



CYPRUS TOHONO MINE SITE
COMMUNITY INVOLVEMENT PLAN

COMMUNITY INVOLVEMENT PLAN ORGANIZATION

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THE COMMUNITY

This section provides a brief community profile and identifies issues and concerns raised during the community interviews.

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THE COMMUNITY INVOLVEMENT ACTION PLAN

Presented in this section is USEPA's action plan for addressing the issues and concerns identified in the interviews. The CIP relies on tools and techniques that USEPA has developed over the years at hundreds of Superfund Sites.

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APPENDICES

The Appendices provide the following:

- Detailed site overview and additional technical information
- Superfund program information
- Glossary of terms
- List of commonly used acronyms
- Historical site timelines

INTRODUCTION

The goal of this Community Involvement Plan (CIP) is to encourage and facilitate community engagement throughout the Cyprus Tohono Mine Site (Site) cleanup. The U.S. Environmental Protection Agency (USEPA) and the community will join in participatory two-way communication by applying the tools described in this plan. Active public involvement is crucial to the success of any project. USEPA's community

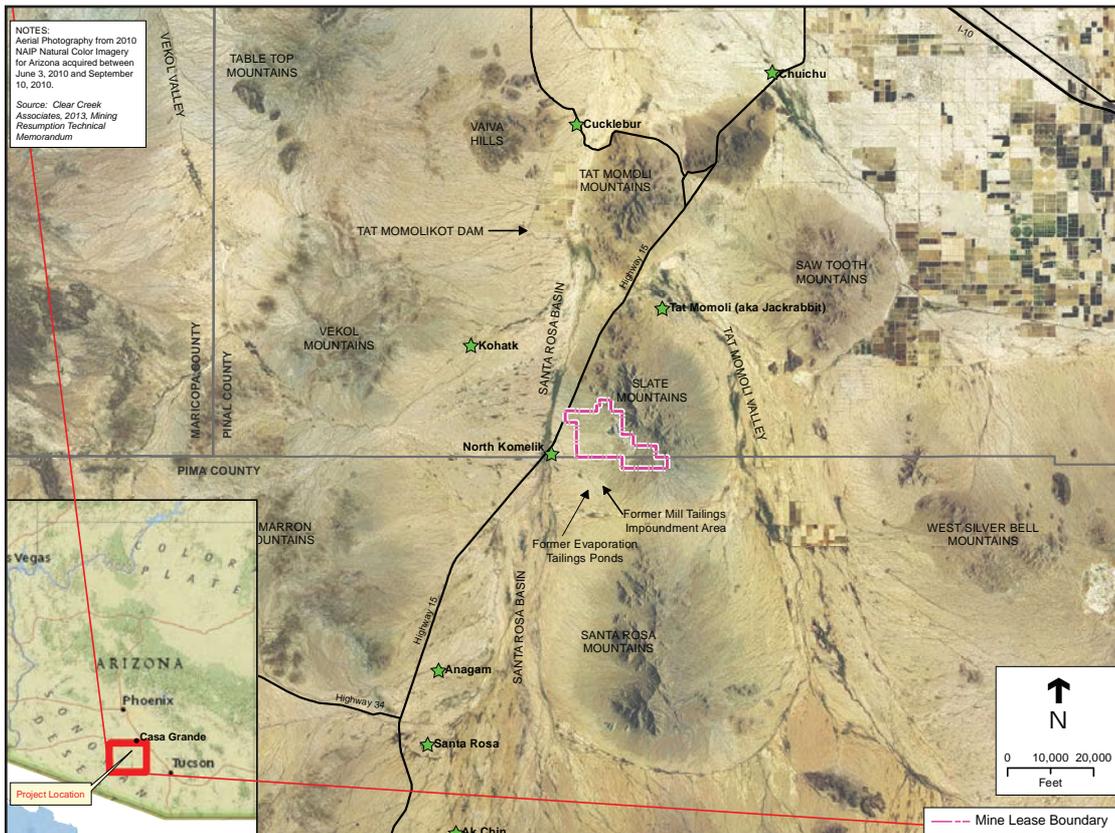
involvement activities at the Site, a Superfund Alternative approach Site (see Appendix), are designed to inform the public of all cleanup activities and include the community in the decision-making process.

At this Site, USEPA defines the "community" as those individuals and entities who have an interest in or are impacted by the mine Site. This

includes residents of North Komelik, members of the Sif Oidak District, tribal members and employees of the Tohono O'odham Nation (Nation). USEPA also recognizes that other stakeholders, including other federal agencies and the lessees of the mine, may have an interest in this Site.

This CIP is based on a series of community interviews conducted with residents of North Komelik, representatives of the Sif Oidak District and of the Tohono O'odham Nation in Sells, and other stakeholders in accordance with USEPA's Superfund community involvement and cleanup guidance.

The CIP is a "living document," meaning that it can be updated or revised over the course of the Site cleanup to reflect long-term changes in the community.



Location of the Tohono Mine Site

THE COMMUNITY

COMMUNITY INVOLVEMENT AT CYPRUS TOHONO MINE SITE

Active and participatory community involvement is an important part of the cleanup process and it is also a requirement of Superfund law. Community involvement is regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as “Superfund.” This CIP follows the community involvement requirements found under the Superfund Amendment and Reauthorization Act of 1986 (SARA) §117 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) §300.430.

USEPA’s Community Involvement Program is designed to facilitate participation of community members throughout the cleanup process, including the investigation phase and the remedy selection phase. USEPA works closely with the Nation and other agencies to provide community involvement staff throughout the Superfund process.

 *Cyprus Tohono Mine Site, photo courtesy of USEPA*

PROTECTING NATURAL AND CULTURAL RESOURCES

In the Elder Brother of Tohono O’odham legend, I’itoi provided everything that the Desert People needed to survive. The Tohono O’odham people have a rich history, much of which is tied to the natural habitat. From the mountain landscape to the prickly pear fruit, nature is deeply integrated in O’odham heritage. For this reason, many community members near the Cyprus Tohono Mine Site are concerned with the preservation of these resources. These resources, including vegetation, wildlife, biota and groundwater, are important considerations in USEPA’s cleanup process. USEPA works with many organizations within the Nation’s Natural Resources Department, including the Tribal Historic Preservation Office and the Tohono O’odham Cultural Center, to protect and preserve the natural and cultural resources of the Nation.



