Proposed Tailings Storage Facility
Ray Mine: Pinal County, Arizona

EIS SCOPING SUMMARY DOCUMENT

February 20, 2014

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (Corps) is the lead federal agency responsible for the preparation of an environmental impact statement (EIS) for a tailings storage facility proposed by ASARCO LLC (Asarco) for the Ray Mine, which is an existing open pit copper mine located in Pinal County, Arizona about 10 miles northwest of the community of Kearny and approximately 65 miles southeast of the city of Phoenix.

This project is planned for an area approximately four miles southwest of the existing Elder Gulch tailings storage facility, which is currently being used by Asarco at the Ray Mine for tailings disposal. The remaining capacity of the existing Elder Gulch tailings storage facility is limited, and Asarco will require a new tailings storage facility to be operational within the next five to seven years to facilitate long-term operations. Asarco is proposing a facility that will provide capacity for the permanent storage of 750 million tons of tailings produced by ore processing at the existing on-site Ray Concentrator.

In March 2013, Asarco submitted a Section 404 permit application to the Corps for a proposed tailings storage facility in Ripsey Wash to comply with regulations promulgated under Section 404 of the Clean Water Act. This permit is required because the Corps considers the Ripsey Wash drainage and its ephemeral tributary washes to be "waters of the United States", which are within the Corps's jurisdiction.

With this submittal, the Corps decided to prepare an EIS document under the provisions of the National Environmental Policy Act (NEPA) to evaluate the potential impacts associated with issuing a 404 permit to Asarco for this tailings storage facility. As required by NEPA, the general public, businesses, special interest groups, and government agencies are provided the opportunity to review and comment on the proposed action. This review and comment process, as addressed by NEPA, is termed "scoping."

On August 26, 2013, a Notice of Intent (NOI) for the Corps to prepare an EIS was published in the *Federal Register*; this notice officially began the scoping period for the project. Written comments on the proposed action were solicited and received. Public scoping "open house" meetings were held in Kearny, Arizona on September 24, 2013 and in Apache Junction, Arizona on September 25, 2013.

Twenty-two comment letters were received during the scoping period. Although a court recorder was available at both public scoping "open house" meetings, none of the meeting attendees provided verbal comments to the court recorder.

The Corps also hosted several meetings with cooperating and interested agencies. On September 10, 2013, the Corps and Asarco met with representatives of the Environmental Protection Agency (EPA) at their offices in San Francisco, California. Then, on September 26, 2013, the Corps hosted a meeting at its Phoenix office for cooperating and interested agencies; at this meeting, there were representatives from Asarco, Bureau of Land Management (BLM), San Carlos Irrigation Project (SCIP), Arizona Department of Environmental Quality (DEQ), and the Arizona Department of Game and Fish. The purpose of these agency meetings was to describe the proposed project, outline the planned NEPA work, and solicit input about any issues or concerns that the agencies might have about the project.

The Corps allowed for a 60-day comment period, which was originally scheduled to close on October 28, 2013. However, with the October 2013 shut-down of portions of the federal government, the Corps extended the scoping comment period for another 21 days, until November 18, 2013, to allow for comment from federal agencies affected by the shut-down.

As a result of the comments received during scoping, and the internal scoping conducted by the Corps with cooperating and interested agencies, the Corps has identified the following issues to be addressed in the Ray Mine tailings storage facility EIS:

Aesthetics and Visual Resources: Identify project-related impacts to visual resources;

Air Quality and Climate: Identify project-related air quality impacts;

Cultural Resources: Identify cultural resources and conduct Native American consultation;

Cumulative Impacts: Address the cumulative impacts of the proposed project with other adjacent activities;

Geology, Geochemistry and Geotechnical: Identify the potential for acid rock drainage and metals transport from the proposed tailings storage facility. Address the stability of the proposed tailings storage facility and other associated structures;

Surface Water Hydrology: Identify any water quality and quantity impacts to Gila River as a result of the proposed tailings storage facility. Address possible impacts to Zelleweger Wash if up-drainage flows from Ripsey Wash are diverted into this wash;

Groundwater Hydrology: Identify any impacts to groundwater quality and hydrology within and surrounding the proposed tailings storage area;

Land Use: Identify land disturbance;

Noise: Identify noise impacts;

Public and Worker Health and Safety: Protect general public and worker health and safety;

Recreation: Identify impacts to recreational activities and opportunities;

Roads / Transportation: Address project construction and operations traffic impact;

Socioeconomics: Address the social, economic and lifestyle effects on residents in the local communities surrounding the Ray Mine;

Soils: Identify site soil resources and adequacy for reclamation;

Vegetation: Address project-related impacts to vegetation;

Waters of the U.S.: Address project-related impacts to waters of the U.S.; and,

Wildlife: Identify impacts to wildlife and wildlife habitats.

The draft EIS for this project is slated for public distribution in the autumn of 2014. With the release of the draft EIS, the Corps will once again solicit comment from the general public, government agencies, businesses, and special interest organizations. The Corps plans for the release of the final EIS in 2015.

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1.0 INTRODUCTION

The U.S Army Corps of Engineers (Corps) is the lead federal agency considering the proposed tailings[1] storage facility that Asarco LLC (Asarco) has proposed to construct and operate at the Ray Mine, which is an existing open pit copper mine located in Pinal County, Arizona about 10 miles northwest of the community of Kearny and approximately 65 miles southeast of the city of Phoenix.

The new tailings storage facility site is proposed for Ripsey Wash and is approximately four miles southwest of the existing Elder Gulch tailings storage facility, which is currently being used at the Ray Mine for tailings disposal. The remaining capacity of the existing Elder Gulch tailings storage facility is limited, and Asarco will require a new tailings storage facility to be operational within the next five to seven years to facilitate long-term operations. Asarco is proposing a facility that will provide for the permanent storage capacity of 750 million tons of tailings produced by ore processing at the existing, on-site Ray Concentrator.

In March 2013, Asarco submitted a Section 404 permit application to the Corps for a proposed tailings storage facility in Ripsey Wash to comply with regulations promulgated under Section 404 of the Clean Water Act. This permit is required because the Corps considers the Ripsey Wash drainage and its ephemeral tributary washes to be "waters of the United States", which are within the Corps' jurisdiction.

With this permit submittal, the Corps decided to prepare an environmental impact statement (EIS) to comply with the National Environmental Policy Act (NEPA). The Corps is the lead agency for the EIS preparation work. The Environmental Protection Agency (EPA), the Bureau of Land Management (BLM), and the San Carlos Irrigation Project (SCIP) are formal NEPA cooperating agencies on this EIS.

As required by NEPA, the general public, businesses, special interest groups, and government agencies are provided the opportunity to review and comment on the proposed action. This review and comment process, as addressed by NEPA, is termed "scoping".

Scoping has four basic objectives:

(1) Identify project-related concerns;
(2) Facilitate determination of significant issues;
(3) Establish the level of evaluation for various issues; and
(4) Assist in the selection of alternatives to be evaluated.

On August 26, 2013, the Corps announced their intent in the *Federal Register* to prepare an EIS that would analyze the proposed Ripsey Wash tailings storage facility. The Corps allowed for a 60-day comment period, which was originally scheduled to close on October 28, 2013. However, with the October 2013 shut-down of portions of the federal government, the Corps extended the scoping comment period for another 21 days, until November 18, 2013.

In addition to the notice in the *Federal Register*, the Corps also placed public notices in the local newspapers (*East Valley Tribune*, *Arizona Silver Belt*, and *Copper Area News*) on September 4, 11 and 18, 2013. These notices announced the Corps plans to prepare an EIS for Asarco's proposed tailings storage

[1] Tailings are the finely-ground rock material produced by the milling process, which separates copper-bearing minerals from non-economic material. Tailings should not be confused with overburden or development rock (sometimes referred to by miners as waste rock), which is non-mineralized or uneconomic mineralized material excavated in order to access the copper-bearing ore that is mined and processed to generate a profit.

facility, along with the time and place for the September public scoping meetings where the public and interested parties could learn more about the project and provide comments to the Corps.

The Corps held two public scoping "open house" meetings to inform the public and interested parties on the proposed project and to solicit comments. These meetings were held on the evening of September 24, 2013, at the Ray Elementary School in Kearny, Arizona, and on the evening of September 25, 2013 at the Performing Arts Center at the Apache Junction High School in Apache Junction, Arizona.

The Corps met with EPA at its offices in San Francisco (California) on September 10, 2013 to discuss the project and solicit input. The Corps also hosted an informational meeting on September 26, 2013 at its Phoenix office for agencies interested in Asarco's proposal and to obtain input on the project and proposed EIS work.

The Corps received a total of 22 letters and emails during the scoping process. Commenters included the EPA, the USDA Forest Service, the Arizona Department of Game and Fish, Arizona Trail Association, Sierra Club, Gila River Indian Community, White Mountain Apache Tribe, Tohono O'Odham Nation, Hopi Tribe, and numerous individuals.

The Corps will continue to welcome any comments and questions on the EIS process. Inquiries should be made to:

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2.0 PURPOSE OF THE DOCUMENT

This Scoping Document has been prepared to:

(1) Describe public and agency scoping activities;
(2) Briefly describe the proposed actions;
(3) Identify government involvement;
(4) Describe the role of the public in the EIS preparation process;
(5) Identify issues and concerns;
(6) Describe the proposed process for development of the alternatives which will be eventually discussed in the draft EIS; and,
(7) Inform the public and government officials regarding the project.

3.0 PROPOSED ACTION

Asarco owns and operates the Ray Mine, which is an open pit copper mine located in Pinal County, Arizona. Mining has been conducted in this area since the 1880s.

Asarco's Ray Operations employ nearly 870 people and consist of a 250,000 ton per day open pit mine with a 30,000 ton per day concentrator and a 103 million pound per year solvent extraction-electrowinning (SX-EW) facility. Cathode copper produced in the SX-EW operation is shipped to the Asarco Amarillo (Texas) Refinery and other customers. A local railroad, the Copper Basin Railway, transports copper concentrates from the Ray Mine to Asarco's Hayden facility, located approximately 17 miles southeast of the Ray Mine, where the concentrates are processed in Asarco's smelter.

The Ray Mine has in-place copper resources that will facilitate mining and milling operations well into the future, under current economic conditions. However, the remaining capacity of Asarco's existing tailings storage facility at the Ray Mine is limited, and the company will require a new tailings storage facility to be operational within the next five to seven years to facilitate long-term operations.

Asarco will continue to use the Ray Concentrator and the conventional slurry method of tailings disposal technique at the Ray Mine. The proposed facility would meet Asarco management direction to design and permit a long-term tailings facility capable of handling 750 million tons of tailings.

Tailings would be pumped to the new Ripsey Wash facility from an existing pumping station at the Ray Mine through a contained slurry pipeline. The tailings slurry and water return pipelines would be high density polyethylene (HDPE) or high-strength steel, with welded joints to ensure long-term operational integrity, and the pipelines would be installed (buried) in a channel that would parallel the Florence-Kelvin Highway.

Asarco would build a bridge to convey the pipelines over the Gila River; this bridge would be adjacent to a new road bridge currently planned for construction as a separate project by Pinal County for the Florence-Kelvin Highway. The tailings slurry and water return pipelines would be sleeved across the bridge within a larger diameter pipe (pipes-in-pipe) as protection in the event of a pipeline break. Additional break protection would be provided by building a lined drain-downside pond, at the low point of the tailings pipeline routing (north of the Gila River and just east of the Florence-Kelvin Highway), to contain tailings from the pipeline should such an event occur.

As part of pre-tailings disposal activities, Asarco would construct a starter dam for the tailings storage facility near where the Florence-Kelvin Highway currently crosses the Ripsey Wash. Material for the starter dam would come from alluvial material within the footprint of the tailings storage facility. Site preparation for this dam would involve excavation down to bedrock and the installation of a seepage cut-off wall and a lined seepage pond to collect any water that might infiltrate through or under the starter dam. Any water captured in the seepage pond would be returned to the tailings storage facility and recycled to the Ray Concentrator.

Asarco would use an upstream method of tailings disposal, which is the same procedure that is currently employed at the Ray Mine, and the Ripsey Wash tailings facility would be designed and operated as a zero-discharge facility for surface water runoff.

Tailings would be discharged from spigots that surround the perimeter of the tailings storage facility and a tailings "beach" would be created using thin-layer, sub-aerial deposition techniques. The tailings discharge operations would focus on directing water to the rear of the facility to allow a pool of water to

form from which water can be reclaimed and pumped back to the Ray Concentrator. As tailings beaches are formed, spigot discharges would progress around the perimeter of the facility, and this action would promote drying and consolidation of the tailings.

Upstream of the tailings storage facility, Asarco would construct diversion channels and a stormwater detention pond capable of controlling the volume and peak flow from a 500-year, 24-hour storm. This work would prevent runoff from entering the tailings facility, and runoff water in the upper reaches of Ripsey Wash water would be routed to the Zelleweger Wash, located immediately to the west of Ripsey Wash. Another diversion channel would be constructed on the east side of the facility in order to route flows from those areas around the facility and convey them to an unnamed tributary to the Gila River.

As part of the construction for the tailings storage facility, Asarco would relocate approximately two miles of the Florence-Kelvin Highway and the existing SCIP 69 kV electric transmission line to the north of the proposed tailings storage facility.

Asarco hopes to begin construction work on a new facility and the associated infrastructure (pipelines, Gila River bridge, highway and powerline relocation) in the last quarter of 2015 to prepare the site for tailings placement by the end of 2016.

Asarco estimates that tailings disposal operations would continue for the foreseeable future, perhaps up to 50 years. The longevity estimate is based on the current knowledge of the Ray Mine mineral resources, the positive forecast for the copper market, the historic success in replacing reserves over the past century, and the promise of identifying and defining additional economic resources at the site through continuing exploration activities. The eventual operation and longevity of the Ray Mine involves various factors, including the actual mineable reserves, mining rates, market conditions, revenues, costs, expected returns to Asarco, and the associated economic, technical, environmental, regulatory, and political risks that face the mining business.

4.0 NATIONAL ENVIRONMENTAL POLICY ACT

Congress passed the National Environmental Policy Act (NEPA) in 1969 as the “National Charter for the Protection of the Environment” (40 CFR 1500.1). Corps permitting activities are subject to NEPA.

NEPA is “intended to help public officials make decisions that are based on an understanding of environmental consequences”. Any project requiring a permit from a federal agency, must meet NEPA.

