level description of the STSIU area that broadly touches on climate, topographic relief, tending to focus on soils. It does not provide any details or discussion related to individual STSIU drainages themselves and what uses the individual waters may or may not be capable of attaining and why.

However, this section does refer to the average annual precipitation of 17.5" per year (WRCC, 2004), which reports that most of the rainfall occurring during the monsoon season of July – September. This annual average rainfall data is of limited value since the Level 1 field

evaluations were carried out in June 2011. Summer precipitation during 2011 was the second lowest on record (behind 1980); near the end of June, 48 percent of New Mexico was in exceptional drought, the worst drought category possible (NWS, 2011), which included the area surrounding Chino Mines.

#### 4. Overview of Study

Background on development and revisions of the Chino report through interactions with both the SWQB and GWQB are described in this section. The information presented in more detail as Region 6 understands it in the preceding Chronology of Events section of this TSD.

##### 4.1 Level 1 Office Procedures

The Chino report indicates that Level 1 reviews rely on evaluations of physical and geographic information about the drainages prior to actual field work. It also notes that many of the reviews of physical and geographic information about the drainages were discussed in the workplan. The exclusion of this type of detail throughout this report is problematic, leaving the reviewer with no clear indication of what decisions were made and why.

###### 4.1.1 Sample Reach Selection

The discussion notes that this physical and geographic information was used with "Site knowledge" to target general sample reaches locations. However, it's unclear what is meant by "Site knowledge" and which, if any actual locations that "might be modified during field evaluations depending on the geomorphic or hydrologic features" were actually modified prior to actual field work. The Chino report again refers to the tentative selection of sample locations prior to field application and possible modification of locations during field evaluations depending on local geomorphic or hydrologic features. The discussion does not clearly indicate if any of the original site selections were actually modified based on these factors. Then it notes the selection of 21 locations in 12 sub-drainages that were identified for HP application, referring to **Table 1**. It's unclear if these were "tentative" or actual assessment sites. **Table 1** actually follows this some 14 pages later - this physical separation of the discussion and a table (or figure) make the Chino report difficult to follow.

###### 4.1.2 Drought Conditions

This discussion indicates that local weather and precipitation data were reviewed to determine if drought conditions were occurring during the HP assessments consistent with the SWQB's HP guidance. The Chino report refers to the 12-month Standardized Precipitation Index (SPI), which can be used as a gauge of drought conditions, noting that drought conditions exist any time the SPI is less than -1.5, indicating severely to extremely dry conditions. The Chino report refers to **Figure 1**, which shows a 12-month SPI value for the site area during field application of the HP (June 2011) was -1.1, indicating that dry conditions existed during sampling but that conditions were within the SPI range recommended in the SWQB's HP guidance.

However, **Figure 1** actually consists of two different graphics, the 12-month SPI (6/1/10 to 5/31/11) map based on “provisional data” and a 72-month SPI graph. Neither of these refer to any of the individual streams being evaluated as required by the SWQB’s guidance. The data record for both the map and graph in **Figure 1** end before the June 2011 date the HP sampling took place. The 12-month SPI map is small but appears to show the Chino Mine site to be in the 0.0 to -1.0, and possibly within -1.0 to -1.5. It is unclear how a precise reading of -1.1 could be drawn from this map alone. The 72-month SPI graph indicates a downward trend from just below 0.0 into the negative range near the end of the record but does not approach an SPI of -1.1. The Chino report also includes a link to the National Oceanographic and Atmospheric Administration (NOAA) 24-month SPI map, running from May 2011 to April 2013. This map also appears to indicate a discrepancy with the reported -1.1 value. While the scale makes it difficult to see, it appears that for the 24-month time frame specified, the SPI was either in the range of -0.80 to -1.29 or extremely dry at -1.99 to -1.60 for the area around Chino Mines. Again, even if the Chino Mine falls in the area that was in the range of -0.80 to -1.29, it’s unclear how a specific value of -1.1 was derived.

Because of the possibility of misreading the graphics in **Figure 1**, particularly the SPI map, a quick search yielded Palmer Z Index Short-Term Conditions for June 2011 (NOAA). The time frame for this NOAA map coincides with the HP sampling. However, it shows that the area around Chino Mines was either in severe, -2.0 to -2.74 or possibly extreme drought at -2.75 and below. Taken together, the SPI and Palmer Z Index data suggest that the area including Chino Mines may have been in drought conditions, potentially well outside of SPI range recommended in the SWQB’s HP guidance, meaning that the conclusions based on Level 1 sampling may not be reliable.