Traditional O'odham Foods¹

BAWI	Tepary Beans
HA:L	O'odham Squash
HU:Ñ	O'odham 60- Day Corn
CIOLIM	Cholla Cactus Buds
BAHIDAJ	Saguaro Cactus Fruit
I:IBHAI	Prickly Pear Fruit

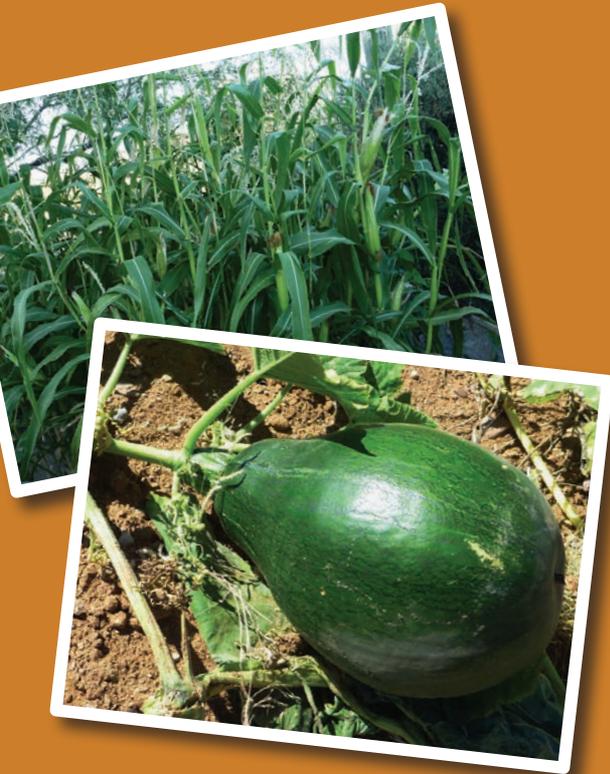


 Photo courtesy of TON EPO

¹Tohono O'odam Community Action. 2014. *Traditional O'odham Foods*. Website: www.tocaonline.org/traditional-foods.html

COMMUNITY PROFILE

History of the Tohono O'odham People

The Tohono O'odham, which means “People of the Desert,” is a Native American tribe located in the Sonoran Desert of the southwest United States and northwest Mexico on a portion of its people’s original Sonoran desert lands. Historically, the O'odham inhabited an enormous area of land in the southwest. Their land extended south to Sonora, Mexico, north to Central Arizona, west to the Gulf of California, and east to the San Pedro River. This land base was known as the Papagueria and it had been home to the O'odham for thousands of years.²

The Nation’s lands feature a desert landscape with broad valleys and tall mountains. The Nation’s people are proud of the diversity of plant and animal life on their lands. The Tohono O'odham were primarily a semi-sedentary tribe that farmed corn, beans, and cotton and gathered beans of the mesquite and the fruit of the giant cactus. Today the Tohono O'odham continue to depend upon agriculture, subsistence ranching, lease of mineral rights, and casino related income.

The Nation gains most of its income from its three Desert Diamond casinos. This relatively new source of income paid for the development of the Nation’s first fire department and the support of other governmental departments, local business development, and educational advancements and scholarships. However, casino

²Official Web Site of the Tohono O'odham Nation. 2014. Website: www.tonation-nsn.gov

³Agency for Toxic Substances and Disease Registry, Division of Community Health Investigations. March 2014. *Health Consultation, Cyprus Tohono Corporation Mine, Tohono O'odham Nation, Arizona*.



 Barrel Cactus, photo courtesy of TON EPO

income is insufficient to cover all of the Nation’s needs. Housing, emergency services, medical, and educational needs require expensive infrastructure, including transportation, personnel, education, and technology. The physical isolation of the Nation has always been an impediment to its economic development. The proximity of the U.S.-Mexico border requires the Nation to incur costs for border-related law enforcement as well.

Demographics

According to the 2010 United States Census, the total population within three miles of the site is eighty-three people, eighty-two of which are American Indian. There are ten children aged six and younger, and nineteen females of childbearing age.³

Almost half of Tohono O’odham tribal members live under the poverty line. Poverty rates on the Nation are more than twice the State and the County rates. Half the children under 18 years of age are considered to be living in poverty. The median household income for the Tribe is \$27,040; less than both the County (\$45,521) and the State (\$50,448). Households on the Nation are three times more likely to participate in the Supplemental Nutrition Assistance Program than are residents of the State and the County. They are also five times more likely to receive public assistance income than residents of the State or the County. Female head of households account for almost half of all households in the Tohono O’odham Nation, in contrast to approximately 12% in the State and County. Households of the Nation are more than three



Environmental Justice and Cyprus Tohono Mine Site

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Fair treatment means that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.

Meaningful involvement means that:

1. Potentially affected community members have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health
2. The public’s contribution can influence the regulatory agency’s decision
3. The concerns of all participants involved will be considered in the decision making process
4. The decision makers seek out and facilitate the involvement of those potentially affected

At Cyprus Tohono Mine Site, USEPA recognizes Environmental Justice concerns. The site team strives to ensure that all activities are looked at through the lens of environmental justice, and that the community is treated fairly and equitably. Residents of the Sif Oidak District and the Nation have a right to clean water and protected natural resources. USEPA will work to continuously incorporate environmental justice initiatives in the work done at Cyprus Tohono. As an environmental justice community, the residents deserve to be acknowledged and informed of their rights.

For more information on USEPA’s Environmental Justice Program, visit:

USEPA Environmental Justice Plan 2014:

<http://www.epa.gov/environmentaljustice/resources/policy/plan-ej-2014/plan-ej-overview.pdf>

USEPA Region 9 Environmental Justice Tools and Resources:

<http://www.epa.gov/region09/ej/tools-resources.html>

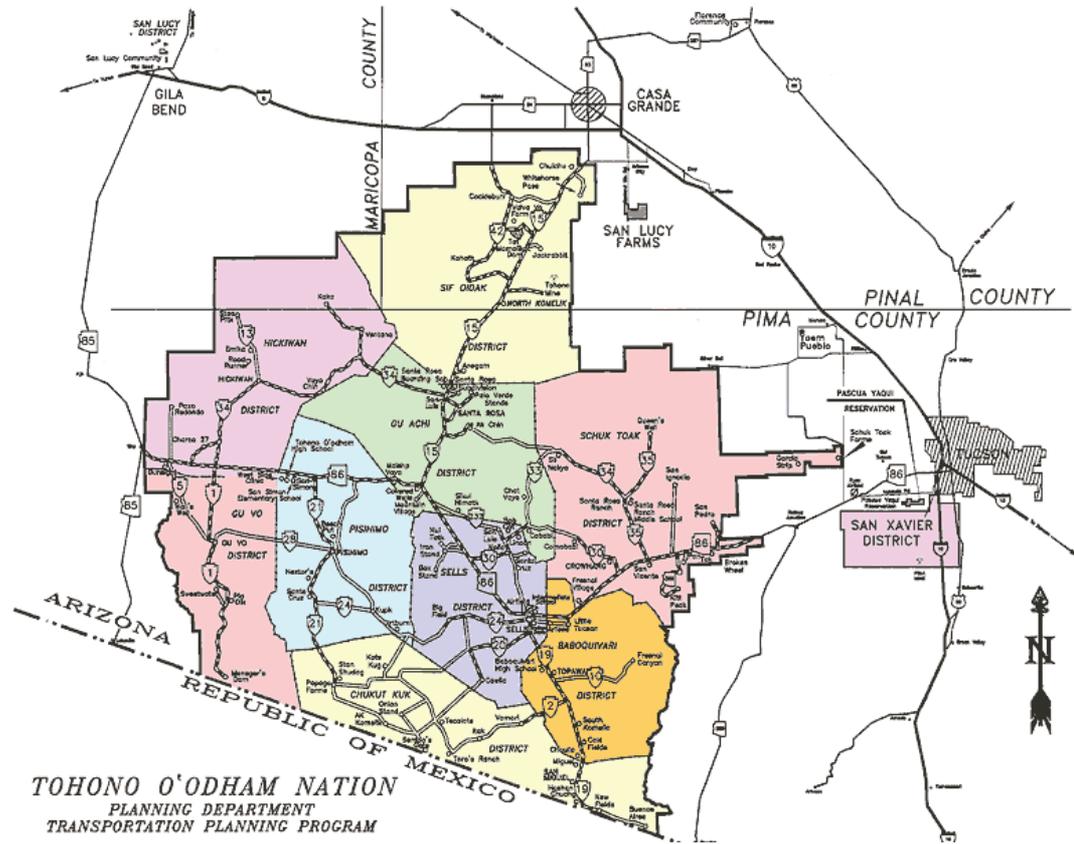
 Photo courtesy of TON EPO

times less likely to have single occupants than other households in the State or County, and four times more likely to contain other relatives. Children under age 18 are fifteen times more likely to live with grandparents on the Nation than they are in the State or County.⁴