There are three levels of project analysis available to deciding officials:

(1) Categorical Exclusions;
(2) Environmental Assessments; and,
(3) Environmental Impact Statements.

Categorical exclusions (CE) are used for routine projects with little risk of environmental effects, and in some emergency situations. Environmental assessments (EA) are used to determine if a proposed project may have significant environmental effects. If the significance finding in an EA is positive, an environmental impact statement (EIS) must be prepared.

The Corps determined the proposed tailings storage facility might have significant environmental effects. Therefore, the Corps decided to prepare an EIS under the NEPA guidelines.

5.0 THE EIS PROCESS

The environmental analysis actions leading to a final EIS are prescribed by NEPA and consist of the following:

- Scoping;
- Analysis Actions;
- Documentation; and,
- Implementation, Mitigation and Monitoring.

5.1 SCOPING

The scoping process (including the public scoping meetings) is part of the NEPA process and provides an opportunity for the public and cooperating and interested agencies to comment on the proposed project. The Corps will consider these comments and use them to help establish the scope of the EIS analysis and the level of evaluation needed to address the comments.

Elements of scoping include the following:

- The description of the proposed action including the nature of the decision to be made;
- The collection of data and information that addresses the project and general area;
- The initiation of public participation in the EIS process;
- The determination of the type and extent of analysis to be used in the preparation of the draft and final EIS documents;
- The identification and initiation of contact with involved government agencies;
- The plans for the preparation of the draft and final EIS, including selection of a formal organization for the document and the development of a tentative schedule for EIS completion and publication;
- The narrowing of the scope of the EIS to significant issues; and,
- The assignment of required specialists and tasks to address environmental issues and concerns.

5.2 ANALYSIS ACTIONS

Based on the results of the scoping efforts, the following analysis process will be used to assess the nature and significance of the physical, biological, and socioeconomic effects of the proposal and its reasonable alternatives.

5.2.1 Collection and Interpretation of Baseline/Background Information

Data collection and interpretation will be focused on the present and expected physical, biological, and socioeconomic conditions affecting or affected by the proposal. The Corps will review and analyze environmental data and information to ensure adequacy and accuracy.

5.2.2 Development of Alternatives

The alternatives developed for the project will respond to important issues identified in the scoping process, as well as the purpose and need for the project. The no action alternative will provide a baseline with which to compare the effects of the “action” alternatives. The description of the existing environment and the current activities will form the no action alternative. The impacts of each action alternative will be addressed and mitigating measures to minimize environmental impacts will be identified.

5.2.3 Estimate of Effects of Each Alternative

Direct, indirect, and cumulative effects of the proposed actions must be considered. Effects will be described in terms of changes in the physical, biological, and socioeconomic environment. These changes will be further described by the magnitude, duration, frequency, reversibility, and significance of the effects. Where adverse environmental impacts are identified, appropriate mitigation measures will be considered and evaluated.

5.2.4 Evaluation of Alternatives

Each alternative will be compared on the basis of its impacts on the environment. This evaluation will provide a means of identifying the preferred alternative. Evaluation methods may include the use of environmental controls and operational technology as mitigation measures and management constraints to the proposed action.

To comply with the EPA's 404(b)(1) Guidelines (40 CFR Part 230), the alternatives will also be assessed and compared in accordance with these guidelines, which is a requirement for 404 permits. This assessment will be provided as a separate appendix to the EIS and incorporated into the alternatives discussion in the EIS.

5.3 DOCUMENTATION

The Corps will document the EIS process by maintaining an administrative record. Documentation will include the Notice of Intent to Prepare the EIS (as published in the *Federal Register*), this Scoping Document, Notices of Availability for the draft and final EIS, the draft and final EIS documents the Record of Decision, and supporting reference materials.

5.4 IMPLEMENTATION, MITIGATION AND MONITORING

The Corps will review input and comments from the public, cooperating agencies, and other interested federal, state, and local government authorities prior to making a final decision on the permitting action.

This EIS process will explore the alternatives and discuss their relative environmental impacts. Often, because of this analysis, a project proponent may elect to modify their proposal during the EIS process in order to respond to certain concerns. The Corps and other federal agencies will consider this EIS when specific approvals and permits are being considered and may attach additional approval conditions or stipulations designated to further mitigate possible environmental impacts.

Environmental monitoring programs may be developed and/or stipulated to respond to site-specific conditions. An overview of such programs will be described in the EIS. The construction, operation and closure of the tailings storage facility (if authorized) would be monitored by various agencies to ensure that environmental safeguards are implemented and maintained.

6.0 PUBLIC'S ROLE IN THE PROCESS

Public involvement and scrutiny are important parts of the scoping and the environmental analysis process. A key component of NEPA is the opportunity for the public to actively participate in the decision making process and communicate concerns so they can be addressed in the EIS. In addition, specialists from the Corps' third party contractor, along with other interested federal, state and local agencies, will participate to identify the impacts and benefits, which occur due to the project.

To maintain public participation throughout the project, the Corps will place notices in local papers, conduct public meetings, and work with federal, state, local, and tribal government entities. Written comments received during the scoping period, August 26, 2013 through November 18, 2013, were combined to identify the concerns and issues that will be used to develop the draft EIS.

7.0 ROLE OF GOVERNMENT AGENCIES AND PRIVATE ENTITIES

The EIS development is based on legal requirements and the involvement of the Corps in the analysis and preparation of the EIS documents and completion of related actions associated with the 404 permitting process. EIS responsibilities are characterized by the following interrelated entities:

- Lead Agency;
- Cooperating Agencies;
- Project Proponent;
- Independent Third Party Contractor;
- Interested Agencies; and
- Tribal Governments.

7.1 LEAD AGENCY

The Corps is the lead agency under NEPA responsible for the preparation of this EIS. The Corps has assigned Mr. Michael Langley of the Los Angeles District Regulatory Division, Arizona Branch, as the EIS Project Manager. Mr. Langley is located at the Corps Arizona-Nevada Area Office in Phoenix, Arizona. His responsibilities include coordinating various aspects of the EIS effort including study design, public involvement, data analysis, and EIS preparation. He is the liaison between the Corps and Asarco, cooperating or interested agencies, and the third-party contractor.

7.2 COOPERATING AGENCIES

At the request or invitation of the Corps, other government agencies may decide to participate in the preparation and review of the EIS documents. This participation is based upon legal requirements, including special expertise and agency jurisdiction by law. Cooperating agencies will participate not only as reviewers of the draft and final EIS documents but also throughout the analysis process to ensure that relevant issues are addressed.

The following agencies have agreed to serve as formal cooperating agencies on this project for the reasons indicated:

- Bureau of Land Management. BLM-managed lands would be affected by the project and a Right-of-Way Grant is required for one part of the project.

- Environmental Protection Agency. EPA has dual roles in this project as a reviewer of the adequacy of the EIS and as a participant in the Section 404 permitting process.
- Bureau of Indian Affairs (San Carlos Irrigation Project). The San Carlos Irrigation Project has an electric transmission line that would have to be relocated as part of this project.

To date, no other federal agencies have indicated any interest in becoming a formal cooperating agency as delineated under NEPA regulations and protocol for this EIS.

7.3 PROJECT PROPONENT

Asarco is the project proponent and owns and operates the Ray Mine. Asarco is also the 404 permit applicant.

Asarco has prepared project plans for the proposed tailings storage facility and provided environmental background information for this site. Asarco has a number of personnel and consultants working on the engineering, environmental, and permitting aspects of their planned operations. Asarco will also be responsible for supplying any additional background and baseline information as may be required to address the environmental impacts of their proposal and possible alternatives.

Asarco is funding the third-party contractor to assist the Corps in preparation of the EIS and related documents. The Corps has direct control and supervision of the third-party contractor.

7.4 INDEPENDENT THIRD-PARTY CONTRACTOR

The Corps has retained Czarnowsky Inc., a contractor experienced in NEPA and EIS preparation. This consultant has NEPA management personnel and technical resource specialists who will assist the Corps in analyzing data, estimating effects, identifying and evaluating alternatives, formulating mitigation measures, and drafting technical sections of the draft and final EIS documents.

7.5 INTERESTED AGENCIES

The Corps has been in contact with other federal, state, and local agencies regarding the proposed tailings storage facility. The agencies are as follows:

- United States Department of Agriculture, Forest Service;
- United States Department of Interior, Fish and Wildlife Service;
- Arizona Department of Environmental Quality;
- Arizona Department of Game and Fish;
- Arizona Department of State Lands;
- Arizona Department of State Parks;
- Arizona State Historic Preservation Office; and,
- Pinal County.

The participation of these agencies in the EIS will be based upon their interest, their legal requirements involved with potential future permitting responsibilities, and their expertise. The Corps will submit a draft EIS to these agencies to solicit their comments and to ensure that all relevant issues are addressed.

7.6 TRIBAL GOVERNMENTS

Because the 404 permitting process is a federal undertaking, the Corps, under the National Historic Preservation Act, is required to consult with Native American Tribes that may have an interest in this project. The Corps has directly contacted 14 tribal government entities during scoping to seek their input on archaeological resources, including traditional cultural properties that may be impacted by the proposed project. Further consultation may be required during the EIS process.

8.0 SYNOPSIS OF PUBLIC SCOPING COMMENTS

As required by NEPA (40 CFR 1503), the general public, interested parties and government agencies were provided the opportunity to comment on the proposed Ripsey Wash tailings storage facility.

The formal scoping process ended on November 18, 2013. The Corps held public "open house" scoping meetings in Kearny, Arizona on September 24, 2013 and in Apache Junction, Arizona on September 25, 2013, which allowed the general public and interested agencies the opportunity to better understand the possible action, provide the Corps with verbal comments, and ask questions. A total of 24 people attended the Kearny scoping meeting, and 15 people attended the Apache Junction scoping meeting. No one who attended the scoping meetings gave verbal comments to the court recorder who was present at both meetings and made available to attendees.

This section is structured to provide a synopsis of the comments and concerns voiced. Comments from the scoping letters were categorized under the following major headings.

- Aesthetics and Visual Resources
- Air Quality
- Alternatives
- Bonding and Performance Securities
- Closure and Reclamation
- Connected Actions
- Cultural Resources and Native American Consultation
- Cumulative impacts
- Hydrology
- Geochemistry
- Geotechnical Considerations
- Land Use
- Miscellaneous
- Mitigation
- Monitoring
- Noise
- Public and Worker Safety and Health (Accidents and Spills)
- Recreation
- Regulatory Compliance
- Socioeconomics
- Soils
- Transportation
- Vegetation
- Waters of U.S.
- Wildlife

Twenty-two letters and/or emails were received during the formal scoping process, with approximately 250 individual comments noted. Many comments contained a string of concerns or issues that could have been classified under any number of categories, thus making it difficult to positively assign them to any single category. But, the Corps believes it captured the intent of the comments and, in several places, included those comments under multiple categories.

The following synopsis has been prepared with the intent of capturing the nature of the comments received by the Corps for this project. For the complete partition of the written comments, see ***Appendix A, Comment Content Analysis.***

8.1 AESTHETICS AND VISUAL RESOURCES

The Corps only received one written comment regarding this topic. The commenter wrote,

- "The National Environmental Policy Act study needs to examine the visual impacts of the dump (tailings storage facility) to popular hiking areas in the Spine across the Gila and also from higher elevation areas in the White Canyon Wilderness."

8.2 AIR QUALITY

The comments received on air quality were segregated into three main areas: (1) concern over fugitive dust, (2) compliance with National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD), and (3) climate change.

Several commenters were concerned about dust. One commenter from the nearby community of Riverside wrote,

- "I have watched as the dust from the Ray Mine pit has become a real problem with our quality of life. I am concerned with having another source of dust on the other side of us."
- Another commenter wrote: "Dust is a continuous problem for the surrounding area and as of yet they are not able to control the problem."
- A third commenter on was concerned about the effects of dust on wildlife: "Any potential for fugitive dust, especially dust that contains toxins, abrasives or otherwise ecologically disruptive compound should be analyzed for the potential to impact wildlife, especially amphibians and mollusks, and all possible measures to prevent such pollution should be prescribed in the EIS."

One commenter stated:

- "The EIS should also discuss the National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD) increments applicable to air quality in the project area." And, "the EIS should identify all Class I PSD areas located within 100 kilometers of the proposed project site" and continued with the following comment, "potential impacts to Class I PSD areas, including visibility, should be discussed."

Several commenters were concerned about climate change.

- The EIS should "discuss the potential impacts of climate change on the project."
- "Climate change is upon us, industrial pollution and its accompanying diseases and conditions are everywhere, and untold species undergo extinction every single day. What more do you need to know in order to begin acting in the best interest of life on Earth? Do what's right and just deny this proposal."

8.3 ALTERNATIVES

The Corps received numerous comments regarding possible project alternatives.

Several commenters simply stated that the EIS must address alternatives. Here's a sampling of those comments:

- "As mandated by NEPA, the draft EIS should include all reasonable alternatives, an evaluation of those alternatives, and mitigation measures to minimize disturbance and impact of the project."
- "The EIS needs to fully examine all alternatives to the Ripsey Wash site to avoid excessive mining sprawl and instead maintain a minimum footprint that still remains a safe and workable option. Focusing tailings on already disturbed areas should be considered."
- "The EIS should rigorously explore and objectively evaluate all reasonable alternatives, including reasonable alternatives not within the jurisdiction of your agency (the Corps)."

Some commenters conveyed their opinion about how alternatives should be addressed in consideration of Corps responsibilities:

- "The Draft EIS should include the 404(b)(1) Alternatives Analysis in order to demonstrate that the project is avoiding and minimizing damage to Waters of the U.S. to the maximum extent practicable and is in compliance with the (Corps) Guidelines. The discussion should demonstrate that relatively less impactful alternatives are not practicable, as defined in the (Corps) Guidelines."
- "Given the fragility and limited amount of waters of the U.S. in Arizona, the least environmentally damaging practicable alternative should minimize and consolidate mining impacts as much as possible."