#### 4.1.3 Precipitation

In the preceding section, the Chino report refers to long-term historic precipitation data (**Figure 2**) from the nearby Fort Bayard climatic station. The Chino report indicates greater than average precipitation during the assessment period and that these conditions were representative of the general precipitation conditions. It also noted that precipitation and flow regime observations made at the time of the HP assessment in 2011 were at least representative of the general precipitation conditions observed over the last century, and possibly reflective of wetter conditions. Given that the data reported in **Figure 2** ends in 2008 and no data around the June 2011 time frame of the HP evaluations were reported, the conclusion that general precipitation conditions were at least representative as those observed over the last century are not substantiated.

The NOAA National Climatic Data Center reports that the first five months of 2011 had been the driest start to any year on record for New Mexico to that point. For the first five months of 2011, statewide precipitation was only 35 percent of normal. The U.S. Drought Monitor map shows (NWS, 2011) show that the area encompassing Chino Mines was in exceptional drought conditions in 2011 as was about half of the State. This is consistent with the Palmer Z Index data from the same time frame referred to in the previous subsection. The Chino Mines area currently remains in severe drought conditions (NWS, 2014). This more recent data provides a long-term precipitation record for New Mexico that includes current Calendar Year Review through 2014,

showing a significant drop in rainfall in the last three years. The area including Chino Mines remains in drought condition potentially well outside of the conditions recommended in the SWQB's HP guidance. Here again, these conditions mean that the conclusions based on Level 1 sampling may not be reliable.

#### 4.1.4 Flow Gauges

The Chino report indicates that historical and recent flow data came from a single regional United States Geologic Survey (USGS) flow gauge located on the Mimbres River, approximately 20 km – approximately 12.4 miles *northeast* of the STSIU watersheds. The location and proximity of the USGS gauge station to the STSIU waters is important to note. The STSIU drainages C, D and E generally flow in a southerly direction to the Hanover-Whitewater Creek watersheds. Rustler Canyon and Martin Canyon drainages flow southeasterly before their confluence with the upper end of Lampbright Draw, which flows south/southwesterly, eventually to the Mimbres River (**Figure 4**).

In its Upper Mimbres Water Master District, Water Master Field Manual (March 2006), the New Mexico Office of the State Engineer (NMOSE) describes the Mimbres River Stream System as formed by the snow pack and runoff from 184 square miles of watershed to the *northeast* (of the gauge), running through part of Grant County into Luna County where it ends. The Manual states that the Mimbres River has one gauging station, USGS gauge 08477110, located between the Kenly #2 and the Heuchling #1 ditches and that there are nine ditches upstream of this gauging station. The physical location northeast of the Chino Mine site and the affect these ditches may have on the measured flow in this portion of the Mimbres raises significant the questions of the validity of using flow data from this USGS gauge station in determining the conditions and use attainment in these waters.

#### 4.1.5 Mine Influence on Hydrologic Regimes

This subparagraph concludes that there is no potential influence from mining activities on the hydrologic regime of the STSIU drainages with the “possible” exception of Rustler Canyon, referring to subsequent descriptions. Specific comments follow.

#### Mine Pit Groundwater Influence

This subsection refers to the delineation of the Santa Rita pit groundwater capture zone as part of the Site-Wide Stage 1 Abatement Final Investigation Report (Golder 2008) and **Figure 4**. The Chino report states that Rustler Canyon is the only STSIU subwatershed that could be influenced by the pit groundwater capture. The Chino report also states that delineating the pit capture zone provides evidence that the hydrology of the drainages outside of Rustler Canyon are not impacted by mining activities because the Santa Rita pit represents the only source of potential historical mining impacts that could have affected the natural STSIU hydrology. The Chino report states but does not explain what evidence the delineation of the pit capture zone provides to show that the hydrology of the drainages outside of Rustler Canyon are not impacted by mining activities.