COMMUNITY ISSUES, CONCERNS & DISCUSSION

In November 2013, USEPA conducted community interviews with interested individuals in North Komelik and Sells, AZ. For a full list of the interview questions, please refer to Attachment 4. Interviewees were asked a variety of questions about their personal history, their understanding of the Cyprus Tohono Mine Site, and their preferred methods of communication regarding the Site. These interviews provided USEPA with useful, valuable information that has been incorporated into this Plan. While the responses were diverse, they can be divided into three main areas of concern: Environmental Cleanup (Superfund Alternative Site Process), Community Outreach, and Mine re-opening.

The interviewees shared a wide range of perspectives, all of which USEPA has attempted to consolidate into this Plan. Some residents have spent their entire lives next to the mine, while others shared their experience of work inside the mine's operations. Some interviewees spoke from the perspective of their work, while others had their family's interests in mind. While not all the views of every individual can be told in this document, USEPA hopes to cover a great number of them. Here is a summary of the concerns raised during community interviews:



Comments/Issues Directly From Community Interviews

Environmental Cleanup (Superfund Alternative Site Process)

- Concerns for livestock drinking water
 - » It's very expensive to pay for water from Santa Rosa
 - » Can we provide our livestock with groundwater to drink?

- Concerns for resident's health, especially children
- Would like more information about contaminated groundwater
 - » What is the source of the perchlorate in groundwater?

⁴Arizona Rural Policy Institute, Northern Arizona University. 2012. *Demographic Analysis of the Tohono O'odham Nation Using 2010 Census and 2010 American Community Survey Estimates.*

Coordination with ATSDR at the Cyprus Tohono Mine Site

The Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency that takes responsive public health actions to promote healthy, safe environments and prevent harmful exposures. Working with USEPA, state environmental departments, state health departments, universities, and other organizations, ATSDR generally evaluates existing environmental data to determine whether exposure to chemicals may have occurred, and if so, whether the exposures could harm people. The agency recommends actions that individuals and organizations can take to reduce or eliminate exposures to harmful chemicals. ATSDR also provides health education to communities affected by environmental chemicals.

Individuals may petition ATSDR to conduct a health assessment of a site. For more information about how to petition ATSDR, call toll free, 1-800-232-4636.

ATSDR's work in the North Komelik Community and at the Cyprus Tohono Mine Site

In 2014, upon request by the Tohono O'odham Nation and USEPA, ATSDR investigated potential health risks associated with exposure to hazardous substances near the Cyprus Tohono Mine Site. ATSDR reviewed available environmental data collected near the Cyprus Tohono mine. A Health Consultation report with ATSDR's

conclusions and recommendations is expected in late 2014 (and will be available here: <http://www.atsdr.cdc.gov/hac/pha/HCPHA.asp?State=AZ>).

Previously, in 2000, upon request of the Tohono O'odham Nation, ATSDR reviewed sulfate levels in drinking water samples taken by the Tohono O'odham Utility Authority at the North Komelik well near the Cyprus Tohono mine. ATSDR found no public health concern at that time, although the water may have had a bad taste.

ATSDR Contact

If you have questions about ATSDR's work, you can call ATSDR toll-free at 1-800-CDC-INFO and ask for information on the Cyprus Tohono Mine Site. You may also contact us directly:

Ben Gerhardstein

Public Health Advisor/Regional

Representative

ATSDR Region 9, San Francisco, CA

(415) 947-4316

bgerhardstein@cdc.gov

BIA Contact

Nina Siqueros

Superintendent

Papago Agency

Bureau of Indian Affairs

PO Box 578, Sells, AZ 85634

- Cultural Resources Survey should be updated
 - » In the past, North Komelik residents could hunt deer, gather plants, etc. on the mine property, but now it is restricted. Will there ever be access in the future? Traditional ways of the village residents cannot be followed.
- The noise from the cannons at the mine can be bothersome to the community
- Concerns for the protection of the Saguaro cactus and endangered/special status species

Community Outreach

- Meetings are the best form of communication
 - » Weekday evening meetings are preferred
 - » It could be useful to have an interpreter who speaks O'odham for the elders
- Continue communicating with us, keep a USEPA presence to show that you're still working

 Copper in natural state, photo courtesy of USEPA



- Simple, easy to read fact sheets
 - » Sent to people's PO boxes
- Make sure to contact all levels of government - community, district and Nation
- Make sure that all members of the community are contacted and kept informed - use several different ways to contact people

Mine Re-Opening

- Will the mine re-opening cause future environmental impacts?
- How is our future environment affected by the mine's operations?
- Mine is a "visual eyesore"
- Traffic, dust, continued use of chemicals, noise are all concerns
- Supplemental Environmental Impact Statement (EIS) before reopening?
- TON rights should be protected
- Concerned that the excavated ore body ("stockpiles") will be located too close to the village of North Komelik

COMMUNITY RESOURCES

Tohono O'odham Nation

Vocational Rehabilitation Program
P.O. Box 837
Sells, Arizona 85634
(520) 383-8796, Fax: (520) 383-3948

Tohono O'odham Nation

Cultural Center & Museum
Topawa, Arizona
(520) 383-0200, Fax: (520) 383-2872
himdagki@tonation-nsn.gov
www.himdagki.org



📷 Mission San Xavier del Bac, photo courtesy of TON EPO

Tohono O'odham Community College

Main Campus
Highway 86, Milepost 125.5 North
(520) 383-8401
www.tocc.edu

Useful Links

EPA's Cyprus Tohono Mine Site Website:
<http://www.epa.gov/region9/cyprustohono>

Environmental Justice Plan 2014:
<http://www.epa.gov/environmentaljustice/resources/policy/plan-ej-2014/plan-ej-overview.pdf>

Region 9 Environmental Justice Tools and Resources:
<http://www.epa.gov/region09/ej/tools-resources.html>

The Runner Newspaper:
www.oodhamrunner.com

From I'toi's Garden: Tohono O'odham Food Traditions:
<http://www.tocaonline.org/book-from-itoi-s-garden.html>

ATSDR's Health Consultation report:
<http://www.atsdr.cdc.gov/hac/pha/HCPHA.asp?State=AZ>

THE COMMUNITY INVOLVEMENT ACTION PLAN

USEPA met with various community members and conducted community interviews in November 2013. Those interviews significantly contributed to the creation of this CIP, determining how USEPA will continue to develop communication regarding the Cyprus Tohono Mine Site with the Nation's community.

Ongoing Communication

USEPA will work to ensure that any important update or information regarding the Site is shared directly with the community, as well as through the proper channels of the Nation's government. It has been made clear that an ongoing USEPA presence is important to the community, as it demonstrates USEPA's continued efforts in the remediation of the Site. The community has been welcoming to USEPA, always encouraging public meetings and offering gathering space.