Other commenters expressed opinions about the actual alternatives to be considered:

- "Reasonable alternatives could include but are not necessarily limited to, alternative sites, alternative designs or method (e.g., dry stack tailings), smaller projects, and reconfigured projects."
- "We recommend the potential dry stack tailings methods, infrastructure needs, and sites be thoroughly evaluated in the alternatives analysis and EIS."
- "I understand the need for Asarco to find places for tailings, but I hope that something can be found that does not obliterate historic sites."
- "These alternatives could include some of the options noted on one of the posters at the public scoping meeting, such as the Hackberry Gulch option or the East Dam option, but could include other options that were not considered by the applicant prior to the public meeting. There is a lot of land in the vicinity that has already been disturbed by mining activities, and these lands should be full considered as site alternatives in the EIS."
- "How come they (Asarco) can't move its tailings to west so Arizona Trail is in tact (sic)."
- "Why not keep the ugly tailings in one area? There is not one mine reclamation area that we would call beautiful or appealing, would you?"
- "Why a wash? Not just land?"

8.4 BONDING AND PERFORMANCE SECURITIES

Several commenters asked a similar question:

- "Do you plan to require financial assurance on this project?"

Another commenter stated:

- "EIS should identify the agency that would hold the bond or other financial instrument, and discuss how the financial assurance could be modified during or after operations if unanticipated temporary, long-term, or perpetual treatment and/or remediation needs are discovered in the future."
- "EIS should describe bonding requirements and other measures that State or Federal regulators have in place to ensure funds would immediately be available should the mine operator or its insurer be unable to fund reclamation or closure activities."

One commenter stated:

- "EIS should attempt a prediction of the environmental impacts and cleanup costs if massive structural failure of the embankment or diversion channels were to occur."

8.5 CLOSURE AND RECLAMATION

A number of comments were received on closure and reclamation. The principal focus of all the comments can be summed with the remarks received in this comment:

- "Reclamation and closure of the tailings dump should be thoroughly discussed in the NEPA document showing how the site could be safely shut down and revegetated and again how water resources will be protected."

8.6 CONNECTED ACTIONS

Several comments were received requesting the Corps to consider connected actions in the EIS:

- "The EIS should clearly identify connected actions and the rationale behind the analysis of those connected actions in the EIS, or excluding analysis of those actions……the Ray Mine, and all actions connected to the Ray Mine, should be considered connected actions."

- "The EIS should discuss connected actions, including actions that automatically trigger other actions which may require environmental impact statements, cannot or will not proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for their justification."

- "Connected actions that should be addressed in the EIS include, but are not necessarily limited to, road relocations; rights-of-way for roads, pipelines, and power lines: and the Ray Land Exchange currently being evaluated in a Bureau of Land Management (BLM) EIS."

8.7 CULTURAL RESOURCES AND NATIVE AMERICAN CONSULTATION

Several comments stressed the importance of cultural resources and can be summarized with the following comment:

- "The area should be carefully studied for cultural sites and the results detailed in the EIS."

One commenter highlighted:

- "The historic bridge needs left." This commenter was referring to the Florence-Kelvin highway bridge over the Gila River.

Another commenter provided information:

- About the "old Globe to Florence stagecoach road" that is found in this area. This commenter also provided a newspaper article about "the place where Sheriff Glen Reynolds and Deputy Holmes were attacked and murdered by Apache prisoners on November 2, 1889, as they were enroute (sic) to Casa Grande."

Several commenters included remarks about Native American consultation:

- "Tribal interests should be fully evaluated and considered. The Hopi Tribe has repeatedly expressed concerns about the mine expansion and impacts on cultural sites. The Corps must consult with the Hopi and other affected tribes related to this project."

- "The EIS should discuss the Corps' formal government-to-government consultation with all Native American tribal governments that could be potentially affected by the proposed project or may have resources (e.g., traditional cultural properties, groundwater resources) that could be affected."

Another commenter had a concern:

- "The lack of Treatment Plans for the sites which are going to be impacted, especially if human remains were to be encountered."

8.8 CUMULATIVE IMPACTS

There were several comments that stated:

- The Corps "must consider cumulative impacts as well as direct and indirect impacts of the proposed project."

One commenter wrote:

- "The EIS should describe the potential cumulative impacts associated with the proposed project and alternatives in light of other past, present, and reasonably foreseeable future actions, including the existing Ray Mine Complex and Hayden smelter, as well as the proposed Ray Land Exchange."
- "The EIS should provide a description of the cumulative effects study areas for each resource that could be affected by the proposed project."
- "The EIS should describe the methodology used to assess cumulative impacts."

The Corps also received a number of individual comments regarding cumulative impacts for specific resources, such as air quality, recreation, waters of the U.S., wildlife and aquatic life in the Gila River.

8.9 GEOCHEMISTRY

Several commenters wanted to know about the geochemistry of the tailings materials.
One commenter wrote:

- "Thoroughly describe the geochemistry of the tailings that will be stored in the proposed tailings facility and discuss the methods used to characterize them."

Another commenter stated:

- "All mining waste is toxic and is the leading hazardous waste in the United States and in Arizona – the mines consistently top the list on the Toxic Release Inventory. The EIS needs to discuss

the amount of heavy metals and radioactive waste in the tailings and the likelihood of acid mine drainage if leaks occur."

8.10 GEOTECHNICAL CONSIDERATIONS

Several comments were received about the need for overall stability and safety of the proposed tailings storage facility. Most of the comments on stability and safety were concerned about who would take care of the clean-up for a tailings failure and whether the project would have a bond or some type of financial security in place in the event of a structural failure. See ***Section 8.4, Bonding and Performance Securities.***

8.11 HYDROLOGY

The Corps received numerous comments on hydrology.

One commenter wrote a comprehensive discourse on hydrology:

- "The EIS should provide a complete hydrologic characterization of the project vicinity, and describe the cumulative effects study area for surface water and groundwater form this project, describing all existing water resources and baseline groundwater and surface water quality, quantity, flow regimes, and groundwater adjudication. Information on groundwater properties and groundwater/surface water connections (e.g., springs, seeps, recharge areas) are needed to identify and assess potential impacts to water resources and risks to receptors of contaminants. The EIS should discuss all direct, indirect, and cumulative impacts to surface water and groundwater quality and quantity form the proposed project and alternatives both during operations and after closure. Effective chemical and/or physical controls to prevent uncontrolled seepage through the tailings should be thoroughly analyzed in the EIS. The EIS should describe all potential project discharges, seepage, temporary ponding, diversions, and groundwater pumping, as well as the potential effects of these activities on water rights, beneficial uses, and wildlife. The EIS should completely describe the current drainage the current drainage patterns in the project area, as well as the projected drainage patterns under each alternative, both during operations and after closure. Include hydrologic and topographic maps of the project area and cumulative impact area. This discussion should address potential effects of the project on erosion potential and sedimentation. Identify the 100-year flood plains in the project area. Discuss the potential for runoff to transport sediment or contaminants from disturbed areas to any surface waters."

Other commenters were concerned about the design storm events to be used for the tailings storage facility and diversion structures:

- "It (the tailings storage facility) will permanently affect the upper reaches of Ripsey (Wash) as they (Asarco) remake and redirect flows from runoff. The EIS should examine in detail the downstream embankment structure, the seepage trenches and liner to ensure protection of Gila River. Similarly, the diversion channels should be studied to see if they will withstand the 500-year 24-hour storm event as required."

- "The 500 year storm comes every 2 years these days. I do not believe the seepage collection is sufficient."

- "In the past we have had several days of heavy rains, not just 24 hrs. The 500 year/24 hour rain scenario is not enough. The upper drainage into Ripsey (Wash) is a huge area and this 500

year/24 hour option would appear not to be enough of a guarantee that the tailings dam would not rail and pour thousands of tons of waste and pollution directly into the Gila River."

There were numerous comments on water quality; these are some examples:

- "Discuss the potential for and effects of movement of any contaminated surface water to the subsurface, and any contaminated subsurface water to the surface."

- "Discuss the potential for contamination of meteoric water that contacts tailings and other project facilities."

- "The project will fill a major tributary to the Gila River with tailings which may leach toxins into the groundwater and release toxins into the Gils (River) via stormwater runoff. The (Arizona) Department (Game and Fish) is particularly concerned with impacts to groundwater, and impacts to the Gila (River), including releases of toxins into the river which may kill or injure aquatic wildlife, or which may harm invertebrates, creating cascading effects in the ecosystem, effectively degrading it for the species dependent on that ecosystem. The EIS should address the potential for the project to pollute waters that support wildlife, including aquatic species, amphibians, and drinking water for terrestrial and avian species and prescribe all possible measure to prevent such pollution."

- "The EIS should describe the applicable permits and state-adopted, EPA-approved water quality standards, including beneficial uses, in the project area, and discuss each alternative's compliance with the standards and permits."

- "The EIS should discuss how the project would be designed with best available demonstrated control technology (BADCT) for purposes of meeting Arizona groundwater standards included in its Aquifer Protection Program (APP) permit."

- "We have seen the test wells that the mine has drilled to monitor water quality. I would like to know who will do the testing?"

- "The hazardous material uses precious water, which can be used for much needed drinking, not for the contamination from this mine."

Several commenters asked about the impacts to hydrology after project closure. :

- "The document should evaluate the impacts of long-term or perpetual ground water pumping and any measures that can be implemented to protect aquifers after the tailings dump is closed."
- "The EIS should discuss the potential for long-term or perpetual drain down of the tailings and how this water would be treated and discharged"
- "The EIS should assess the effectiveness of various cap/cover systems in reducing meteoric water flow through the tailings."
- "Describe the post-closure water resource recovery."

8.12 LAND USE

There were several comments on land use:

- "The EIS should describe any special (land) uses, such as livestock grazing or recreation, which comprise on-going activities in the vicinity of all site alternatives, and discuss how these activities could potentially be affected by the proposed project."

- "The EIS should discuss how the project rights-of-way for the proposed action and alternative tailings sites would be consistent with BLM's Resource Management Plan and any decisions made related to the Ray Land Exchange EIS."

- "The amount of State Land being sought by Asarco is far in excess of what is required for this particular project, leaving the possibility of a greatly enlarged dump in the future."

- "Protect the AZT (Arizona Trail) from future relocation."

8.13 MONITORING

Numerous comments on regulatory compliance were submitted. The overarching comment can be summed in this comment:

- "The EIS should describe the implementation, performance, and effectiveness of monitoring procedures that would be required, enforcement mechanisms available to State or Federal regulators should the mine operator fail to properly follow the plan, and triggers for follow-up action."

A sampling of the comments on monitoring follows:

- On air quality: "The EIS should describe all air quality monitoring that has been conducted in the project vicinity, provide the results, and discuss how this information is used in emissions modeling for the project," and "The EIS should discuss whether and how air quality monitoring would be implemented to ensure project compliance with all applicable air quality standards and permits."

- On hydrology: "The EIS should describe procedures for water quality and quantity monitoring and reporting."

- On wildlife: "Discuss how surveys were conducted for each species, the findings of each survey, and all follow-up surveys…"

- On closure: "The EIS should discuss provisions that would be made under each alternative for post-operation surveillance to ensure that site closure and stabilization have been effective."

8.14 MISCELLANEOUS

Many comments did not seem to fit into any of the other categories, so the Corps created a "miscellaneous" category to capture these assorted comments.

- "All costs associated with mitigation efforts will be paid by Asarco."

- "The EIS should adequately identify and describe the underlying need(s) for the project and the associated objectives or outcomes for purposes of both the National Environmental Policy Act analysis and the Clean Water Act Section (404)(B)(1) alternative analysis. Clear descriptions of project needs and objectives set the stage for thorough consideration of a range of alternatives and their effectiveness in meeting the needs and objectives of the project."

- "And is this proposed facility in anticipation to address future Ray Mine Land operations? As I understand it the initial proposed Ray Land Mine (sic) Exchange as yet not be approved."

- "What is difference between State and BLM land?"

- "Corps of Engineer, please clean the Gila out (brush/sand) so our birds, animals don't get burn out with these fires. It runs all the way back to San Carlos Dam."

- "The ATA (Arizona Trail Association) is working closely with Asarco, Pinal County – holder of the right-of-way for the existing AZT (Arizona Trail) location, and the Bureau of Land Management in identifying the optimal realignment (of the Arizona Trail). The ATA profoundly appreciates the support and professional working relationship of these partners."

Several commenters expressed project opposition:

- "I am writing to express my opposition to the proposal to construct a tailings pond for a copper mine in Pinal County, Arizona."

- "We feel we must voice our opposition to this project."

- "As a native Arizonan, my first impulse is to oppose it due to past abuses to our state by the mining industry, but I also realize I need to get better informed in regards to this application."

- "This proposal is an environmental and social disaster just waiting to happen and I demand that it be denied and that the regulations be rewritten as to prohibit this kind of blatantly dangerous project from even making it to the drawing board."

Other commenters expressed their support for the project:

- "Mr. Langley – thank you for the information on the Ray Mine proposed tailings storage facility. For the record, the facility is needed, and I support this project facility! Get it done!"

- "I want them to do it. We need the work."

One commenter was worried about environmental justice:

- "Executive Order 12898 on Environmental Justice addresses disproportionate adverse impacts of federal actions on minority and low-income populations. The EIS should identify minority and low-income populations, and address whether the alternatives would cause any disproportionate adverse impact, such as displacement, changes in existing resources or access, or community disruption."

8.15 MITIGATION

The Corps received a number of comments about mitigation for air quality, hydrology, waters of the U.S., recreation (including the possible Arizona Trail displacement), and wildlife.

One commenter wrote a treatise to address mitigation:

- "The EIS should thoroughly identify and describe appropriate mitigation measures associated with the project, specifying which ones would be committed to by the mine operator and/or required by Federal, State, or local agencies. The EIS should address how each measure would

specifically mitigate the targeted impact, provide substantial detail on the means of implementing each mitigation measure, identify who would be responsible for implementing it, indicated whether it is enforceable, and describe its anticipated effectiveness. For some impacts, there may be several appropriate and effective measures, and some measures may turn out to be less effective than anticipated. The mitigation plan in the EIS should, therefore, include implementation monitoring and effectiveness monitoring, as well as contingency measures that would be implemented if initial mitigation measures are unsuccessful."

8.16 NOISE

The Corps only received one written comment regarding noise. The commenter wrote:

- "This regards the area of Kearny AZ and specifically Riverside where I have several properties. Several of us that aren't dependent on the mines are concerned about peripheral pollution and noise. The impact on the community is of concern."

8.17 PUBLIC AND WORKER HEALTH AND SAFETY

There were several general comments about potential accidents and spills:

- "The EIS should discuss how accidental releases of hazardous materials would be handled, including along the roads the pipeline routes, for each alternative. Identify the potential impacts of failure of the solution containment systems, methods for discovering such failures, and the degree to which impacts would be reversible."

