UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NPDES PERMIT NO. AZ0024601

In compliance with the provisions of the Clean Water Act ("CWA") (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.), the following discharger is authorized to discharge from the identified facility at the outfall location(s) specified below, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in this permit:

Discharger Name	Cyprus Tohono Corporation
Discharger Address	P.O. Box 15009
	Casa Grande, AZ 85130-5009
Facility Name	Cyprus Tohono Mine
Facility Location Address	32 miles south of Casa Grande on HW 15
	Casa Grande, AZ 85122
Facility Rating	Minor

Outfall Number	General Type of Waste Discharged	Outfall Latitude	Outfall Longitude	Receiving Water
001	Treated Pit Water	32^0 31' 43" N	111^0 54' 58" W	Unnamed Tributary of Santa Rosa Wash

This permit was issued on:	October 29, 2013
This permit shall become effective on:	December 01, 2013
This permit shall expire at midnight on:	November 30, 2018
In accordance with 40 CFR 122.21(d), the discharger shall submit a new application for a permit at least 180 days before the expiration date of this permit, unless permission for a date no later than the permit expiration date has been granted by the Director.	

Signed this _____29th_____ day of _____October_____, 2013, for the Regional Administrator.

_____[- S -]_____
Jane Diamond, Director
Water Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Cyprus Tohono Corporation ("Permittee") is authorized to discharge treated mine pit water through Outfall 001. Discharge shall be limited and monitored by the Permittee as specified below.

Effluent Characteristic	Concentration limits	Monitoring Requirements	
	Daily Maximum mg/l	Monitoring Frequency	Sample Type
Flow	Monitor Only (1)	Daily	Estimate
Aluminum (2)	Monitor Only (3)	weekly	Composite
Cadmium (2)	0.014	weekly	Composite
Copper (2)	0.0063	weekly	Composite
Lead (2)	0.015	weekly	Composite
Manganese (2)	Monitor Only (3)	weekly	Composite
Selenium (2)	Monitor Only (3)	weekly	Composite
Silver (2)	0.00032 (4)	weekly	Composite
Zinc (2)	0.344	weekly	Composite
Total Acidity	Monitor Only (3)	Daily (Field)	Discrete
pH	Not less than 6.5 standard units nor greater than 9.0 standard units.	Daily (Field)	Discrete

Footnotes

(1) No limit set for Flow.

(2) Total Recoverable. All metals limits are for total recoverable metals as specified in Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79-020) method 4.1.4.

(3) No limit set at this time. A level that approaches or exceeds applicable surface water quality standards may trigger a re-evaluation of reasonable potential and the permit may be reopened and limitations placed in the permit.

(4) For Silver, a concentration of non-detect at the detection limit of 0.005 mg/L shall be considered in compliance with the permit limits.

B. OTHER LIMITATIONS AND REQUIREMENTS

1. The discharge shall be free from pollutants in amounts or combinations that in the receiving water:

   a. Settle to form bottom deposits that inhibit or prohibit the habitation, growth or propagation of aquatic life;

   b. cause objectionable odor in the area in which the surface water is located;

   c. cause off-taste or odor in drinking water;

   d. cause off-flavor in aquatic organisms;

   e. are toxic to humans, animals, plants or other organisms;

   f. cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth or propagation of other aquatic life or that impair recreational uses;

   g. change the color of the surface water from natural background levels of color.

2. The discharge shall be free from oil, grease and other pollutants that float as debris, foam, or scum; or that cause a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank or aquatic vegetation.

C. SPECIAL CONDITIONS

1. Notification Requirements for Discharge

The Permittee shall provide notification to U.S. EPA and the Tohono O'odham Nation EPA at least 60 days prior to the discharge of treated pit water.

2. Monitoring Requirements During periods of non-discharge

If no discharge occurs during the reporting period, the permittee shall specify "No discharge" on the Discharge Monitoring Report (DMR) forms. During the time that the treatment plant is not in operation, the permittee shall submit DMRs on a yearly basis, due January 28th of each year.

If the treatment system is put back into operation, the permittee shall submit monthly DMRs during treatment operation as required by Section D.1.a of the permit, which states "Unless otherwise specified, during each month when the treatment plant is in operation, the permittee shall submit monthly DMRs by the 28th of the month following the end of any given monthly period."

3. Outfall erosion protection

During periods of discharge, the Permittee shall maintain outfall erosion control protection and /or energy dissipation at the outfall location to prevent erosion and scouring of the channel.