Communication Tools

The community members expressed a preference for a cross-media approach to information sharing. This means that USEPA will use various methods to provide the community with information, including through printed material and at public meetings. The most common tools that USEPA will implement are:

Fact Sheets

Through fact sheets, USEPA will regularly provide information to the community and give updates on the cleanup. These fact sheets will include information about upcoming community meetings, public comment periods, and other pertinent information. USEPA will design clear, easy to read fact sheets with visual representations

(i.e. maps, pictures) whenever possible. USEPA will mail a fact sheet to every person on the current USEPA mailing list. Community members can be added to the mailing list by contacting the USEPA Community Involvement Coordinator. USEPA will also provide extra copies to the

 EPO office at work, photo courtesy of TON EPO



Tohono O'odham Nation's Environmental Protection Office (TON EPO), Water Resources and Natural Resources Departments and the Sif Oidak District Office located in North Komelik.

Community Meetings

USEPA will hold regular community meetings to update the public on site activities. USEPA will coordinate with local representatives and the Nation's staff to ensure widespread publicity for these meetings. USEPA will hold additional meetings at the request of the community. These meetings can be held at the Sif Oidak District Office in North Komelik, or at whatever location is most convenient for the majority of the community. The community has stated a preference for evening, weekday meetings.

The following four locations have been used in the past for public meetings:

- Sif Oidak District Office in North Komelik, Federal Route 15, North Komelik Community on the Nation
- Nation's Legislative Council Chambers, Main Street, Sells, Arizona on the Nation
- Sells Recreation Center
- North Komelik Community Center

Briefing of Council Members

USEPA will brief the Nation's Legislative Council and the Sif Oidak District Council upon their request for information or in correspondence with relevant site cleanup information. The Legislative Council includes 24 elected members who participate on various committees (e.g., Water Resources, Agricultural and Natural Resources, Domestic Affairs).

Newspaper

USEPA will use *The Runner* newspaper to publicize important information or to give public notice related to the site. *The Runner* is published the first and third Fridays of each month. Contact Information: (520) 383-5426, Email stanley@oodhamrunner.com





 *TON Legislative Chambers, photo courtesy of TON EPO*

Community College Outreach

USEPA will explore the possibility of working with the Tohono O’odham Community College when conducting outreach. There are many applicable and relevant classes offered at this school and it is a good location for publicity and outreach.

Public Comment Periods

The public comment period is a time during which USEPA accepts comments from the public on proposed actions and decisions. This enables citizens to participate in the administrative decision making process. The community will be notified of public comment periods through fact sheets and/or public notices. At

the request of the community, USEPA will implement extended public comment periods of 60 days automatically for the Cyprus Tohono Mine Site.

Recognizing Tribal Government

The Tohono O’odham Nation, being a federally-recognized tribe, has its own governmental system. The Nation is comprised of three branches of government: Executive, Legislative, and Judicial. The Executive branch houses the Chairman and Vice-Chairman’s offices, the Legislative branch houses the tribal council representatives (two representatives from each of the twelve districts), and the Judicial branch houses the courts and judges. These three branches of government exist together in a system of checks and balances.

Throughout the cleanup process at Cyprus Tohono Mine Site, USEPA will work in close collaboration with the Nation. USEPA will follow the correct protocol in requesting to appear at Legislative Council meetings, disseminating information to representatives, and ensuring that both the Nation and the Sif Oidak District are fully apprised of site activities and information.

An important part of ensuring this collaboration is in setting meeting dates and times. USEPA will work to adjust schedules whenever possible in order to attend the meetings of the Legislative Council, the Sif Oidak District Council and the North Komelik Community. In addition, the Nation has twelve standing committees that



coordinate on key Nation interests (e.g., Water Resources, Agricultural and Natural Resources, Domestic Affairs). These meetings are held at least once a month. When USEPA requires a special meeting or additional appearance, the project manager and community involvement coordinator will work with local officials to properly make this request.

Important Nation Dates and Events

Celebrated Holidays on the Nation

NEW YEAR'S DAY

1st day of January

MARTIN LUTHER KING DAY

3rd Monday in January

PRESIDENT'S DAY

3rd Monday in February

GOOD FRIDAY

Friday before Easter

MEMORIAL DAY

last Monday in Monday

INDEPENDENCE DAY

July 4

LABOR DAY

1st Monday in September

NATIONAL INDIAN DAY OR NATIVE AMERICAN DAY

4th Friday of September

ST. FRANCIS DAY

October 4

VETERANS DAY

November 11

THANKSGIVING

4th Thursday of November

AMERICAN INDIAN HERITAGE DAY

4th Friday of November/day after Thanksgiving

CHRISTMAS

December 25

Other Major Events Celebrated by the Nation

EARTH MONTH

April

ANNUAL TON RODEO AND FAIR

1st weekend in February

MAGDALENA PILGRIMAGE TO SONORA

also known as Fiestas de San Francisco Javier – last week of September and 1st Week of October

Agency and Organization Collaboration

Successful cleanups are done through collaboration. Within the Nation, USEPA works closely with the TON EPO, the Mining Office, and the Water Resources Department. Maintaining these symbiotic relationships helps to support the cleanup's goals and includes important stakeholders in the decision making process. USEPA will continue to work with these offices, as well as coordinate with any other interested individuals.

Another useful organization is the Tohono O'odham Nation Cultural Center and Museum. Their rich depiction of Tohono O'odham history and commitment to preserving cultural heritage is a valuable resource for USEPA's community involvement initiative. USEPA hopes to work with the museum in the future and form a mutually beneficial working relationship.

From the official TON website: "The Cultural Center & Museum is working to instill pride by creating a permanent tribal institution to protect and preserve O'odham "jewe c himdag". Working with elders, the Cultural Center & Museum will promote understanding and respect of O'odham "himdag" through educational programs and public outreach.⁵

⁵Official Web Site of the Tohono O'odham Nation. 2014. Website: www.tonation-nsn.gov



📷 Sells, AZ, photo courtesy of TON EPO

Information Repositories

Information repositories have been established at the Sif Oidak District Council Building in the community of North Komelik and at the TON EPO in Sells. The Public Records Information Repository will include final copies of site deliverables (e.g., work plans and reports), quarterly progress reports, quarterly water quality monitoring reports, this Community Involvement Plan, and certain other data and information designated by USEPA. The documents may be reviewed during normal government office working hours

or at any time on the site website (see below). A complete copy of the Administrative Record, which is also available for review by community members, is maintained by USEPA at its regional office in San Francisco.