Another commenter stated:

- "(I have) concern with any potential for hazardous spills, standing water, and pollutants which may create a hazard to wildlife including the potential to impact migrating birds or dispersing amphibians such as leopard frogs. The EIS should prescribe all possible measures to prevent such pollution."

8.18 RECREATION

Recreation comments concerned two general areas: (1) dispersed recreational opportunities and (2) the Arizona Trail.

Several commenters were concerned about dispersed recreation:
One commenter expressed concerns

- "about the impact this project may have on hunters, anglers, and wildlife recreationists that use the area, loss of hunting and angling opportunities, reduced hunt-permit revenue to the Department (Arizona Game and Fish Department), and impacts on the quality of the outdoor experience outside the project footprint within view of the facility."

- "There is high potential for loss and degradation of opportunity for recreationists that use the area."

Another commenter wrote:

- "While this area may continue to needs (sic) the economics of the mines, we in this area are beginning to value ecotourism and cultural tourism. The Kearny Chamber of Commerce, the Copper Corridor Coalition, Oracle's Women's Network, the Nature Conservancy and many small

businesses that are trying to promote tourism and outdoor recreation in this corridor as an alternative to the mining operations."

With dispersed recreation in mind, one commenter wrote:

- "The years and years of recreation and hunting history that Ripsey (Wash) has given the local area residents and visitors must be considered. Not only will it take out the acreage asked for but it will affect hundreds of more acres as a result of continual build up and working on the structure."

The Corps received numerous comments regarding the Arizona Trail and its relocation if the proposed action of developing the tailings storage facility in Ripsey Wash is approved. Actual comments follow:

- "Currently the Ripsey segment is a beautiful section of the Arizona Trail which goes approximately eight miles along the east ridges of Ripsey and is enjoyed by locals as well as many visitors to the area. Horseback riders, hikers, four wheelers and ATV's use this area year round."

- "Asarco must build the new trail prior to closure of the existing trail."

- "The EIS should discuss the fate of the Arizona Trail which parallels Ripsey Wash. This popular Trail seems to be under assault as it is also in the path of Resolutions Copper's tailings dump just north of Highway 60 by Superior."

- "Two general feasible locations for a new route exist, one west of Ripsey Wash through open, rolling desert; and the other to the east higher in the Tortilla Mountains. Both of these routes must be further refined to a near-final location and then analyzed according to recognized and agreed-upon criteria."

- "The Ripsey Wash TSF (tailings storage facility) will destroy the Florence-Kelvin trailhead. This facility – constructed with Asarco's assistance – will have to be relocated depending on which alternative AZT (Arizona trail) route is selected."

- "The existing trail has available water sources in Ripsey Wash. Asarco officials have previously agreed to provide alternative water sources long whichever alternative is selected. New water sources must be developed and maintained."

8.19 REGULATORY COMPLIANCE

Numerous comments on regulatory compliance were submitted. Some of these urged the Corps to comply with NEPA standards, regulations, and guidance. Others stressed the need for the project to comply with individual federal, state and local regulations and guidelines appropriate for the planned construction and development.

A sampling of the comments and the targeted concern follows:

- On air quality: "The EIS should identify all air permits and/or permit modifications that would be needed for the proposed project and discuss how the project would meet permitting requirements. The EIS should discuss whether a PSD (Prevention of Significant Deterioration) permit would be required for the proposed project."

- On wetlands and waters of the U.S.: "All required Federal and State permits for work potentially affecting wetlands and waters of the U.S. should be identified."

- On stormwater: "The EIS should discuss the applicability of Arizona's General Permit for Stormwater Discharges Associated with Industrial Activity – Mineral Industry (AZMSG2010-003) to this project. The EIS should include a storm water pollution prevention plan and discuss specific mitigation measures that may be necessary during operations, closure, and post-closure for each alternative."

- On Spill Prevention Control & Countermeasures (SPCC): "Describe the project's spill prevention, control, and countermeasures plans, and petroleum-contaminated soils management plan."

8.20 ROADS / TRANSPORTATION

There were limited comments on transportation. But a couple of commenters were concerned:

- "access to the upper reaches of Ripsey as well as the crossover road to Hackberry and what the locals call the flats about Ripsey from the Florence-Kelvin road to the Tecolote ranch and beyond."

Another commenter stated:

- "Changing the highway, putting in pipes to divert water, trucks running to and from the (tailings) storage facility is not conducive to this area."

8.21 SOCIOECONOMICS

There were only a few comments on socioeconomics concerns:

- "I think this mine presents a challenge to the neighborhood."

- "The community is growing with new families moving in. We are concerned that the mine with all its weight will disregard our community and not be accountable to such a small community. Please regard this as a concern that I am voicing and please note it."

A few other commenters noted that recreation and tourism are of growing importance to the region and the local communities. These comments have been covered in the see ***Section 8.18, Recreation.***

8.22 SOILS

The Corps only received one written comment regarding soils. The commenter stated:

- "For each alternative, the EIS should describe the availability, properties, and sources of growth medium, discuss how growth medium would be applied to disturbed areas, and identify any additional measures (e.g., amendments) that may be needed to ensure successful reclamation and re-vegetation of all disturbed areas."

8.23 VEGETATION

Written comments received on vegetation were segregated into three main areas: (1) protection of riparian habitat, (2) the spread of invasive or noxious species, and (3) impacts to threatened and endangered vegetation species.

The Corps received several comments on riparian habitat:

- "The EIS should identify non-jurisdictional wetland and riparian habitat as well as other unique or important habitat areas that could be affected by each alternative. The EIS should describe their functions and values and the acreages likely to be affected. The EIS should address opportunities for improving the quality and quantity of these areas in designing facilities."

- "It is the policy of the Arizona Game and Fish Commission that the Department (of Game and Fish) shall recognize riparian habitats as areas of critical environmental important to wildlife and fisheries…"

- "Riparian habitat is defined by the (Arizona Game and Fish) Commission as distinct vegetation and land shape, which occur in or adjacent to drainage ways and/or their flood plains. It is characterized by different species or life forms, both plant and animal, that those of the immediately surrounding habitats. Ripsey Wash, and the Gila River, which would be indirectly impacted by the project, meet the definition of riparian areas."

One commenter wrote about the concern:

- "(I have concern) with potential for spread of invasive species and pathogens." The commenter continued with the request that the Corps "determine if there is any potential for the introduction of noxious weeds, pathogenic fungi (*chytridiomycota*), and other organisms which may cause disease or alteration to ecological functions."

The Corps received a single comment about the need to protect:

- "endangered cacti" from "this massive structure."

8.24 WATERS OF THE U.S.

The Corps received a single comment on this item that stated:

- "The EIS should describe all waters of the U.S. that could be affected by the project under each alternative, including past impacts. The discussion should include acreages and channel lengths, habitat types, values, and functions of these waters."

8.25 WILDLIFE

Most comments concerned the potential impacts to wildlife. There were concerns about wildlife within the Ripsey Wash area and along the Gila River. A sampling of some of the comments on wildlife follows:

- The EIS should "evaluate the project in context of Arizona's State Wildlife Action Plan (SWAP) and use the species lists found in the SWAP when considering impacts to wildlife to ensure that impacts to state trust responsibility species and evaluated and considered. These lists include Species of Greatest Conservation Need (SGCN) and Species of Economic and Recreational Importance (SERI)."

- The EIS should "identify all significant impacts to SGCN and SERI species, recreation use, and economic impacts to wildlife resources and recreation."

- "The Corps may find the (Arizona Game and Fish) Department's Wildlife Habitat and Mapping tools such as Habimap™ Arizona and the Environmental Review Tool useful in evaluating potential impacts and comparing between alternatives."

- "Discuss how (wildlife) surveys were conducted for each species, the findings of each survey, and all follow-up surveys."

- "The local rancher of the A Diamond Ranch knows first-hand about the unique wildlife which resides in the (Ripsey) wash area and I know that the (Arizona) Game and Fish Department will be commenting on this area as an important wildlife corridor."

- "Ripsey Wash, a major tributary to the Gila River, is populated with a high density of saguaros and ironwood trees, and is potential habitat for rare species such as the cactus ferruginous pygmy owl and, candidate for federal listing, the Sonoran desert tortoise, as well as being of high value to game species such as the desert mule deer and javelins."

- The EIS should analyze the "take of birds or disturbance of birds nesting, roosting, and utilizing the area."

- Asarco should "develop an avian conservation plan in consultation with Arizona Game and Fish Department to be authorized by the Arizona Game and Fish Commission to address the potential for take and disturbance of birds and nests. Arizona Revised Statutes §17-236 is more restrictive than the (federal) Migratory Bird Treaty Act in that it prohibits the take of birds (and disturbance of nests and eggs including migratory and *non-migratory* (emphasis added by commenter) birds."

9.0 INTERESTED AGENCY INPUT

During the scoping process, the Corps has been in contact with various federal, state, and local agencies for comments and concerns. These agencies include the following:

- United States Department of Agriculture, Forest Service;
- United States Department of Interior, Fish and Wildlife Service;
- Arizona Department of Environmental Quality;
- Arizona Department of Game and Fish;
- Arizona Department of State Lands;
- Arizona State Historic Preservation Office; and,
- Pinal County.

These agencies were invited to attend the public "open house" scoping meetings held in Kearny, Arizona on September 24, 2013, and in Apache Junction, Arizona, on September 25, 2013. Many of the comments and questions expressed in ***Section 8.0, Synopsis of Public Scoping Comments***, are the same as those received from various responding interested agencies. The issues that the Corps has identified as potentially important are set forth in ***Section 11.0, Issues***, of this document.

10.0 TRIBAL GOVERNMENT INPUT

As described previously, 14 tribal government agencies were contacted for input on the 404 permit application and the EIS. Comments received from tribes have been included in this summary report.

11.0 ISSUES

To ascertain potential issues and concerns associated with the construction, operation and eventual closure of the proposed tailings storage facility, the Corps and its third-party contractor reviewed Asarco's project plans, available environmental information, and visited the site on several occasions. The Corps also solicited input from its cooperating agencies and other interested agencies, and hosted several meetings with these agencies to obtain such input. In addition, the Corps held two public scoping meetings and requested comments from the general public.

Based on these internal and external scoping efforts, the Corps has identified a number of issues for the proposed Ripsey Wash tailings storage facility. These issues are addressed in this section.

11.1 AESTHETICS AND VISUAL RESOURCES

Identify project-related impacts to visual resources. The area of concern includes how the proposed new tailings storage facility might affect the view shed for: (1) residents of Kearny, Kelvin and Riverside; (2) travelers on State Highway 177 and the Florence-Kelvin highway; and, (3) recreational users in the area, particularly those on the Arizona Trail.

11.2 AIR QUALITY AND CLIMATE

Identify project-related air quality impacts. Areas of concern include: (1) compliance with federal and state air quality standards; (2) the effects on air quality from fugitive dust and gaseous emissions; (3) visibility effects to any Class I areas in the vicinity of project; and, (4) possible climate change impacts as a result of the project.

11.3 CULTURAL RESOURCES

Identify cultural resources and conduct Native American consultation. The areas of concern include: (1) the effects to pre-historic and historic properties listed or eligible for listing on the National Register of Historic Places; and, (2) the potential to affect cultural resources, reserved rights, trust issues, traditional cultural properties, and other responsibilities of Native American tribes.

11.4 CUMULATIVE IMPACTS

Address the cumulative impacts of the proposed project with other adjacent activities. The area of concern includes the influence of future tailings storage on past, present, or reasonably foreseeable future projects in the region, specifically the cumulative impacts of the proposed tailings storage facility with the operation of the Ray Mine and Asarco's Hayden operations.

11.5 GEOLOGY, GEOCHEMISTRY AND GEOTECHNICAL

Identify the potential for acid rock drainage and metals transport from the proposed tailings storage facility. Address the stability of the proposed tailings storage facility and other associated structures. The areas of concern include; (1) short and long-term impacts to the Gila River; (2) potential for release of metals into groundwater from tailings; and, (3) the stability of the tailings storage facility and other associated structures, such as the detention pond and water diversion structures.

11.6 SURFACE WATER HYDROLOGY

Identify any water quality and quantity impacts to Gila River as a result of the proposed tailings storage facility. Address possible impacts to Zelleweger Wash if up-drainage flows from Ripsey Wash are diverted into this wash. The areas of concern include: (1) the alteration of existing hydrologic systems by direct disturbance; (2) the potential for increased sediment levels; (3) the alteration of downstream flow rates and any changes in the downstream water chemistry in the Gila River; and (4) any impacts on existing surface water rights.

11.7 GROUNDWATER HYDROLOGY

Identify any impacts to groundwater quality and hydrology within and surrounding the proposed tailings storage area. The areas of concern include: (1) the potential to alter existing groundwater hydrologic systems by tailings disposal; (2) changes in alluvial and bedrock groundwater chemistry as a result of tailings disposal; and (3) any impacts on existing groundwater rights.

11.8 LAND USE

Identify land disturbance. Areas of concern include: (1) the acreage of disturbance on federal, state and private lands; (2) the effects on livestock grazing in the area; (3) changes in future (post-project) land use; and (4) the potential development of lands included in the pending land exchange between Asarco and the Bureau of Land Management (BLM).

11.9 NOISE

Identify noise impacts. Areas of concern include: (1) level of noise from construction traffic and development activities; (2) level of noise during operations; (3) compliance with federal, state and local noise standards; (4) disruptions caused by noise to recreational users and wildlife in the area.

11.10 PUBLIC AND WORKER HEALTH AND SAFETY

Protect general public and worker health and safety. Areas of concern include: (1) health and safety risks from the construction and operation of a tailings storage facility; (2) the possibility of an accident that would necessitate an emergency response; and (3) the potential for an accidental spill of tailings or other substances that could impact the environment, especially to the Gila River.

11.11 RECREATION

Identify impacts to recreational activities and opportunities. Areas of concern include: (1) disruption to recreational opportunities at developed sites, such as the Arizona Trail and (2) disruption to undeveloped recreation activities such as off-road recreation and hunting.

11.12 ROADS / TRANSPORTATION

Address project construction and operations traffic impacts. Areas of concern include: (1) the amount of road use and traffic on the Florence-Kelvin Highway and State Highway 177; (2) amount of project-related road maintenance demands during operation; and (3) potential for accidents with any increased road use.