The drawdown of groundwater and its discharge to Whitewater Creek is not the only concern that should be addressed here. The Final Groundwater Restoration Plan for the Chino, Cobre, and Tyrone Mine Facilities (2012) states that hazardous substances from sources at mine sites can be transported to groundwater from infiltration of contaminated surface runoff; seepage from the walls of open pits and underground workings, waste rock, stockpiles, tailings, leach piles, stormwater, or process water reservoirs can injure groundwater. Injured groundwater can then expose downgradient biologic, geologic, and surface water resources to impacts. The Plan also reports that the areal extent of injured alluvial and regional groundwater covers 13,935 acres. **Figure 3.2** of the Plan shows the areal extent of injured alluvial and regional groundwater at the Chino Mine, which overlaps/is larger than the area delineated for the pit capture zone, suggesting that Rustler Canyon may not be the only drainage affected by the Santa Rita pit and leachate from surrounding stockpiles. Although this Chino report is not recommending a re-classification for the Rustler Canyon drainages, the state is obligated to not only ensure that the appropriate designated uses and criteria are in place for these waters, but to ensure that its water quality standards provide for the attainment and maintenance of downstream waters consistent with 40 CFR 131.10(b). In this instance, it means showing that water quality in the Rustler Canyon or other drainages are not affected by the Santa Rita Pits and that anything moving through these drainages is not affecting Subwatershed G drainages and Lamplighter Draw downstream.

### Regional Springs

The Chino report states that both recent observations and historical references don't indicate that mining activities have influenced the presence or disappearance of springs in the STSIU drainages. The discussion refers to present and historical observations of Brown Spring, Bolton Spring and Ash Spring specifically – although **Figure 4** only shows the location of Brown Spring. There is no indication that the “recent” or “present” observations were made during the 2011 time frame for this UAA or in other unrelated investigations. Although the “historical” observations may refer to dated findings by Paige (1916) and findings by Sivinski and Tonne (2011), there is no discussion of flow volume from these springs other than that they continue to express water and no mention of water quality. There has not been anything presented that clearly supports the conclusion that the flow in these springs has not been impacted by mining activities. Although annually-reoccurring pools in Martin Canyon and Rustler Canyon may indicate the presence of seeps or springs, with no data showing consistency in volume or water quality, there is no support for the statement that these seeps or springs have not been impacted by mining activities.

In addition, it's unclear why the springs referenced by Sivinski and Tonne (2011); Apache Tejo Spring, Cold Spring, Kennecott Warm Spring, and Kennecott Cold Spring are mentioned and included in **Figure 4** since they are not considered within STSIU drainages that were assessed in this HP study.

### **4.2 Level 1 Field Evaluations**

This paragraph indicates that the field crew performed one field replicate at pre-determined reach locations as described in the project work plan and consistent with recommendations in NMED SWQB's Quality Assurance Project Plan (QAPP). It also states that three reaches not identified

in the workplan were selected in the field to capture localized watershed features. However, the report does not identify these reaches or explain what these features were and why there was need to deviate from the work plan and/or QAPP.

#### 4.2.1 Sample Reach Selection

This subparagraph primarily repeats hydrology protocol requirements, but does say that most sites that were selected were representative of the corresponding drainages. It's unclear if this means that those identified in the previous paragraph are being referred to here.

### **5. Results**

#### **5.1 Summary of Level 1 Field Evaluation Scoring**

This subsection provides a general summary of the results of the Level 1 evaluations indicating that all of the waters evaluated scored as ephemeral, but provides no details with the exception of the discussion of the intermittent finding for Rustler Canyon.

##### 5.1.1 Sub-Watershed Drainages Scored as Ephemeral during Level 1 Field Evaluations

This paragraph notes that during field application of the HP, an ephemeral classification was reached for most of the drainages after scoring the first 6 indicators. The discussion notes that of the 24 reaches evaluated, 17 reaches were determined as ephemeral after the first six indicators were evaluated and scored, and that three additional reaches were determined as ephemeral based on evaluation and scoring of all Level 1 HP indicators.

See comments provided under section **4.1 Level 1 Office Procedures** and its subsections.

### **6. Conclusions and Hydrologic Classification Recommendations**

This section provides summary conclusions from the Level 1 hydrology determinations and lists those waters that should retain the marginal warm water and primary contact uses and associated criteria in §20.6.4.98 NMAC. The Chino report concludes that the state's limited aquatic life use designation should apply to the following subset of waters:

- Subwatershed Drainage A and tributaries;
- Subwatershed Drainage B and tributaries (excluding the northwest tributary containing Ash Spring);
- Subwatershed Drainage C and tributaries thereof (excluding reaches containing Bolton Spring, the CLF critical habitat transect, and all reaches in Subwatershed C that are upstream of the CLF critical habitat);
- Subwatershed Drainage D and tributaries thereof (Drainages D-1, D-2 and D-3, excluding the southeast tributary in drainage D1 that contains Brown Spring);
- Subwatershed Drainage E and tributaries thereof (Drainages E-1, E-2 and E-3).