Information Repository Locations:

Sif Oidak District Council Office
P.O. Box 12038
Casa Grande, Arizona 85230
(520) 361-2360

Tohono O’odham Environmental Protection Office

P.O. Box 837
Sells, Arizona 85634
(520) 383-8681

EPA Region 9 Record Center

55 Hawthorne Street
San Francisco, California 94105
(415) 820-4700

Site Website:

<http://www.epa.gov/region9/cyprustohono>

Key Contacts

USEPA Region 9

Andria Benner

EPA Project Coordinator
U.S. EPA, Mail Code SFD-6-2
75 Hawthorne Street
San Francisco, CA 94105
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benner.andria@epa.gov

Sarah Cafasso

Community Involvement Coordinator
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Tohono O'odham Nation

Cornelius Antone

Tohono O'odham Nation Department of
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P.O. Box 837
Sells, AZ 85634
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Laurie Suter

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Sif Oidak District

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Isaac Jose

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APPENDICES

OVERVIEW OF THE SUPERFUND CLEANUP PROGRAM

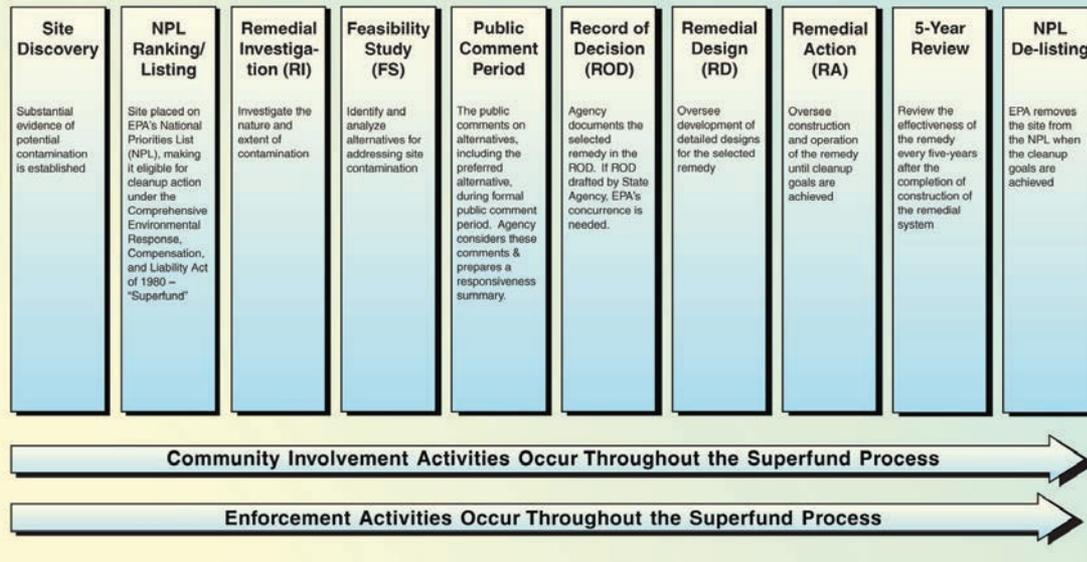
The Superfund cleanup process begins with site discovery or notification to USEPA of possible releases of hazardous substances. Sites are discovered by various parties, including citizens, State agencies, and USEPA Regional offices. USEPA then evaluates the potential for a release of hazardous substances from the site through these steps in the Superfund cleanup process.

SUPERFUND ALTERNATIVE APPROACH

The Cyprus Tohono Mine Site is classified as a Superfund Alternative (SA) approach site. The Superfund Alternative approach uses the same process and standards for investigation and cleanup as sites on the National Priorities List (NPL). Sometimes, USEPA will refer to the “Superfund process” in community meetings regarding the Cyprus Tohono site. This is because the process remains the same for SA approach sites. Sites become classified as Superfund Alternative when a potentially responsible party

(PRP) enters into an SA agreement with USEPA and stays in compliance with that agreement. All of the cleanup funding for the site is provided by the PRP, in this case the Cyprus Tohono Corporation (CTC). If a PRP fails to meet the obligations of the agreement, USEPA may reconsider putting the site on the NPL. USEPA will oversee the investigation and cleanup just as it would at a site listed on the NPL. When the cleanup is completed, USEPA will ensure the remedy continues to work as intended by monitoring the site and performing the same reviews it conducts for sites listed on the NPL.

The Superfund Process



CYPRUS TOHONO MINE SITE TECHNICAL OVERVIEW

The operations area of the Cyprus Tohono Mine Site is located within three miles of the village of North Komelik in the Sif Oidak District of the Nation, approximately thirty-two miles southwest of the town of Casa Grande, Arizona. The Cyprus Tohono Corporation (CTC) maintains a copper mine and processing facility in “care and maintenance status” on lands leased from the Nation. Development of what is now known as the Cyprus Tohono Mine Site began in the 1880’s, when low-grade oxide ore was mined from the surface. During the 1950’s and 1960’s,

Trans-AZ operated a small open pit copper oxide mine. In the late 1960's, Trans-AZ and the El Paso Natural Gas Company enlarged the open pit. Mining continued into the 1980's, with several changes of operators. CTC began operating the property in 1987, after leasing it from the Tohono O'odham Nation. It expanded the open pit mining activities and heap leaching operations. Further information about the history of the mine operations is provided in a summary timeline (see Attachment 1).

 *Cyprus Tohono Mine Site, photo courtesy of USEPA*



ENVIRONMENTAL AND REGULATORY ACTIVITIES

In 1992, there was a release of 1.4 million gallons of process waste water to surface washes on the mine site due to a break in a line running to the evaporation ponds. This release, combined with other releases from unlined evaporation ponds, catchment basins and ditches on the mine site resulted in the discovery of underlying groundwater contamination on the leased mine property as well as underneath the village of North Komelik.

Beginning in 1996, various environmental and regulatory activities began at the mine site to address these environmental problems as outlined in Attachment 2. Over more than a ten year period of investigation, CTC conducted various environmental investigative activities including:

- Surface geophysical studies
- Installation of monitor wells in the former in-situ mine, the bedrock groundwater system, the plant operations area, the pit lake area and the area where the evaporation ponds and mill tailings impoundments were located
- Hydraulic testing
- Water level monitoring
- Water quality monitoring of the bedrock groundwater system, the pit lake and underground mine water
- Soils investigations for organic and inorganic compounds in the plant operations area
- Passive soil gas investigation in the plant operations area

CTC has installed over sixty groundwater monitor wells at the mine site. The primary contaminants of concern identified in the groundwater

were sulfate, uranium and perchlorate. During the period of 1980 to 1996, before CTC conducted these investigative activities, a prior operator of the mine site installed 15 groundwater monitor wells to monitor the in-situ mining operations. In addition, the CTC removed contaminated soils from the evaporation ponds and mill tailings, under a 2006 USEPA Non-Time Critical Removal Action, during the period of 2007–2008. Further information about the history of environmental and regulatory activities at the mine site is provided in a summary timeline (see Attachment 2).

ADDITIONAL INFORMATION ON CYPRUS TOHONO SITE CLEANUP ACTIVITIES

In 2009, CTC voluntarily entered into an Administrative Settlement Agreement and Order on Consent (2009 Consent Order) for a Groundwater Remedial Investigation/Feasibility Study (RI/FS) with USEPA under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as Superfund.

The mine and associated study areas are located entirely within the Sif Oidak District of the Tohono O'odham Nation. The leased lands straddle the Pima and Pinal County lines, and include a Mining Lease of 4,180 acres, a Business Lease of 6,325 acres, and a Business Lease for Water Well Sites (or water well lease). The Consent Order defines the "Site" as the area encompassing both the Mining and Business Lease boundary locations as shown on Figure 2.

The Statement of Work (SOW) included as Appendix A to the 2009 Consent Order specifically focuses on conducting an RI/FS for groundwater. The purpose of the groundwater RI/FS is to define the nature and extent of groundwater contamination, assess potential human health and ecological risks, and develop and evaluate potential remedial alternatives.