11.13 SOCIOECONOMICS

Address the social, economic and lifestyle effects on residents in the local communities surrounding the Ray Mine. Areas of concern include project-related construction and operational impacts to the demographics of local communities surrounding the Ray Mine, including impacts to employment, income, housing, utilities, public service, tax and governmental revenues, and present lifestyles.

11.14 SOILS

Identify site soil resources and adequacy for reclamation. Areas of concern include: (1) the availability of soils for reclamation; and (2) the potential of increased soil erosion and sedimentation from construction and operational activities.

11.15 VEGETATION

Address project-related impacts to vegetation. Areas of concern include: (1) the impacts to vegetation communities by the project; (2) the impacts on any threatened, endangered, and candidate plant species as identified by the U.S. Fish and Wildlife Service; (3) the impacts to any BLM sensitive plant species; and, (4) the control of noxious weeds.

11.16 WATERS OF THE U.S.

Address project-related impacts to waters of the U.S. Areas of concern include: (1) the impacts to waters of the U.S.; and (2) changes in the functions and values of on-site and off-site jurisdictional waters of the U.S. from tailings disposal operations.

11.17 WILDLIFE

Identify impacts to wildlife and wildlife habitats. Areas of concern include (1) the impacts to wildlife habitat, such as the physical loss of habitat and a reduction in diversity and habitat effectiveness; (2) impacts to wildlife species found in the area, including those species listed in the Arizona Game and Fish Department's *Species of Greatest Conservation Need* (SGCN) and *Species of Economic and Recreational Importance* (SERI); (3) the impacts on any threatened, endangered, and candidate wildlife species as identified by the U.S. Fish and Wildlife Service; and, (4) the impacts to any BLM sensitive wildlife species.

12.0 ALTERNATIVES

Alternatives will be assessed to address key issues associated with the Ripsey Wash tailings storage facility. Biological, social, and economic aspects of alternatives will be evaluated so that an informed decision on the proposed action can be made.

Based on input received in the scoping process, the Corps will develop a set of reasonable alternatives to be considered in detail in the draft EIS. The Corps will consider a full range of alternatives. Some of these alternatives may be eliminated from detailed evaluation because they do not meet the purpose and need of the project, because they are outside the bounds of this project, or they have technical complications that would prohibit implementation. In addition, alternatives may be eliminated because they do not meet practicability requirements as described in the EPA's 404(b)(1) Guidelines (40 CFR Part 230).

12.1 NO ACTION ALTERNATIVE

This alternative serves as the baseline for estimating the effects of action alternatives. The baseline for the tailings storage facility EIS is the existing condition of the environment, today. This will take into account the ongoing operations and activities of the Ray Mine. Under the no-action alternative, the 404 permit for the proposed tailings storage facility would be denied. NEPA requires that a "no action" alternative be considered in EIS documents.

12.2 ACTION ALTERNATIVES

As part of the EIS process and in accordance with the EPA's 404(b)(1) Guidelines, the Corps will conduct a comprehensive alternative assessment. Social and environmental issues, concerns, and opportunities will be considered in this assessment. In reviewing possible project alternatives for consideration in the EIS, the Corps will examine numerous locations, operational methods, and mitigation measures. The type and range of alternatives will be determined from public comments and key issues that have been identified during the scoping process, as well as reviewing the purpose of and need for the proposed tailings storage facility.

The merits of each alternative will be carefully weighed. The actual analysis of alternatives will be included in the draft EIS and will include a discussion of environmental protection measures, mitigation requirements, and operational constraints. The assessment of alternatives and the understanding of key issues are the foundation to meeting the mandate of NEPA and the 404(b)(1) Guidelines.

APPENDIX A – COMMENT CONTENT ANALYSIS

Aesthetics and Visual Resources

The National Environmental Policy Act study needs to examine the visual impacts of the dump to popular hiking areas in the Spine across the Gila and also from higher elevation areas in the White Canyon Wilderness.

Air Quality

(1) Fugitive Dust and Other Emissions

Not only is this substance hard to stabilize but it will continually be blown off the structure as dust causing multiple problems for Kearny and the surrounding area. (Note: Hayden and Winkelman's problem with the same issue involving the Hayden tailings dam).

I have lived at 56470 E Simmons Way Riverside for more than 40 years. I have watched as the dust from Ray Mine pit has become a real problem with our quality of life. I am concerned with having another source of dust on the other side of us.

Dust is a continuous problem for the surrounding area and as of yet they are not able to control the problem.

The group running Asarco Ray let the mine pit put out too much dust. There is no reason to believe the tailings storage facility won't be run the same way.

Any potential for fugitive dust, especially dust that contains toxins, abrasives, or otherwise ecologically disruptive compounds should be analyzed for the potential to impact wildlife, especially amphibians and mollusks and all possible measures to prevent such pollution should be prescribed in the EIS.

The EIS should estimate air pollutant emissions for each alternative, including criteria pollutants and hazardous air pollutants.

(2) Compliance with National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD)

The EIS should describe existing air quality in the project vicinity, including the attainment designations for the area.

Air Quality (con't)

(2) Compliance with NAAQS and PSD (con't)

The EIS should also discuss the National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD) increments applicable to air quality in the project area. PSD increments exist for sulfur dioxide, nitrogen dioxide, PM10 (particulates smaller than 10 microns in diameter), and PM2.5 (particulates smaller than 2.5 microns in diameter). Specifically, for Class II areas, the annual PSD increment for nitrogen dioxide is 25 microns per cubic meter ($\mu g/m^3$); the annual and 24-hour increments for PM10 are 17 $\mu g/m^3$ and 30 $\mu g/m^3$; the annual PM2.5 increment is 4 $\mu g/m^3$; and the annual, 24-hour and 3-hour increments for sulfur dioxide are 20 $\mu g/m^3$, 91 $\mu g/m^3$, and 512 $\mu g/m^3$, respectively.

The EIS should identify all Class I PSD areas located within 100 kilometers of the proposed project site. Class I areas even further away could potentially be affected as well. The Corps should consult with the U.S. Forest Service and National Park Service for a determination of which areas could be adversely affected by the proposed action. Potential impacts to Class I PSD areas, including visibility impacts, should be discussed.

Modeling should be conducted to determine concentrations of criteria air pollutants for an accurate comparison with the NAAQS, as well as emissions in tons per year for purposes of demonstrating whether the project would exceed general conformity *de minimis* thresholds.

If a PSD permit would not be required, the EIS should indicate whether the baseline date has been triggered for minor sources in the project area. Once the minor source baseline date has been triggered for a certain pollutant in a specified area, all emissions from minor sources of that pollutant consume increment. The EIS should discuss impacts to the NAAQS and PSD increments from projected emissions of each alternative, considering the effects from all aspects of mine excavation, construction, operation, and support activities, as well as cumulative emissions from other sources in the project area.

(3) Climate Change

Climate change is upon us, industrial pollution and its accompanying diseases and conditions are everywhere, and untold species undergo extinction every single day. What more do you need to know in order to begin acting in the best interest of life on Earth? Do what's right and just - deny this proposal.

... the EIS identify the cumulative contributions to greenhouse gas emissions that would result from implementation of the proposed project. In addition, we recommend the EIS discuss the potential impacts of climate change on the project.

Alternatives

Due to the scale of this project and its potential environmental impacts, it certainly warrants an EIS. As mandated by NEPA, the draft EIS should include all reasonable alternatives, an evaluation of those alternatives, and mitigation measures to minimize the disturbance and impact of the project.

The EIS should rigorously explore and objectively evaluate all reasonable alternatives, including reasonable alternatives not within the jurisdiction of your agency. 40 CFR 1502.14.

The EIS should provide a clear discussion of the reasons for the elimination of alternatives which were not evaluated in detail.

Reasonable alternatives could include, but are not necessarily limited to, alternative sites, alternative designs or methods (e.g., dry stack tailings), smaller projects, and reconfigured projects.

The Draft EIS should include the 404(b)(1) Alternatives Analysis in order to demonstrate that the project is avoiding and minimizing damage to Waters of the U.S. to the maximum extent practicable and is in compliance with the Guidelines. The discussion should demonstrate that relatively less impactful alternatives are not *practicable*, as defined by the Guidelines.

The document should discuss potential environmental impacts of the alternatives in comparative form, thus sharply defining the issues among the options for decision makers and the public. 40 CFR 1502.14.

. Additional analysis is needed for alternatives that were not identified by the applicant in the Alternatives Analysis as the proposed alternative, but which may have fewer environmental impacts.

Dry stack tailings disposal is also discussed in the Alternatives Analysis but eliminated from further evaluation. EPA does not believe, however, that the draft analysis provides sufficient information to support the elimination of dry stack disposal as an option for the proposed project. We recommend that potential dry stack tailings methods, infrastructure needs, and sites be thoroughly evaluated in the Alternatives Analysis and EIS.

If a permit is required, EPA will review the project for compliance with the 404(b)(1) Guidelines and a demonstration that the project is the least environmentally damaging practicable alternative available to achieve the project purpose. The EIS should describe the potential environmental impacts and discuss alternatives to avoid or minimize discharges into waters of the U.S.

An alternative cannot be rejected simply because it may be more expensive than the applicant's proposed alternative. Rather, if an alternative is rejected due to costs, it must be credibly demonstrated that the costs are unreasonably higher than a typical applicant could be asked to bear in that situation (in other words, the applicant's proposed alternative is not the cost "baseline" against which alternatives are measured for practicability).

Given the fragility and limited amount of waters of the U.S. in Arizona, the least environmentally damaging practicable alternative should minimize and consolidate mining impacts as much as possible. An effective Alternatives Analysis and Draft EIS will provide detailed analysis on direct and indirect impacts on waters of the U.S., and include consideration of factors such as special aquatic sites, habitat type, river and creek crossings, and construction impacts. The analysis of each potential site should include information about the quality, landscape function, and connectivity of all affected waters of the U.S.

The only site alternative presented in the public scoping meeting handout is the Ripsey Wash location. Since this tailings proposal would have significant effects on the Ripsey Wash region in terms of aesthetics, habitat values, wildlife migration values, eco-tourism values, and recreational values, it seems appropriate to consider alternative site locations in the Environmental Impact Statement (EIS), particularly alternative sites that are already significantly impacted by mine activities or by their immediate proximity to mine activities.

These alternatives could include some of the options noted on one of the posters at the public scoping meeting, such as the Hackberry Gulch option or the East Dam option, and could include other options that were not considered by the applicant prior to the public meeting. There is a lot of land in the vicinity that has already been disturbed by mining activities, and these lands should be fully considered as site alternatives in the EIS.

ATA's Preferred Alternative: The ATA's position is that the interests of the Arizona National Scenic Trail are best served by the no-action alternative. Clearly, destruction of the existing trail and locating a new trail is a drastic measure. The current route was selected with thorough involvement and cooperation between the Arizona State Land Department, Pinal County, The Bureau of Land Management, the Winkleman Natural Resources Conservation District and the ATA. The route was selected only after full consideration of the desirable scenic and other characteristics exhibited by several potential routes. The trail in this area was then built, including portions by volunteers, demonstrating the strong connection between the trail, its users and supporters.

The trail was placed in its present location because of the outstanding scenic qualities of the immediate area and the views of the natural landscape for miles around. The TSF will forever destroy much these scenic resources and the ensuing trail experience. The Ripsey Wash alternative will allow construction of the TSF and placement of the huge tailings pond upon and in the immediate vicinity of the trail, with devastating effects on the trail, its scenic characteristics and the trail experience. There is no conceivable compensating mitigation action for this impact. For these reasons, the ATA's position is that the interests of the Arizona National Scenic Trail are best served by the no-action alternative.

It is very strange to us that none of the other alternative sites were thoroughly discussed at the scoping meetings. If this is a true EIS process then there should have been a full discussion with the public and disclosure by the mine as to why none of the other sites are adequate.

I understand the need for ASARCO to find places for tailings, but I hope that something can be found that does not obliterate historic sites. Historic site preservation is becoming increasingly difficult as the population expands, and mining activity increases. Your consideration of this matter is greatly appreciated.

Why not keep the ugly tailings in one area? There is not one mine reclamation area that we would call beautiful or appealing, would you?

Why a wash? Not just land?

The National Environmental Policy Act ("NEPA") and the regulations promulgated to implement the act (42 U.S.C. § 4321, *et seq.*, 40 CFR § 1500.1, *et seq.*) mandate that the Corps assess and evaluate the environmental impacts of the **Ray Mine Proposed Tailings Storage Facility** and that reasonable alternatives be considered (42 U.S.C. § 4332 102 C).

The EIS needs to fully examine all alternatives to the Ripsey Wash site to avoid excessive mining sprawl and instead maintain a minimum footprint that still remains a safe and workable option. Focusing tailings on already disturbed areas should be considered.

The Corps should consider this type of Department information when considering between project alternatives which fulfill the purpose and need of the project.

The ATA learned of the Hackberry Alternative at the public scoping meetings. As this alternative does not directly affect the AZT and only peripherally affects the trail experience, it is the ATA's second preferred alternative.

The ATA supports the no action alternative, followed by the Hackberry alternative, as the TSF will result in significant negative impacts to the Arizona Trail (AZT).

How come they can't move ~~the~~ tailing to west to Az. Trail isn't in Hack.

The ATA acknowledges that neither the no-action nor the Hackberry alternative may be the final decision. Therefore, comments have been prepared should the Ripsey Wash alternative be approved.

An alternative to Ripsey wash should be found that would not discharge directly into The Gila River if the dam is breached. This would allow Asarco some time to control the massive flows that could result if the dam failed due to heavy rains. Perhaps East of the Elder Gulch dam would be an option.

The Department is concerned that the proponent is confident enough in the choice of alternatives that they have already moved forward with an application for the purchase of Arizona State Trust Land for the project. The Department expects that The Corps will require a thorough analysis and vetting of alternative locations for the facility and will not rely solely on proponent-provided information which could lead to pre-analysis decision when a thorough analysis might uncover a less-damaging alternative. The Department expects that the location of the preferred alternative chosen will clearly be the least environmentally damaging alternative evaluated.

I met you last Tuesday night at the public meeting in Kearny. I approached you after the meeting because I was curious about the other (alternative) sites that you said would be instigated just as thoroughly as the major proposal across the Gila River from the mine. I was disturbed by the fact that no one spent any time on those sites at the meeting. The only thing about the alternative sites was a map showing their location and some non-official local folks who chatted about their characteristics.