4. Outfall monitoring inspections

The Permittee shall establish a monitoring procedure and recordkeeping to evaluate the effects of the discharge on the wash. The monitoring procedure shall consist of visual monitoring at the discharge point and at the unnamed wash crossing at Indian Road 15 for the entire duration of the discharge. For the first week of discharge, the Permittee shall make daily inspections to determine the distance from the discharge point where the surface water completely infiltrates into the wash. For the following 4 weeks, the Permittee shall make weekly inspections to determine the distance from the discharge point where the surface water completely infiltrates into the wash.

If significant erosion or potential flooding is observed, the permittee shall notify EPA and the Tohono O'odham EPA within 24 hours. The Permittee may be required to institute protective measures as necessary in order to minimize flooding or erosion.

5. Reopener

This permit may be modified per the provisions of 40 CFR Part 122 and 124. This permit may be reopened based on newly available information; to add conditions or limits to address demonstrated effluent toxicity; to implement any EPA-approved new Arizona water quality standard; or to re-evaluate reasonable potential (RP).

D. GENERAL MONITORING AND REPORTING

1. Reporting of Monitoring Results

a. The permittee shall report monitoring results on EPA Discharge Monitoring Report (DMR) forms, to the extent that the results reported may be entered on the forms. The permittee shall submit results of all monitoring required by this permit in a format that will allow direct comparison with the limitations and requirements of this permit. Discharge flows shall be reported in terms of the date, time and duration of the discharge. If no discharge occurs during the reporting period, the permittee shall specify "No discharge" on the DMR.

Unless otherwise specified, during each month when the treatment plant is in operation, the permittee shall submit monthly DMRs by the 28th day of the month following the end of any given monthly period. For example, if the monthly monitoring period ends January 31st, the permittee shall submit the DMR by February 28. The permittee shall submit original copies of these and all other reports required herein, signed by an authorized representative, to EPA at the following addresses:

U.S. EPA Region 9
Enforcement Division DMR (ENF-4-1)
75 Hawthorne Street
San Francisco, CA 94105

A copy of all DMRs shall be sent to the following address:

Tohono O'odham Nation - EPA
Attn: Cornelius Antone
P.O. Box 834
Sells, AZ 85634

b. Sample collection will be performed in accordance with the preservation and handling, preparation and analysis of samples as described in the most recent edition of 40 CFR 136.3, unless otherwise specified in this permit. For effluent analyses, the Permittee shall utilize an analytical method with the published Method Detection Limit (MDL, as defined in Appendix A of this permit) that is lower than the effluent limitations (or lower than the water quality criteria). If all published MDLs are higher than effluent limitations or water quality criteria concentrations, the Permittee shall utilize the EPA-approved analytical method with the lowest published MDL. In accordance with 40 CFR 122.45(c), effluent analyses for metals shall measure "total recoverable metals" except where otherwise specified in this permit.

c. For the purposes of reporting, the Permittee shall use the reporting threshold equivalent to the laboratory's MDL. As such the Permittee or its laboratory must utilize a standard calibration where the lowest standard point is equal to or less than the Minimum Level (ML), as defined in section Appendix A of this permit. The daily parameters (pH, total acidity) shall be analyzed using accurate field measuring devices.

For analytical results between the laboratory's MDL and the ML, the Permittee shall report No Discharge/No Data (Not Quantifiable) ["NODI(Q)"] on the DMR form. Analytical results below the laboratory's MDL shall be reported as No Discharge/No Data (Below Detection Level) ["NODI(B)"].

As an attachment to the first DMR form submitted following the effective date of this permit, and at any time thereafter that the following information should change, the Permittee shall report the following: the analytical result; the analytical method number or title, preparation and analytical procedure, and published MDL; the laboratory MDL, standard deviation (S) from the laboratory's MDL study (see 40 CFR Part 136, Appendix B), and the number of replicate analyses used to compute the laboratory's MDL (n); and ML.

d. Quality Assurance Manual

Sample collection will be performed as stated in the Quality Assurance (QA) Manual/QA Plan.

The Permittee shall develop a QA Manual/QA Plan for collection and analysis of samples. If the water samples are analyzed by an independent laboratory, the Permittee shall ensure that the laboratory has a QA Manual.