In order to facilitate the investigation and potential implementation of response actions, specific mine-related facilities have been grouped into three Study Areas as shown on Figure 1:

- **Area 1:** Open Pit Area Study Area (OPSA)
- **Area 2:** Plant Area Study Area (PSA)
- **Area 3:** Evaporation Tailings Ponds Groundwater Study Area (ETPGSA)

The RI process completed in draft in January 2013 included monitoring well installation, groundwater and Pit Lake monitoring and reporting, a Remedial Investigation Report, and a baseline human health and ecological risk assessments. The FS process will include a preliminary remedial alternatives analysis, a Feasibility Study Work Plan, development and evaluation of potential remedial alternatives, and a Feasibility Study Report.

GLOSSARY

Most of the terms defined below are used in this Community Involvement Plan. Definitions were taken from the Superfund glossary on the USEPA website at: <http://www.epa.gov/superfund/programs/reforms/glossary.htm>. A number of additional mining terms have also been included.

Administrative Settlement Agreement and Order on Consent (AOC): A legal document signed by USEPA and an individual, business, or other entity that formalizes an agreement reached between USEPA and potentially responsible parties (PRPs) where PRPs will conduct all or part of a cleanup action at a Superfund site; cease or correct actions or processes that are polluting the environment; or otherwise comply with USEPA-initiated regulatory enforcement actions to resolve site contamination. The AOC describes actions that PRPs are required to perform.

Administrative Record: A file which is maintained and contains all information used by the lead agency to make its decision on the selection of a response action under CERCLA. This file is to be available for public review and a copy is to be established at or near the site, usually at one of the information repositories. Also, a duplicate file is held in a central location, such as a Regional or State office.

Aquifer: An underground geological formation, or group of formations, containing water. Aquifers are sources of groundwater for wells and springs.

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as Superfund). This law, enacted by Congress on December 11, 1980, created the Superfund program. Specifically, CERCLA (1) established prohibitions and requirements concerning closed and abandoned hazardous waste sites, (2) provided for liability of persons responsible for releases of hazardous

waste at these sites, and (3) established a trust fund to provide for cleanup when no responsible party could be identified.

Cleanup: *Cleanup* is the term used for actions taken to deal with a release or threat of release of a hazardous substance that could affect humans and/or the environment. The term is sometimes used interchangeably with the terms *remedial action*, *removal action*, *response action*, or *corrective action*.

Community Involvement Plan (CIP): A document that identifies techniques used by USEPA to communicate effectively with the public during the Superfund cleanup process at a specific site. This plan describes the site history, nature and history of community involvement, and concerns expressed during community interviews. In addition, the plan outlines methodologies and timing for continued interaction between the Agencies and the public at the site.

Containment: A remediation method that seals off all possible exposure pathways between a hazardous disposal site and the environment.

Contamination: Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use.

El Paso: El Paso Natural Gas Company was involved with the operation of the mine site from 1966 to 1978 when its mine leases were terminated.

Feasibility Study: See *remedial investigation*.

Five-Year Review: A periodic review of a Superfund site conducted after a response action has been initiated. The purpose of a five-year review is to evaluate whether the response action remains protective of public health and the environment.

Geochemical Hydrogeological

Characterization: The term refers to technical studies and analyses conducted by engineers or scientists to determine the geochemical and hydrogeological nature of a specific location or area. In the case of the Cyprus Tohono Mine Site, these characterization studies included: drilling wells and logging the lithology, conducting pump tests and other aquifer tests (hydrogeological tests), collecting water quality samples, collecting water level elevations measurements, and conducting other evaluation studies to determine the physical characteristics of the mine site.

Groundwater: The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs. Because groundwater is a major source of drinking and irrigation water, there is growing concern over contamination from leaching agricultural or industrial pollutants.

Heap Leaching: Heap leaching refers to the stockpiling (heaping) of crushed rock from the mining process on an impermeable plastic liner and/or clay-lined leach pad where sprinklers or drip irrigation is used to water down or irrigate the crushed rock with a leach solution to dissolve the valuable metals. The solution then percolates



 *Cyprus Tohono Mine Site, photo courtesy of USEPA*

through the heap leach pile and leaches out the metals (e.g., copper). This process could take from one month up to two years depending on the target metal.

Information Repository: A file containing current information, technical reports, and reference documents regarding a Superfund site. The information repository is usually located in a public building that is convenient for local residents, such as a public school, city hall, or library.

National Contingency Plan (NCP): The basic policy directive for federal response actions under CERCLA. It sets out the organizational structure and procedures for responding to releases of

hazardous substances, pollutants, and contaminants, and contains the Hazard Ranking System and the National Priorities List as appendices.

National Priorities List (NPL): USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which USEPA is required to update at least once a year, is based primarily on the score a site receives from USEPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Nine Criteria: The USEPA nine criteria used to evaluate a potential cleanup remedy are: (1) overall protection of human health and the environment, (2) compliance with applicable or relevant and appropriate requirements (ARARs), (3) long-term effectiveness and permanence, (4) reduction of toxicity, mobility or volume, (5) short-term effectiveness, (6) implementability, (7) cost, (8) state acceptance, and (9) community acceptance.

Noranda: Noranda Mining Company, also known as Noranda Lakeshore Mines, Inc.

Operable Unit (OU): A designation for a portion of a site with defined boundaries and at which site actions are separately planned, executed, and monitored to reduce potential risk or damage to public health and the environment.

Open Pit: This is an excavation or cut made at the surface of the ground for the purpose of extracting ore. It is necessary to excavate and relocate large quantities of waste rock. An open pit is usually open for the duration of the mine's life.

Oxide Ore: Copper oxide ores are copper-containing rocks with a small percentage of copper. The copper from these oxide ores are usually leached by sulfuric acid to liberate the copper minerals into a solution called a pregnant leach solution.

Perchlorate: Perchlorate is both a naturally occurring and man-made chemical that is used to produce rocket fuel, fireworks, flares and explosives. Perchlorate can also be present in bleach and in some fertilizers. Perchlorate may have adverse health effects because scientific research indicates that this contaminant can disrupt the thyroid's ability to produce hormones needed for normal growth and development.

Plume: A well-defined area of dispersed contamination in an aquifer which starts at a source point and spreads vertically and laterally downgradient.

Potentially Responsible Party (PRP): An individual or company (e.g., an owner, operator, transporter, or generator of hazardous substances or hazardous waste) that is potentially responsible for the past contamination and future cleanup of a Superfund site.

Reclamation Plan: A Reclamation Plan is a written document that addresses the reconstruction of disturbed ecosystems by returning the land to a stable and productive condition compatible with the land use plan.