The report states that the ephemeral classifications for the remaining waters are based on Level 1 hydrology determinations consistent with “observations and suggestions from previous Site investigations.” In referring to **Figure 4**, this section also states that the ephemeral designation for the identified STSIU drainages also applies to their associated tributaries because the unnamed reaches assessed during the HP study were “determined to be representative of the collective subwatershed.” The basis for this presumption is unclear since there were no sampling sites in these tributaries. This is of particular concern since waters and tributaries in Rustler Canyon, Martin Canyon, drainage C-4 and C-19 were initially determined to be ephemeral but were later found to have flow present after further investigation prompted by NMED. A defensible UAA relies on current findings, not “suggestions” from previous site investigations.

### III. REGION 6 DETERMINATION

The New Mexico water quality standards provide for a UAA based on the NMED’s *Hydrology Protocol* (2011) to determine the appropriate designated uses in waters that may not be capable of supporting CWA uses based on one of the factors in 40 CFR 131.10(g). Consistent with federal regulations at 40 CFR 131.10, the New Mexico standards at §20.6.4.15 NMAC provide for the development of a UAA by the SWQB or a 3<sup>rd</sup> party. As described earlier, NMED submitted the Chino Mines Report as a UAA to support designated use changes for specified waters.

The Chino Mines report evaluated waters within the Chino Mine STSIU, including Rustler Canyon, Martin Canyon and five unnamed subwatershed drainages adjacent to Whitewater Creek and Lampbright Draw to determine if they were capable of attaining the current designated uses. These waters, like other unassessed waters in New Mexico are currently categorized in §20.6.4.98 NMAC and are presumed capable of supporting CWA §101(a)(2) uses. NMED submitted the Chino report as a UAA for the unclassified streams identified above. The Chino report concludes that the state’s limited aquatic life use designation should apply to the subset of these waters identified in the preceding section.

In its technical review, Region 6 found that although the Chino Mines report touched on a number of important points, it lacked adequate detailed discussion and used generalized data to support the conclusion that the state’s limited aquatic life use designation is appropriate for the subset of waters identified. The Introduction of the Chino report refers to a number of what apparently are regulatory, enforcement and/or remedial actions. These actions may be important to understanding the mine site, particularly given the potential influence on surface and groundwater, but the Chino report fails to explain how they relate to determining the appropriate uses in the STSIU waters. The Level 1 assessments in Appendix A suggest that a subset of the STSIU waters may be predominately ephemeral. However, several sections of the Chino Mines report that touch on or directly address climatic conditions (drought, precipitation and flow), authors appear to have relied on data sources that were not temporally related to the June 2011 field evaluations which is inconsistent with the guidance for UAA’s relying on the SWQB’s Hydrologic Protocol. The Region found and cited climate data that indicate significant drought conditions prevailed during the HP field assessments. The inconsistencies between the sources cited in the Chino Mines report and those found by the Region lead to significant questions

concerning the validity of the Level 1 assessments and the conclusions about designated uses that were drawn from them.

Region 6 believes that determining the appropriate designated uses for the STSIU drainages depends on understanding the natural hydrology and climate conditions as well as the effect of mining activities, remediation, permitted discharges, surface diversions and alterations in surface and groundwater flow may have on use attainment in these waters. Based on the concerns outlined in this TSD, Region 6 has determined that it cannot technically approve the Chino report. This technical review does not constitute a final action under §303(c) of the Clean Water Act (CWA), but is an interim action utilizing previously approved performance-based provisions (See 65 FR 24647, 24648 ((April 27, 2000))).

#### IV. REFERENCES

Federal Water Pollution Control Act (Clean Water Act) (CWA) Title 33, Navigation and Navigable Waters, Chapter 26-Water Pollution Prevention and Control, Section 101 [As Amended Through Pub.L. 111-378, January 4, 2011] (33 U.S.C. § 1251 et seq.)  
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