I just took a look at the site, http://www.spl.usace.army.mil/Portals/17/docs/regulatory/Projects/Ray_Mine/PublicNotice_EIS.pdf , and while there is a lot of worthwhile information there, the alternative sites aren't shown there either. Is there anyplace on the web where I can access a map similar to the one they had at the meeting showing those sites?

Describe the designs of the proposed diversion channels, tailings dam, seepage collection systems, collection and sedimentation ponds, pump back systems, and any necessary treatment or disposal of these solutions, and depict these facilities on a map;

The EIS should also indicate, for each alternative, whether the tailings facility would achieve zero discharge for all phases of the project and, if so, describe how zero discharge would be achieved.

Bonding and Performance Securities

I do have a question. Do you plan to require financial assurance on this project?

As tailings piles contain millions of tons of unstable, saturated waste, the EIS should attempt a prediction of the environmental impacts and cleanup costs if massive structural failure of the embankments or diversion channels were to occur.

If the potential impacts of the project would necessitate a long-term trust fund, EPA believes this information is essential in the Draft EIS because it could make the difference between a project sufficiently managed over the long-term by the site operator, or an unfunded/under-funded contaminated site that becomes a liability for the Federal government. In the absence of an appropriate guarantee, EPA could consider a project unacceptable if it could result in unmitigated impacts exceeding environmental standards on a long-term basis.

. The EIS should discuss financial assurance for reclamation and closure activities associated with each alternative. The viability of the financial assurance can be a critical factor in whether a project is environmentally acceptable. Therefore, this information should be disclosed in the Draft EIS. The Draft EIS should also identify the agency that would hold the bond or other financial instrument, and discuss how the financial assurance could be modified during or after operations if unanticipated temporary, long-term, or perpetual treatment and/or remediation needs are discovered in the future. In addition to determining the actual cost of reclamation, the bond calculation should consider the extra expense of taking over reclamation at a critical time during operations, such as when the water balance is high and surplus water must be treated, or when environmental or reclamation measures have not been successful in controlling pollution and must be redone. The EIS should describe bonding requirements and other measures that State or Federal regulators have in place to ensure funds would be immediately available should the mine operator or its insurer be unable to fund the required reclamation or closure activities.

If long-term post-closure monitoring and management would be needed to ensure post-closure care and resource protection, the Draft EIS should include a general description of the funding mechanism, such as a long-term trust fund, that would be required, and identify the agency that would require and oversee it. The financial assurance necessary to fund all post-closure activities must be kept current as conditions change at the mine, and the permitting agency should ensure that the form of the financial assurance does not depend on the continued financial health of the mine operator or its parent corporation. The mechanics of the fund are critical to determining whether sufficient funds would be available to implement the post-closure plan and reduce the possibility of long-term contamination problems. The discussion in the Draft EIS should include the following information:

- Requirements for timing of payments into the fund;
- How to ensure the fund would be bankruptcy remote;
- Acceptable financial instruments;
- Tax status of the fund;
- Identification of the fund beneficiaries; and
- Identity of the operator with responsibility/liability for financial assurance at this site.

Closure and Reclamation

Reclamation and closure of the tailings dump should be thoroughly discussed in the NEPA document showing how the site could be safely shut down and revegetated and again how water resources will be protected. The option of further NEPA study at the time of closure should be included.

How long will this operation be utilized and/or if there are any plans in place to rehabilitate the land once the mine ceases to exist?

Is this in a wash where tailing would be washed down after mine closes?

For each alternative, the EIS should describe and discuss the following components of site reclamation:

- A detailed account of measures that would be taken to decommission mine facilities and stabilize and revegetate the tailings, roads and other areas;
- Identification (including estimated acreage) of the areas targeted for reclamation, and description of the intended degree of treatment in each area;
- Estimation of any irrigation requirements;
- Timing of reclamation and duration of reclamation treatment;
- Reclamation monitoring plan, including standards for determining, and means of assuring, successful reclamation;

. The EIS should describe the reclamation and closure of the tailings, including capping/covers, drain down facilities, chemistry and fate of drain down fluids, and projected drain down times.

We recommend that revegetation be accomplished with only native species indigenous to the area in order to restore the ecosystem to as natural a state as possible after facility closure. We also recommend that revegetation success be monitored and enforced for at least five years following revegetation efforts.

We recommend that the EIS assess a gravity drain and passive treatment systems for closure/post-closure management of the tailings drainage, which could obviate the need for pumping and reduce long-term post-closure costs.

The Department is concerned about the potential for success of reclamation. It is the Department's experience that reclamation has a very limited definition in mining nomenclature. To the extent possible, The Corps should strive for *restoration* of mine tails to pre construction conditions after closure of the facility. Compensatory mitigation should be identified for any residual impacts to wildlife resources and habitat. Adequate bonding should be required to ensure that reclamation successfully restores the site.

How much longer will this mine be here? What will happen to these tailings then?

Connected Actions

The EIS should clearly identify connected actions and the rationale behind including analysis of those connected actions in the EIS, or excluding analysis of those actions. The Department suggests that operations at the Ray Mine, and all actions connected to the Ray Mine, should be considered connected actions.

Connected Actions: The EIS should discuss connected actions, including actions that automatically trigger other actions which may require environmental impact statements, cannot or will not proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for their justification. 40 CFR 1508.25.

Connected actions that should be addressed in this EIS include, but are not necessarily limited to, road relocations; rights-of-way for roads, pipelines, and power lines; and the Ray Land exchange currently being evaluated in a Bureau of Land Management (BLM) EIS.

The Hackberry Gulch, West Dam, and Granite Mountain sites analyzed for potential tailings disposal in the Draft Clean Water Act Section 404(b)(1) Alternatives Analysis for the Asarco Ray Mine Proposed Tailings Storage Facility are also identified as selected parcels in the 1999 Ray Land Exchange EIS, which is the subject of an upcoming Supplemental Draft EIS. We recommend that the Corps closely coordinate with BLM so that information relevant to these connected actions is appropriately addressed in both the Ray Tailings Storage Facility EIS and the Ray Land Exchange EIS.

Cultural Resources / Native American Consultation

The area should be carefully studied for cultural sites and the results detailed in the EIS. Tribal interests should be fully evaluated and considered. The Hopi Tribe has repeatedly expressed concerns about the proposed mine expansion and the impacts on cultural sites. The Corps must consult with the Hopi and other affected tribes relative to this project.

The EIS should discuss the Corps' formal government-to-government consultation with all Native American tribal governments that could be potentially affected by the proposed project or may have resources (e.g., traditional cultural properties, groundwater resources) that could be affected. The principals for interactions with tribal governments are outlined in an April 29, 1994, presidential memorandum and Executive Order 13175, dated November 6, 2000.

The old Globe to Florence stagecoach road goes through this area. Attached is a copy of a part of the Florence quadrangle topo map, surveyed in 1900. It shows the road coming into Ripsey Wash from the east, then going through the hills, past BM2250, BM3081 and on to Donnelly Ranch.
A copy of a piece of the present topo map is also attached. Note that the old road does not follow the present road in the vicinity of Ripsey Wash.
The part of the old road as it goes through the proposed ASARCO tailings site can easily be identified, as can be seen from the attached photo "steep grade DJH". Some of the old road, near its intersection with the present road, has already been bulldozed by ASARCO. Why this was necessary is not known.

But take care of Historical Bridge Needs left

The GRIC-THPO concurs with a finding of adverse effect for this undertaking and we agree with site Register eligibility determinations.

. The part of the present topo map shows a location marked "Kid site." This is the place where Sheriff Glen Reynolds and Deputy Holmes were attacked and murdered by Apache prisoners on November 2, 1889, as they were enroute to Casa Grande. This was an important event in Arizona history. In a separate email I will attach an article that describes the details.

I briefly reviewed the abundant information regarding the proposed project, and I had a couple of concerns. One being the lack of the Treatment Plans for the sites which are going to be impacted, especially if human remains were to be encountered.

Cumulative Effects

(1) General

The EIS should provide a description of the cumulative effects study areas (CESA) for each resource that could be affected by the proposed project.

The EIS should describe the potential cumulative impacts associated with the proposed project and alternatives in light of other past, present, and reasonably foreseeable future actions, including the existing Ray Mine Complex and Hayden smelter, as well as the proposed Ray Land Exchange.

The EIS should describe the methodology used to assess cumulative impacts. Guidance on how to analyze cumulative impacts has been published by the Council on Environmental Quality[1] and EPA.[2]

1 Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality, January 1997. http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm

2Consideration of Cumulative Impacts in EPA Review of NEPA Documents, U.S.EPA, May 1999. http://www.epa.gov/compliance/resources/policies/nepa/index.html

In addition, you may also wish to refer to http://www.dot.ca.gov/ser/cumulative_guidance/purpose.htm. This cumulative impact guidance was prepared by the California Department of Transportation, the Federal Highway Administration, and EPA Region 9 for transportation projects in California. However, the principles and the 8-step process in this guidance can be applied to other types of projects, both within and outside of California. We recommend the principles and steps in this guidance to other agencies as a systematic way to analyze cumulative impacts for their projects.

Potential impacts, including cumulative and additive impacts, from pollution, habitat fragmentation, transportation and infrastructure, water diversion, groundwater pumping, and disturbance should be evaluated.

Identify all other on-going, planned, and reasonably foreseeable projects in the study area, not just mining projects, which may contribute to cumulative impacts. Where studies exist on the environmental impacts of these other projects, use these studies as a source for quantifying cumulative impacts;

The Corps as the lead agency for this project, must consider cumulative impacts as well as direct and indirect impacts of the proposed project (40 CFR ~ 1508.7).

(2) Air Quality

Emissions should be estimated from all Ray mine operations and facilities, such as roads, construction, blasting, excavation, and processing, which create the need for the proposed tailings storage facility. Emissions sources also include any off-site processing and support activities, such as vehicle traffic and delivery trucks for fuels, maintenance supplies, and other materials, as well as cumulative emissions from other sources in the project area.

(3) Hydrology

This discussion should be informed by the actual adverse impacts to surface water and groundwater quality that have resulted from existing mine facilities such as the Hayden tailings as well as the Elder Gulch tailings impoundment, which has had contaminated seepage despite its BADCT design.

ASARCO has had many environmental problems with the Hayden tailings involving spills into the Gila River and polluting the surrounding area. They historically have been unable to control the tailings which has allowed the structure walls to collapse causing major problems with pollution in the Gila River and its lower stake holders.

(4) Recreation – Arizona Trail

The EIS must consider the cumulative impacts of this project, including on the Arizona Trail.

(5) Waters of the U.S.

cumulative impacts on waters of the U.S., including the Gila River, Mineral Creek, and San Pedro River, need to be considered in light of past, current, and foreseeable future activities in the project vicinity, including operations and tailings storage at the Ray Mine Complex and Hayden smelter.

(6) Wildlife

The EIS should address the interaction of multiple impacts. While individually, each impact may not have a significant effect on any species, analysis of their additive and interactive impacts may reduce the suitability of the area for occupation or use by certain species; especially those that are rare, secretive and do not tolerate human activity, rely on high ecosystem integrity, or are dependent on large blocks of unfragmented habitat.

Identify all species or critical habitat that could potentially be directly, indirectly, or cumulatively effected by each alternative;

Hydrology

(1) General

The EIS should provide a complete hydrologic characterization of the project vicinity, and describe the CESA for surface water and groundwater for this project, describing all existing water resources and baseline groundwater and surface water quality, quantity, flow regimes, and groundwater adjudication. Information on groundwater properties and groundwater/surface water connections (e.g., springs, seeps, recharge areas) are needed to identify and assess potential impacts to water resources and risks to receptors of contaminants.

The EIS should discuss all direct, indirect, and cumulative impacts to surface water and groundwater quality and quantity from the proposed project and alternatives both during operations and after closure. Effective chemical and/or physical controls to prevent uncontrolled seepage through the tailing should be thoroughly analyzed in the EIS. The EIS should describe all potential project discharges, seepage, temporary ponding, diversions, and groundwater pumping, as well as the potial effects of these activities on water rights, beneficial uses, and wildlife.

(2) Surface Water

The EIS should completely describe the current drainage patterns in the project area, as well as the projected drainage patterns under each alternative, both during operations and after closure. Include hydrologic and topographic maps of the project area and cumulative impact area. This discussion should address potential effects of the project on erosion potential and sedimentation. Identify the 100-year flood plains in the project area. Discuss the potential for runoff to transport sediment or contaminants from disturbed areas to any surface waters.

Describe the projected chemical characterization of water in open ponds that would be located at the project site, including supernatant in the tailings impoundment;

The EIS should describe all potential surface water discharges from the project, including storm water, and include a map depicting locations of all discharge outfalls.

Watershed management for this area is critical and the locating the mine's tailings in this area would change the watershed in this area. I know that the mine staff say that there will be little to no impact, but there will need to be maintenance roads and facilities to maintain the new storage facility.

It will permanently affect the upper reaches of Ripsey as they remake and redirect water flows from runoff.

The EIS should examine in detail the downstream embankment structure, the seepage trenches and liner to ensure protection of the Gila River. Similarly, the diversion channels should be studied to see if they will withstand the 500-year 24-hour storm event as required.

THE 500-YEAR STORM COMES EVERY 2 YEARS THESE DAYS. I DO NOT BELIEVE THE SEEPAGE COLLECTION IS SUFFICIENT.

. The EIS should identify potential water sources and the amount of water needed for the project, and describe the potential impacts associated with using these sources.

Describe how the tailings facility would be designed to preclude the discharge of contaminants to surface water and groundwater in light of past failures of the Elder Gulch facility to preclude contaminated seepage;

Estimate the sedimentation rates in sedimentation ponds.

In the past we have had several days of heavy rains, not just 24 hrs. There 500 year /24 hour rain scenario is not enough. The upper drainage into Ripsey is a huge area and this 500 year/24 hr option would appear not to be enough of a guarantee that the tailings dam would not fail and pour thousands of tons of waste and pollution directly into the Gila River.

(3) Water Quality – Surface Water and Groundwater

THE HAZARDOUS MATERIAL USES PRECIOUS WATER, WHICH CAN BE USED FOR MUCH NEEDED DRINKING, NOT FOR THE CONTAMINATION FROM THIS MINE.

Discuss the potential for and effects of movement of any contaminated surface water to the subsurface, and any contaminated subsurface water to the surface;

Studies by Mineral Policy Center (now Earthworks) show that predictions in NEPA documents regarding water contamination are often incorrect, and that impairment to water quality happens far more often than originally believed.