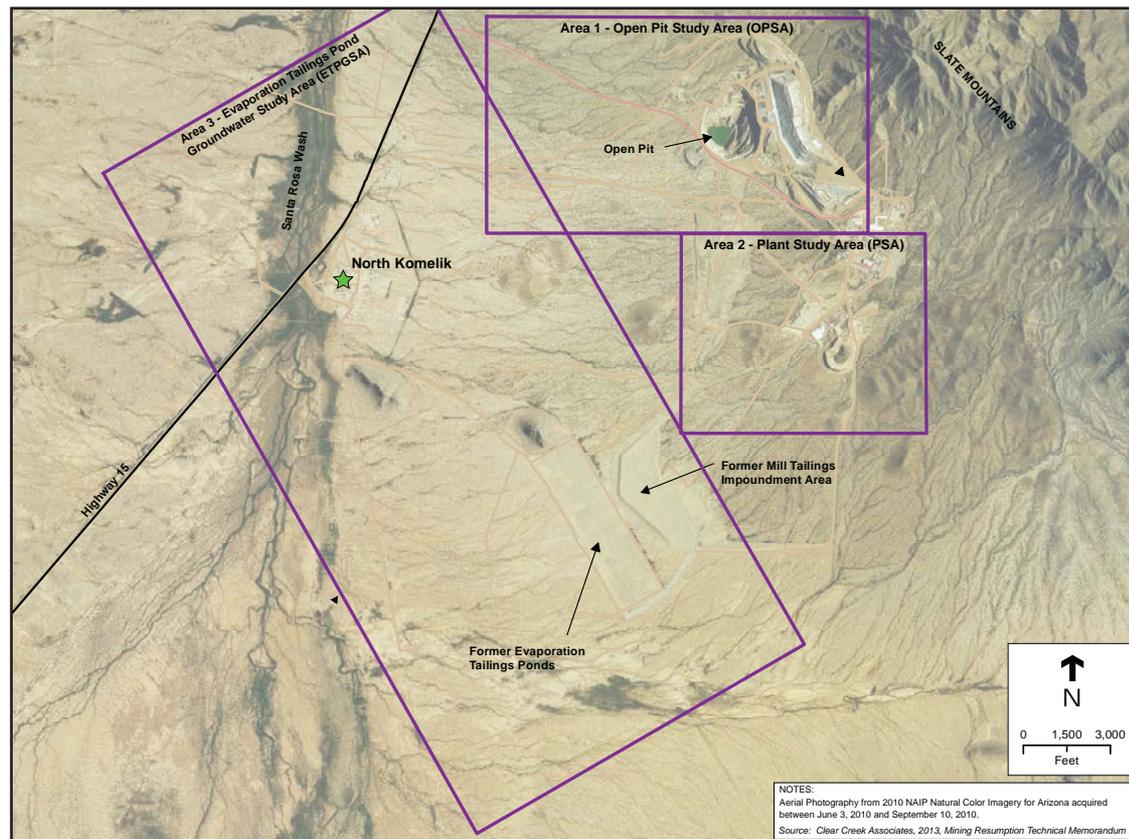


Figure 1. Map Showing Three Study Areas for Remedial Investigation

Record of Decision (ROD): The primary legal document at a site, which sets forth USEPA’s selected remedy as well as the factors that led to its selection.

Remedial Investigation and Feasibility Study (RI/FS): This is one step of the cleanup process. The remedial investigation is an in-depth study to determine the nature and extent of contamination at a Superfund site. The feasibility study is a description and analysis of potential cleanup alternatives, based on nine criteria. When these studies are combined into a concurrent effort, they are called an “RI/FS.”

Remedial Project Manager (RPM): The USEPA or State official responsible for overseeing on-site remedial action.

Remediation: Cleanup or other methods used to remove or contain a toxic spill or hazardous materials.

Remedy: A long-term action that stops or substantially reduces a release or threat of a release of hazardous substances.

Solvent Extraction and Electro-winning (SX-EW): This is a two-stage process in which mined rock is covered with a solvent solution to extract and concentrate the metals. The resulting solution is followed by an electro-winning step in which the metal is recovered in a highly pure form by deposition onto a cathode.

Stakeholder: Any organization, governmental entity, or individual that has a stake in or may be impacted by a Superfund cleanup.

Sulfate: Sulfate is a salt of a sulfuric acid. Salts, acid derivatives, and peroxides of sulfate are widely used in industry. Sulfate dissolves easily and occurs naturally in drinking water.

Uranium: Uranium is a silvery-white metallic chemical element with a symbol U and atomic number 92. Uranium is weakly radioactive and occurs naturally in soil, rock and water.

ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order on Consent	NCP	National Contingency Plan
BERA	Baseline Ecological Risk Assessment	NRDA	Natural Resources Damage Assessment
BHHRA	Baseline Human Health Risk Assessment	OPSA	Open Pit Study Area
BIA	U.S. Bureau of Indian Affairs	PA/SI	Preliminary Assessment and Site Inspection
BLM	U.S. Bureau of Land Management	PSA	Plant Study Area
CCCG	Cyprus Casa Grande Corporation	QA	Quality Assurance
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act	QAPP	Quality Assurance Project Plan
CFR	Code of Federal Regulations	QC	Quality Control
CIP	Community Involvement Plan	RI/FS	Remedial Investigation/Feasibility Study
CSM	Conceptual Site Model	SAP	Sampling and Analysis Plan
CTC	Cyprus Tohono Corporation	SLERA	Screening Level Ecological Risk Assessment
DOI	U.S. Department of Interior	SLHHRA	Screening Level Human Health Risk Assessment
EE/CA	Engineering Evaluation and Cost Analysis	SOD	Sif Oidak District
EIS	Environmental Impact Statement	SOW	Statement of Work
EPA	Environmental Protection Agency	SX	Solvent Extraction
EPO	Environmental Protection Office	TAP	Technical Assistance Plan
ETPGSA	Evaporation Tailings Ponds Groundwater Study Area	TON	Tohono O’odham Nation
EW	Electrowinning	TON EPO	Tohono O’odham Nation Environmental Protection Office
MPO	Mine Plan of Operations	TRI	Transarizona Resources, Inc.
		USEPA	U.S. Environmental Protection Agency
		USFWS	U.S. Fish & Wildlife Service

ATTACHMENT 1

Timeline of Mine Ownership and Operational History

Year	Activity	Year	Activity
1880s	Initial mining claims filed.	1979	Noranda Mining Company entered into new mining and business leases with the Tohono O’odham Nation (TON) and resumed full production of the oxide ore.
1914 – 1929	Mine site was actively explored and developed by various claim owners.	1983	Noranda, in conjunction with U.S. Bureau of Mines, implemented a solid in-situ leach research program (injected acidic solutions into deeper zones through injection wells to then collect leach solutions). Noranda also initiated a block cave in situ operation which continued until 1994.
1949	U.S. Bureau of Mines further explored oxidized copper ore body.	1987	Cyprus Casa Grande Corporation (CCGC) purchased mining rights from Noranda and entered into mining and business leases with the TON and the U.S. Bureau of Indian Affairs (BIA) for open pit mining, underground mining and in-situ leaching, as well as incidental mining operations
1956	Transarizona Resources, Inc. (TRI) was organized to mine and process oxidized copper ore. In coordination with U.S. Bureau of Mines, TRI developed a small open pit and a copper chloride process, and constructed a treatment plant to treat the ore.	1991 – 1994	Beginning in 1991, CCGC began evaluating the feasibility of open pit mining because in-situ leaching was being phased out. CCGC also collected baseline information for a Draft Environmental Impact Statement (EIS) prepared by BLM for the expansion of open-pit mining.
1966	Narragansett Wire Company, purchased the mine assets. Later the same year, El Paso Natural Gas Company purchased a 50% interest.	1993	U.S. Bureau of Land Management (BLM) issued an Environmental Assessment and Finding of No Significant Impact on CCGC’s Interim Mine Plan of Operations (MPO)
1967	Narragansett Wire was acquired by El Paso Natural Gas Company	June 1994	CCGC changed its name to Cyprus Tohono Corporation (CTC) at Nation’s request
1967 – 1973	Hecla/El Paso conducted extensive drilling of the major porphyry copper deposit.	1994	CTC began open pit mining in accordance with a 3-year interim mining plan.
1969	Hecla Mining Company acquired a 50% interest from El Paso and assumed operating direction of the mine site.	March 1995	CTC submitted current MPO for expanded open pit and heap leaching operations
1974	Hecla/El Paso constructed the mill tailings impoundment		
1975	Hecla/El Paso began production of the lower sulfide ore zone and upper oxide ore zone.		
1977	Hecla/El Paso moved site into a care and maintenance status when copper prices fell		
1978	Hecla/El Paso terminated its mining and business leases and the Nation assumed control of the mine site until it was leased again.		