The purpose of the QA Manual is to assist in planning for the collection and analysis of samples and explaining data anomalies if they occur. As appropriate and applicable, the QA Manual shall include the details enumerated below. The QA Manual shall be retained on the Permittee's premises and be available for review by EPA. The Permittee or the independent laboratory as the case may be shall review its QA Manual annually and revise it when appropriate. Throughout all field sampling and laboratory analyses, the Permittee or the laboratory shall use quality assurance/quality control (QA/QC) procedures as documented in its QA Manual.

i. Project Management, including roles and responsibilities of the participants; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; applicable technical, regulatory, or program-specific action criteria; personnel qualification requirements for collecting samples.

ii. Sample collection procedures; equipment used; the type and number of samples to be collected including QA/QC samples (i.e., background samples, duplicates, and equipment or field blanks); preservatives and holding times for the samples (see 40 CFR 136.3); and chain of custody procedures.

iii. Identification of EPA certified laboratories available to be used to analyze the samples; provisions for any proficiency demonstration that will be required by the laboratory before or after contract award such as passing a performance evaluation sample; analytical method to be used; Method Detection Limit and Minimum Level to be reported; required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken by the Permittee or the laboratory as a result of problems identified during QC checks.

iv. Discussion of how the Permittee will perform data review and requirements for reporting of results to EPA to include resolving of data quality issues and identifying limitations on the use of the data.

2. <u>Monitoring and Records</u>

Records of monitoring information shall include:

a. Date, exact location, and time of sampling or measurements performed, and preservatives used;

b. Individual(s) who performed the sampling or measurements;

c. Date(s) analyses performed;

d. Laboratory(s) which performed the analyses;

e. Analytical techniques or methods used;

f. Any comments, case narrative or summary of results produced by the laboratory. These should identify and discuss QA/QC analyses performed concurrently during sample analyses and should specify whether they met project and 40 CFR Part 136 requirements. The summary of results must include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, sample receipt condition, holding times, and preservation;

g. Summary of data interpretation and any corrective action taken by the Permittee; and

h. Effluent limitations for analytes/compound being analyzed.

3. Twenty-Four Hour Reporting of Noncompliance

The Permittee shall report any noncompliance which may endanger human health or the environment. This information shall be provided orally within 24 hours from the time the Permittee becomes aware of the noncompliance to the following person or their office:

USEPA Enforcement Division: (415) 972-3577

Tohono O'odham Nation - EPA
Attn: Cornelius Antone
P.O. Box 834
Sells, AZ 85634

A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

APPENDIX A: DEFINITIONS

1. "Composite sample" is defined as a time-proportioned mixture of not less than three (3) discrete aliquots obtained at equal time intervals. Each aliquot shall be a discrete sample of not less than 100 ml and shall be collected and stored in accordance with procedures outlined in the most recent edition of Standard Methods for the Examination of Water and Wastewater. Sample collection, preservation, and handling shall be performed as described in the most recent edition of 40 CFR 136.3 (Table II). Where collection, preservation and handling procedures are not outlined in 40 CFR 136.3, procedures outlined in the 18th edition of Standard Methods for the Examination of Water and Wastewater shall be used.

2. A "discrete" or "grab" sample means any individual sample collected in less than 15 minutes.

3. The "daily maximum" concentration means the measurement made on any single discrete sample or composite sample.

4. The "Method Detection Limit (MDL)" is the minimum concentration of an analyte that can be detected with 99% confidence that the analyte concentration is greater than zero, as defined by the specific laboratory method listed in 40 CFR Part 136. The procedure for determination of a laboratory MDL is in 40 CFR Part 136, Appendix B.

5. The "Minimum Level (ML)" is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all of the method-specified sample weights, volumes, and processing steps have been followed (as defined in EPA's draft National Guidance for the Permitting, Monitoring, and Enforcement of Water Quality-Based Effluent Limitations Set Below Analytical Detection/Quantitative Levels, March 22, 1994). Promulgated method-specific MLs are contained in 40 CFR Part 136, Appendix A and must be utilized if available. If a promulgated method-specific ML is not available, then an interim ML shall be calculated. The interim ML is equal to 3.18 times the promulgated method-specific MDL rounded to the nearest multiple of 1, 2, 5, 10, 20, 50, etc.

   When neither an ML nor an MDL are available under 40 CFR Part 136, an interim ML should be calculated by multiplying the best estimate of detection by a factor of 3.18; when a range of detection is given, the lower end value of the range of detection should be used to calculate the ML. At this point in the calculation, a different procedure is used for metals than for non-metals:

   a. For metals: due to laboratory calibration practices, calculated MLs for metals may be rounded to the nearest whole number.

   b. For non-metals: because analytical instruments are generally calibrated using the ML as the lowest calibration standard, the calculated ML is then rounded to the nearest multiple of (1, 2, or 5) x 10^n, where n is zero or an integer. (For example: if an MDL

is 2.5 ug/L, then the calculated ML is: 2.5 ug/L x 3.18 = 7.95 ug/L. The multiple of (1, 2, or 5) x 10^n nearest to 7.95 is 1 x 10^1 = 10 ug/L, so the calculated ML (rounded to the nearest whole number) is 10 ug/L.)