Discuss the potential for contamination of meteoric water that contacts tailings and other project facilities;

The project should be evaluated with the greater ecosystem in mind including connected habitats in the Gila River watershed, particularly the Gila River and connected environment downstream and cumulative impacts such as potential pollutant inputs upstream, water diversion, and dams.

The project will fill a major tributary to the Gila River with tailings which may leach toxins into the groundwater and release toxins into the Gila via stormwater runoff. The Department is particularly concerned with impacts to groundwater, and impacts to the Gila, including releases of toxins into the river which may cause kill or injure aquatic wildlife, or which may harm invertebrates, creating cascading effects in the ecosystem, effectively degrading it for the species dependent on that ecosystem. The EIS should address the potential for the project to pollute waters that support wildlife, including aquatic species, amphibians, and drinking water for terrestrial and avian species and prescribe all possible measures to prevent such pollution.

Sierra Club is opposed to such an extreme example of mining sprawl and its profound impacts on such a large area of undisturbed land and are concerned about its effects on the nearby Gila River.

The NEPA study should attempt a risk analysis to determine the likelihood of ground and surface water contamination.

(3) Water Quality - Surface Water and Groundwater (continued)

We have seen the test wells that the mine put in to check water quality but who will be doing the quality checks?

We have seen the test wells that the mine has drilled to monitor the water quality. I would like to know who will do the testing.

The EIS should describe the applicable permits and state-adopted, EPA-approved water quality standards, including beneficial uses, in the project area, and discuss each alternative's compliance with the standards and permits.

The EIS should discuss how the project would be designed with best available demonstrated control technology (BADCT) for purposes of meeting Arizona groundwater standards included in its Aquifer Protection Program (APP) permit.

The EIS should discuss the direct, indirect, and cumulative impacts of the proposed project on all waterbodies in the CESA, including the likely impacts of each alternative on impaired and potentially impaired waterbodies in the CESA. At present, the CESA includes multiple 303(d) listed impaired water bodies near the existing Ray Mine site and the proposed Ripsey Wash alternative. Mineral Creek is impaired for copper, selenium and low dissolved oxygen. The Gila River from the San Pedro confluence to Mineral Creek is impaired for sediment, although the Gila River below Mineral Creek is not listed as impaired. Devils Canyon, the headwaters to Mineral Creek, is listed as "inconclusive" for copper impairment, although this is based on only one exceedence of the Aquatic and Wildlife warm water designated use acute copper standard from 2007.

The EIS should assess the likely impacts of each alternative on the water quality, water availability, and habitat for organisms in waterbodies in the CESA, including indirect impacts to waters upstream and downstream of the tailings impoundment. All major water bodies in the CESA area are perennial and carry the Aquatic and Wildlife warm water (A&Ww) designated use, which means there are plants and animals to protect and more stringent water quality standards apply. A&Ww water bodies are protected by the suspended sediment concentration standard (which does not apply to ephemeral or effluent dependent waterbodies). In Arizona Department of Environmental Quality standards, the A&Ww designation signifies the "the use of a surface water by animals, plants or other organisms for habitation, growth or propagation." The A&Ww designation includes the Gila River, from San Pedro River to Mineral Creek; Devils Canyon, from Headwaters to Mineral Creek; Mineral Creek, from Devils Canyon to Gila River; Gila River, from Mineral Creek to Ashurst Hayden Dam; and Walnut Creek, a tributary to the Gila River.

Hydrology (continued)

(4) Hydrology and Closure

The document should evaluate the impacts of long-term or perpetual ground water pumping and any measures that can be implemented to protect aquifers after the tailings dump is closed.

The EIS should discuss the potential for long-term or perpetual drain down of the tailings and how this water would be treated and discharged.

The EIS should assess the effectiveness of various cap/cover systems in reducing meteoric water flow through the tailings.

Describe post-closure water resource recovery.

Geochemistry - Characterization of Tailings

All mining waste is toxic and is the leading hazardous waste in the United States and in Arizona – the mines consistently top the list on the Toxic Release Inventory. The EIS needs to discuss the amount of heavy metals and radioactive waste in the tailings and the likelihood of acid mine drainage if leaks occur.

We also understand that Asarco will be providing geochemical information on existing Ray Mine tailings to the Corps for use in the EIS. We respectfully request that you share this information with EPA as soon as it is available.

Thoroughly describe the geochemistry of the tailings that will be stored in the proposed tailings facility, and discuss the methods used to characterize them;

Geotechnical - Short term and Long term stability (Safety)

The location they want to build in is a primary contributor to the Gila river and once the earthen dam is completed the remaining dam will likely be built of high density tailings such as the Hayden Tailings dam.

The EIS should discuss how the project rights-of-way for the proposed action and alternative tailings sites would be consistent with the BLM's Resource Management Plan and any decisions made related to the Ray Land Exchange EIS, and discuss any provisions that BLM or the Corps would require for the purpose of mitigating potential impacts.

The EIS should describe any special uses, such as livestock grazing or recreation, which comprise on-going activities in the vicinity of all site alternatives, and discuss how these activities could potentially be affected by the proposed project. The EIS should describe the nearby natural conservation areas, wilderness areas, or other specially designated areas, and discuss how they could be affected by the proposed project.

The amount of State Land being sought by Asarco is far in excess of what is required for this particular project, leaving the possibility of a greatly enlarged dump in the future. The EIS should consider the eventual disposition of all this land and its resultant impact to the Gila River and surrounding area.

Protect the AZT from future relocations: While National Scenic Trail status provides a level of protection for the AZT, the current action in which the trail is being pushed off perfectly acceptable and appropriately authorized location by the actions of third parties clearly demonstrates that this status in inadequate. In the United States the highest form of land use protection is "fee ownership." Even ownership of the easement across the State Trust Land has proven insufficient to protect the trail.

Miscellaneous

(1) General

EPA recommends that the Ray Tailings Storage Facility EIS include a clear description of the project's purpose and need. The EIS should adequately identify and describe the underlying need(s) for the project and the associated objectives or outcomes for purposes of both the National Environmental Policy Act (NEPA) analysis and the Clean Water Act Section 404(b)(1) alternatives analysis. Clear descriptions of project needs and objectives set the stage for thorough consideration of a range of alternatives and their effectiveness in meeting the needs and objectives of the project.

Also, at a recent meeting of the Open Space and Trails Committee, Pinal County Supervisor House expressed his surprise that he had not heard about all of this before. He also said that the Ray Mine folks really need this new location for tailings for a new mine in the works. For us, the mine has not provided full disclosure of why it so desperately needs this specific site and they have not justified sufficiently destroying one of our watersheds and important habitats.

This is a project with many environmental issues – water quality, cultural resources, endangered species, and impacts to the cultural and natural landscapes of the project area.

Not many of us may respond to your request for comments because most of us, including me do not quite understand all the ins and outs of this EIS Process and Asarco's technical expertise. I am in hopes that my comments will help in developing a workable and satisfactory outcome to this process not only for the future of ASARCO but for those of us who love the area and do not want to see it damaged or destroyed.

And is this proposed facility in anticipation to address future Ray Land Mine operations? As I understand it the initial proposed Ray Land Mine exchange has yet not been approved.

The description of the affected environment should focus on each affected resource or ecosystem. Determination of the affected environment should not be based on a predetermined geographic area, but rather on perception of meaningful impacts and natural boundaries.

Focus on resources of concern, i.e., those resources that are at risk and/or are significantly affected by the proposed project, before mitigation. Identify which resources are analyzed, which ones are not, and why;

Include appropriate baselines for the resources of concern with an explanation as to why those baselines were selected; and

The EIS should identify direct, indirect, and cumulative impacts to surface water and groundwater flows, wetlands, springs and seeps, vegetation, wildlife, and other water-dependent resources as a result of the proposed project.

What is difference between State & BLM / AND ?

EASY ON ENVIRONMENT AS LONG AS CLEAN pretty much
→ "OK of ENGINEER PLEASE Clean the C.I.A out (brush/SAND) SO our birds animals Don't get
Burn out with these Fires. It burns all the way BACK to Don Carlos DAM.

Miscellaneous (continued)
(1) General (continued)

We recommend that the Corps and the project proponent actively pursue pollution prevention techniques to prevent or reduce pollution at the proposed mine.

The Department can provide input and be a resource for The Corps regarding nongame and threatened and endangered wildlife. Through the Department's MOU with the FWS, and because of the FWCA, the Department is able to participate in the Endangered Species Act (ESA) Section 7 consultation process including helping to develop conservation measures and providing input to the Biological Opinion (BO.) The Department requests that The Corps invite our participation in Section 7 consultation from the beginning of the process and continue our participation throughout the consultation to ensure that Section 7 consultation is efficient and effective, and that any responsibilities of the Department are thoroughly vetted. Again, it is important to involve us early in the process and communicate throughout to provide the best input in a timely manner.

The ATA is working closely with Asarco, Pinal County—holder of the right-of-way for the existing AZT location, and the Bureau of Land Management in identifying the optimal realignment. The ATA profoundly appreciates the support and professional working relationship of these partners.

The Department requested Cooperating Agency status for the project based on special expertise related to wildlife resources potentially affected by the project. The Corps denied the Department Cooperating Agency status but we understand that the Corps has committed to coordinating with the State as required under the Fish and Wildlife Coordination Act (FWCA.)

(2) Project Opposition

I am writing to express my opposition to the proposal to construct a tailings pond for a copper mine in Pinal County, Arizona.

THESE LANDS ARE OWNED BY THE CITIZENRY OF THE USA, NOT BY BLM. THEY MANAGE IT. THERE IS A DIFFERENCE. BLM AS MANAGERHAS BEEN MANAGING OUR LANDS VERY POORLY AND ALLOWS PROFITEERS TO RIP OFF THE PUBLIC SO MUCH OF THE TIME. DENY THESE PIPELINES.

This proposal is an environmental and social disaster just waiting to happen and I demand that it be denied and that the regulations be rewritten as to prohibit this kind of blatantly dangerous project from even making it to the drawing board.

As a native Arizonan my first impulse is to oppose it due to past abuses to our state by the mining industry, but I also realize I need to get better informed in regards to this application.

USFWS SHOUDL REPRESENT NO PROBLEM- THEY SEEM TO ALWAYS FIND FR PROFITEERS AND SEEMTO HAVE NO REGARD FOR PROTECTING THE NATURAL LANDS OR BIRDS OR ANIMALS. THIS COMMENT IS FOR THE PUBLIC RECORD.

Sierra Club is opposed to such an extreme example of mining sprawl and its profound impacts on such a large area of undisturbed land and are concerned about its effects on the nearby Gila River.

Miscellaneous (continued)

(2) Project Opposition (continued)

We feel we must voice our opposition to this project.

While the GRIC-THPO concurs with the findings and project recommendations, the GRIC-THPO does not support the issuance of a 404 Permit to ASARCO, LLC. Continued mining and expansion of the mine operations can only be viewed as a detriment and adverse effect on our cultural landscape.

(3) Project Support

Mr. Langley thank you for the information on The Ray Mine, Proposed Tailing Storage Facility. For the record This Facility is needed and I support this project, facility! Get it done! I want them to do it. We Need work, Economy.

(4) Environmental Justice

Executive Order 12898 on Environmental Justice addresses disproportionate adverse impacts of federal actions on minority and low-income populations. The EIS should identify minority and low-income populations, and address whether the alternatives would cause any disproportionate adverse impact, such as displacement, changes in existing resources or access, or community disruption. The document should also explore potential mitigation measures for any adverse environmental justice effects. The EIS should describe the measures taken by the Corps to: (1) fully analyze the environmental effects of the proposed Federal action on minority communities and low-income populations; and (2) present opportunities for affected communities to provide input into the NEPA process. The EIS should state whether the analysis meets requirements of your agency's environmental justice strategy.

(5) Costs

All costs associated with mitigation efforts will be paid by Asarco.

The FWCA (16 USC § 662.d) provides that the cost of *planning for* and the construction or installation and maintenance of means and measures adopted to carry out conservation purposes constitute an integral part of the cost of projects. The Department expects to incur costs in planning for conservation of the wildlife resources affected. The Department is interested in discussing how The Corps may be able to incorporate our costs in planning for conservation purposes into the cost of the project and how mitigation measures preventing, or compensating for, the loss of and damage to wildlife resources, including compensatory land acquisitions, as well as the development and improvement thereof, may be incorporated into the costs of the project. Such mitigation measures should be described for each alternative evaluated.

(1) General Mitigation

The EIS should thoroughly identify and describe appropriate mitigation measures associated with the project, specifying which ones would be committed to by the mine operator and/or required by Federal, State, or local agencies.

The EIS should address how each measure would specifically mitigate the targeted impact, provide substantial detail on the means of implementing each mitigation measure, identify who would be responsible for implementing it, indicate whether it is enforceable, and describe its anticipated effectiveness.

For some impacts, there may be several appropriate and effective measures, and some measures may turn out to be less effective than anticipated. The mitigation plan in the EIS should, therefore, include implementation monitoring and effectiveness monitoring, as well as contingency measures that would be implemented if initial mitigation measures are unsuccessful.

When cumulative impacts occur, the EIS should discuss appropriate mitigation measures, clearly indicating who will be responsible for mitigation measures and how mitigation implementation will be ensured.

The EIS should describe contingency measures to be implemented based on trends and triggers identified by monitoring. The Draft EIS should also indicate the projected costs for these activities.

(2) Air Quality Mitigation - General

The EIS should discuss mitigation measures to minimize air pollutant emissions from the project. For each alternative, the EIS should identify which measures would be implemented, how effective the measures would be, whether and how they could be enforced, and who would enforce them. Appropriate measures exist that could be used to control PM10 emissions, as well as diesel particulate matter (DPM) and other criteria pollutants, from fugitive sources related to the project. In addition to suppressing road dust by watering or using other dust palliatives, we recommend the following emissions reduction measures.

- Use particle traps and other appropriate controls to reduce emissions of DPM and other air pollutants. Traps control approximately 80 percent of DPM, and specialized catalytic converters (oxidation catalysts) control approximately 20 percent of DPM, 40 percent of carbon monoxide emissions, and 50 percent of hydrocarbon emissions;
- Minimize project-related trips of workers and equipment, including trucks and heavy equipment;
- Lease or buy newer, cleaner equipment (1996 or newer model);
- Employ periodic, unscheduled inspections to ensure that construction equipment is properly maintained at all times and does not unnecessarily idle, is tuned to manufacturer's specifications, and is not modified to increase horsepower except in accordance with established specifications.