ATTACHMENT 2

Timeline of Mine Ownership and Operational History

Year	Activity
1995	BLM completed a Final EIS, including evaluating alternatives and potential environmental effects, for the transition to open-pit mining and heap leaching
Aug 1995	BLM issued a Record of Decision approving the Final MPO and selecting Alternative B, with a Biological Opinion
1997	CTC suspended open-pit mining activities
1997 – 1999	CTC continued to leach ore from the heap leach pads.
1999	CTC moved mine site into “care and maintenance” status
2005	CTC resumed leaching ore from the heap leach pads (SX-EW operations)
2008	CTC suspended SX-EW operations
Jan 2009	CTC moved mine site into “care and maintenance” status
2010	CTC provided BLM Financial Assurance (\$51.8 million)



Photo courtesy of USEPA

Timeline of Environmental and Regulatory Activities

Year	Activity
1980	Noranda installed 4 groundwater monitor wells (EA-1 through EA-4) downgradient of the evaporation tailings ponds and mill tailings impoundment in Area 3
1982	Noranda installed 9 groundwater monitor wells (MS, MC and MN-series) to monitor the in-situ mining in Area 1 (OPSA)
1996	CTC installed 2 additional groundwater monitor wells (EA-5 and EA-6) in Area 3
July 2000	CTC completed a Hydro-geological and Geochemical Site Characterization Report
Nov 2000	CTC completed a Reclamation Plan for the evaporation ponds and immediate surrounding area
2000	CTC installed a 13.7 million gallon solution management and contingency pond system for containing process waste waters
Nov 2000	ATSDR, in consultation with the N. Komelik community, prepared a health consultation on sulfate in N. Komelik drinking water supply wells
2001 – 2009	CTC installed 50 CTC-series groundwater monitor wells: 10 wells in the OPSA; 38 wells in the ETPGSA; 2 wells in the PSA
2001	CTC implemented a Wildlife Management Plan to prevent birds and wildlife from using surface impoundments after 40 birds were found dead on the mine site
2001	CTC provided improved habitat for the lesser long-nosed bat through structural rehabilitation of the Mammon Mine
Feb 2002	CTC began providing bottled water to N. Komelik community

Timeline of Environmental and Regulatory Activities

Year	Activity	Year	Activity
Spring 2002	USFWS confirmed two sightings of cactus ferruginous pygmy owl near mill tailings pond	Sept 2009	USEPA identified mine site as a Superfund Alternative Site
April 2002	Nation requested USEPA complete a Preliminary Assessment/Site Inspection (PA/SI) on releases from the mine site	Sept 2009	USEPA and CTC signed an Administrative Settlement Agreement and Order on Consent (AOC) for CTC to complete a Remedial Investigation/Feasibility Study (RI/FS) at the site
Dec 2002	CTC installed 2 new drinking water supply wells and new pipeline for N. Komelik	2009	CTC moved mine site into “care and maintenance” status
2003	CTC installed 3 groundwater monitor wells (900-1, 1100-1, 1100-2) to monitor the in-situ operational area	2009 – 2011	CTC conducted RI of three study areas at the site
Aug 2003	USEPA completed a PA/SI Report	2011 – 2012	CTC conducted additional soil investigations in the PSA to evaluate organic and inorganic compounds in soils;
2004	CTC constructed a temporary water treatment plant for the acidic pit lake waters which treated all waters that were in the pit lake at that time	June – Aug 2011	CTC installed 6 new groundwater wells (PA-7 thru PA-12) in the PSA
Aug 2006	USEPA signed a Non-Time Critical Removal Action Memorandum to remove contaminated soils from the evaporation ponds and mill tailings	Dec 2012	CTC submitted Draft RI Report to USEPA
2006 – 2008	CTC conducted a series of electrical resistivity studies in the open pit study area	Sept 2013	ATSDR began an updated health consultation for the site
2008	CTC installed 6 groundwater monitor wells (PA-1 – PA-6) in the plant study area (PSA) to evaluate the hydrology and obtain data on water quality	Nov 2013	USEPA conducted community interviews for EPA Community Involvement Plan (CIP)
2007 – 2008	CTC moved contaminated soils as part of the USEPA-directed Removal Action to a newly constructed lined repository cell next to the existing heap leach piles	May – Dec 2013	USEPA submitted comments to CTC on 4 volumes of Draft RI Report
July 2009	DOI reached a settlement with CTC through the Natural Resources Damage and Restoration Program for injuries caused by releases at the site	Dec 2013	CTC submitted Mine Reopen Plan to USEPA and Nation
		June 2014	USEPA and Nation submitted comments to CTC on Mine Reopen Plan
		Oct – Dec 2014	USEPA is coordinating with CTC on next steps for beginning the FS

ATTACHMENT 3

Community Interview Questionnaire

Name: _____

Affiliation: _____

Date/Time: _____

History

1. How long have you lived/worked in this area?
2. Are you familiar with the Cyprus Tohono Mine Alternative Superfund Site?
 Yes No
How would you rate your familiarity on a scale of 1 – 10?
(1 = not at all familiar and 10 = very familiar)
3. How did you first become aware of contamination associated with the mine site?
4. What is your understanding of the contamination related to the mine site?

Concerns

5. Do you have concerns about this mine site? Please explain.
6. Do you know if anything has been done to address these concerns?

Level of Confidence

7. What has your experience been with EPA and any other government agencies or officials?

Community Communication and Involvement

8. How are you currently receiving information about the mine site?
9. Is the information clear and easy to understand?

10. How do you feel about the level of community involvement and outreach from the Project to the residences and businesses affected by the site?

11. Do you feel you have been kept adequately informed? If not, what can be done to change this?

12. What is the best way to provide information to you? (newsletters, fact sheets, community meetings, website, other) How frequently?

13. Have you participated in any public meetings and/or community advisory group meetings for the site?

Yes No

a. If no, why not?

b. If yes, do you have any suggestions for improvement?

14. In your opinion, what days of the week (and times) are best for community meetings?

15. Are you aware of the information repositories at the Sif Oidak District Council Building in North Komelik and the Tohono O’odham Environmental Protection Office in Sells?

Yes No

16. Are these locations convenient for the community?

17. Are you interested in being on the mailing list to receive information updates on environmental cleanup activities at the Cyprus Tohono Mine Alternative Superfund Site?

Yes No

If so, can we confirm your address (and e-mail address)?

18. Can you suggest any other individuals or groups that should be contacted for additional information or to be added to the mailing list?





Cyprus Tohono Mine Site
www.epa.gov/region9/cyprustohono

Community Involvement Plan
January 2015