Mitigation (continued)
(3) Air Quality Mitigation – Climate Change

The EIS should also identify any specific mitigation measures needed to (1) protect the project from the effects of climate change (e.g., changes in storm magnitude or frequency), (2) reduce the project's adverse air quality effects, and/or (3) promote pollution prevention and environmental stewardship.

Any sustainable design and operation measures that can be identified as reducing greenhouse gases should be identified in the EIS with an estimate of the geenhouse gas emissions reductions that would result if measures were implemented. For each alternative, the EIS should indicate whether these measures would be required. Attention should be paid to explaining the quality of each greenhouse gas mitigation measure – including its permanence, verifiability and enforceability. We offer the following potential measures for the Corp' consideration:

- Incorporate alternative energy components into the project such as on-site distributed generation systems, solar thermal hot water heating, etc.;
- Incorporate recovery and reuse, leak detection, pollution control devices, maintenance of equipment, product substitution and reduction in quantity used or generated;
- Include use of alternative transportation fuels, biodiesel, electric vehicles, ethanol, etc. during construction and operation if applicable;
- Include passive water collection and treatment systems to reduce or eliminate power use;
- Commit to using high efficiency diesel particulate filters on new and existing diesel engines to provide nearly 99.9% reductions of black carbon emissions.

(4) Hydrology Mitigation

Describe the mitigation actions that would be taken should destabilization or contamination be detected, and identify who would be responsible for these actions.

Describe mitigation measures to prevent contamination of water and sediment at the tailings facility and along the rerouted highway, power line, and pipeline routes.

THE 500 YEAR STORM COMES EVERY 2 YEARS THESE DAYS. I DO NOT BELIEVE THE SEEPAGE COLLECTION IS SUFFICIENT.

(5) Waters of the U.S. Mitigation

The EIS should address opportunities for improving the quality and quantity of wetlands in the study area in designing facilities.

There are many issues to address in the upcoming EIS if the project is to move forward. The Corp's scoping document, for example, mentions mitigation for impacts to U.S. waters but largely defers discussion until the EIS is written. No longer burying Zelleweger Wash with tailings as originally planned is not mitigation. The same is true for taking measures to protect the Gila River from pipeline spills. These measures should be taken regardless and should not be counted as mitigation. The EIS needs to discuss in detail specific mitigation, including purchase of offsite waterways in an appropriate ratio.

(6) Waters of the U.S. Mitigation (cont)

(Arizona Game & Fish)

The Department expects the proponent to work toward a mutually beneficial agreement in implementing any mitigation requirements of the 404 permit through the Department's In-Lieu Fee Program as authorized by The Corps.

. If a discharge of dredged or fill material is permitted, the EIS should include identification of, and commitments to, required mitigation for impacts to waters of the U.S. for evaluation by the public and decision-makers. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation. Mitigation is necessary to offset environmental impacts in an arid environment with ephemeral, intermittent, and perennial waters of the U.S. Generally, the EIS discussion of mitigation should follow criteria outlined under the 2008 Mitigation Rule, which include, but are not limited to the following information:

- Acreage and habitat type of waters of the U.S. that would be created or restored;
- Water sources to maintain the mitigation area;
- Revegetation plans, including the numbers and age of each species to be planted;
- Maintenance and monitoring plans, including performance standards to determine mitigation success;
- The size and location of mitigation zones;
- The parties that would ultimately be responsible for the plan's success; and
- Contingency plans that would be implemented if the original plan fails.

(6) Recreation Mitigation - Arizona Trail

As a reroute cannot adequately mitigate the damage to the trail experience, additional mitigations as identified in this letter will be required.

The timing of these mitigation measures is a critical concern. The scenic degradation will begin at the moment construction begins. Permitting and construction of the trail re-routes can easily encounter delays, so to ensure that the trail remains intact and a quality recreational experience open for use, ATA requests that these mitigation measures be completed and in place before construction of the TSF begins.

Asarco is purchasing eleven sections of Arizona State Trust land for the TSF. Asarco should purchase additional State Trust Land over which the AZT lies and preserve it via transfer to an appropriate government entity for perpetual preservation and management in its natural condition. Priority acquisition targets are the State Trust lands in the Red Mountain area north of the Cochran town site, followed by Trust lands to the south of the project area. We understand BLM has completed some preliminary work towards acquisition of State Trust lands in the area under other acquisition opportunities.

(6) Recreation Mitigation - Arizona Trail (continued)

The transfer needn't be burdened by expensive analysis given the preservation intent. Development restrictions sufficient to protect cultural resources in concert with trail and view shed preservation and management of the property, and appropriate legal provisions, can be developed to satisfy the State's requirements to protect them.

Pinal County is a likely entity to hold the property under administrative designations that provide for strong, perpetual preservation and management for natural conditions. The Bureau of Land Management is another candidate but only if adequate legal protection can be placed on the property to ensure its perpetual preservation.

(7) Wildlife Mitigation

The EIS should discuss avoidance, minimization, and mitigation of losses or modification of habitat and plant and animal species composition. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation. We recommend that the EIS include a detailed mitigation plan, and include information similar to that recommended in the Waters of the U.S. section above.

For each alternative, the EIS should discuss the design elements and mitigation measures that would be taken to prevent exposure of migratory waterfowl and other wildlife to any toxic solutions or spills. The EIS should discuss the effectiveness of these measures to protect wildlife, and indicate how they would be implemented and enforced. Describe maintenance requirements and monitoring to ensure their effectiveness.

The NEPA analysis should describe impacts to state trust responsibility species, alternatives, and potential mitigation for those impacts. The Council on Environmental Quality (CEQ) requires a discussion of the impacts on all natural resources and the conservation potential of various alternatives and mitigation measures 40 CFR 1502.16(f). It is important to note that mitigation under NEPA should not be limited to mitigation for impacts to Waters of the U.S. but should include impacts from the *entirety* of the project including impacts to state trust responsibility species and habitats directly, and indirectly, impacted by the project and its connected actions. The Department expects the proponent to coordinate with the Department to achieve mutually beneficial agreement on how these impacts can be effectively mitigated, and to insist that this mitigation be integral to the EIS.

The Department offers our data, information, assistance, and expertise in developing and planning for means and measures to mitigate impacts through the NEPA process with a view to preventing loss of and damage to wildlife resources and expect such information will become integral to the EIS. The Department further requests that the data we have made available via the SWAP and various planning tools be utilized and summarized in the EIS for all SWAP listed species as encouraged by the FWCA (16 USC § 662.b.)

(8) Mitigation Costs

It is the ATA's expectation that as part of the mitigation plan Asarco, or its successors in interest, will pay all costs associated with the requested mitigation measures. These include relocation of the AZT, construction of water and trailhead improvements, and such necessary expenses as cultural and legal surveys, permitting, right-of-way acquisition, trail and trail head construction, travel and staff costs incurred by the Arizona Trail Association in connection with the development and implementation of the Arizona Trail mitigation measures and relocation of the trail, indirect costs to the Arizona Trail Association, and funding to adequately maintain the trail over a five year period.

Monitoring

(1) Monitoring - General

The EIS should describe the implementation, performance, and effectiveness monitoring procedures that would be required, enforcement mechanisms available to State or Federal regulators should the mine operator fail to properly follow the plan, and triggers for follow up action.

(2) Air Monitoring

The EIS should describe all air monitoring that has been conducted in the project vicinity, provide the results, and discuss how this information is used in emissions modeling for the project.

The EIS should discuss whether and how air quality monitoring would be implemented to ensure project compliance with all applicable air quality standards and permits.

(3) Hydrology Monitoring

The EIS should describe procedures for water quality and quantity monitoring and reporting. The EIS should also describe procedures for monitoring the functioning of the tailings in controlling contact with groundwater, surface water, and meteoric water (e.g., maintenance of run on/runoff channels, liners, underdrains, seepage collection areas, growth medium covers; ponding on top of facilities; etc.). Describe all monitoring locations for surface water, ponded water, and collected seepage; groundwater monitoring wells; and points of compliance on the site. The EIS should discuss monitoring frequencies, screening intervals, and parameters to be monitored during all phases of the project, including post-closure.

For each alternative, the EIS should discuss whether long-term post-closure monitoring and management would be needed to protect surface water and groundwater.

Provide past and current monitoring results and trends for surface water and groundwater quality at the existing Ray tailings facilities and discuss their relevance in predicting potential for, and protecting against, contaminated mine drainage from the proposed tailings facility;

Monitoring
(4) Wildlife Monitoring

Discuss how surveys were conducted for each species, the findings of each survey, and all follow-up surveys and monitoring that would be conducted before, during, and/or after the project occurs;

(5) Closure Monitoring

The EIS should discuss provisions that would be made under each alternative for post-operation surveillance to ensure that site closure and stabilization have been effective.

Noise (Impact on Nearby Residents)

Sorry for the last minuet contact. This regards the area of Kearny AZ and specifically Riverside where I have several properties. Several of us that aren't dependent on the mines are concerned about peripheral pollution and noise. The impact on the community is of concern.

Public and Worker Health & Safety (Accidents & Spills)

The Department is concerned with any potential for hazardous spills, standing water, and pollutants which may create a hazard to wildlife including the potential to impact migrating birds or dispersing amphibians such as leopard frogs. The EIS should prescribe all possible measures to prevent such pollution.

The EIS should discuss how accidental releases of hazardous materials would be handled, including along roads and pipeline routes, for each alternative. Identify the potential impacts of failure of the solution containment systems, methods for discovering such failures, and the degree to which impacts would be reversible.

Recreation
(1) Dispersed Recreation

The Department is very concerned about the impact this project may have on hunters, anglers, and wildlife recreationists that use the area, loss of hunting and angling opportunities, reduced hunt-permit revenue to the Department, and impacts on the quality of the outdoor experience outside the project footprint within view of the facility. There is high potential for loss and degradation of opportunity for recreationists that use the area. The Department seeks to minimize and mitigate that degradation as much as possible and to seek compensation to offset losses to wildlife recreation.

The Department fully expects the EIS to identify all (12) significant impacts to SGCN and SERI species, recreational use, and economic impacts related to wildlife resources and recreation.

(1) Dispersed Recreation (continued)

While this area may continue to needs the economics of the mines, we in this area are beginning to value ecotourism and cultural tourism. The Kearney Chamber of Commerce, the Copper Corridor Coalition, Oracle's Women's Network, the Nature Conservancy and many small businesses that are trying to promote tourism and outdoor recreation in this corridor as an alternative to the mining operations.

The years and years of recreation and hunting history that Ripsey has given the local area residents and visitors must also be considered. Not only will it take out the acreage asked for but it will be affect hundreds of more acres as a result of continual build up and working on the structure.

(2) Recreation – Arizona Trail

Should the TSF be constructed under the Ripsey Wash alternative, the Arizona Trail must be relocated.

Then Asarco must build the new trail prior to closure of the existing trail.

Trail Routes: ATA personnel very preliminarily examined alternative trail routes around the proposed TSF in Ripsey Wash. Two general feasible locations for a new route exist, one west of Ripsey Wash through open, rolling desert; and one to the east higher in the Tortilla Mountains. Both of these routes must be further refined to a near-final location and then analyzed according to recognized and agreed-upon criteria.

Adequate trailheads: The Ripsey Wash TSF will destroy the Florence-Kelvin trailhead. This facility—constructed with Asarco's assistance—will have to be relocated depending on which alternative AZT route is selected.

Provide replacement water sources: The existing trail has available water sources in Ripsey Wash. Asarco officials have previously agreed to provide alternative water sources along whichever alternative is selected. New water sources must be developed and maintained.

Currently the Ripsey segment is a beautiful section of the Arizona Trail which goes approximately eight miles along the east ridges of Ripsey and is enjoyed by locals as well as many visitors to the area. Horseback riders, Hikers, four wheelers and atv's use this area year round.

The EIS should discuss the fate of the Arizona Trail which parallels Ripsey Wash. This popular Trail seems to be under assault as it is also in the path of Resolution Copper's tailings dump just north of Highway 60 by Superior.

Regulatory Concerns and Compliance

(1) General

The Corps should closely coordinate with the appropriate agencies regarding regulatory requirements and controls.

As I understand it, the facility is being designed to store 751 million tons of mine waste. In this modern era of surface and groundwater depletion and contamination have we learned nothing about the threat that tailings ponds represent? That my government would even consider such a project points to the very real denial that it, and likely folks like you are in.

We are strong believers in property rights and do not want to be considered otherwise but we also believe that all property owners must go through local approvals of zoning and plating and that there should be no exemptions to this process. Historically mining companies have skirted this by inappropriately interpreting A.R.S. 11-812 claiming that this statute makes them exempt from local governance. Honorable Judge Robert Olsen, judge of the Superior court recently ruled against Freeport on their attempt to build a sulfuric acid translocation station next to one of our farms in Safford under the assumption that A.R.S. 11-812 exempted them from local due process. His ruling requires any offsite facilities such as this one on Florence-Kelvin hwy must go thorough local due process. It is my understanding that this application has not done that and before any Federal or environmental permitting can be done that first local zoning and platting is required.

(2) Regulatory Concerns – Air Quality

The Corps should coordinate with the Pinal County Air Quality Control District and the Arizona Department of Environmental Quality regarding regulatory requirements and controls in the project area. The EIS should demonstrate that the direct and indirect project emissions conform to the approved State Implementation Plan (SIP) and would not cause or contribute to violations of the NAAQS.

The EIS should identify all air permits and/or permit modifications that would be needed for the proposed project and discuss how the project would meet permitting requirements. The EIS should discuss whether a PSD permit would be required for the proposed project. If a PSD permit is required, the mining company will need to determine increment consumption as well.

(3) Regulatory Concerns – Waters of the U.S.

All required Federal and State permits for work potentially affecting wetlands or waters of the U.S. should be identified.

If a General Conformity Determination would be required, EPA encourages the Corps to work with the appropriate agencies in developing the Draft General Conformity Determination for the project and to identify additional mitigation measures that would be necessary.

(4) Stormwater

. The EIS should discuss the applicability of Arizona's General Permit for Stormwater Discharges Associated with Industrial Activity – Mineral Industry (AZMSG2010-003) to this project. The EIS should include a storm water pollution prevention plan and discuss specific mitigation measures that may be necessary during operations, closure, and post-closure for each alternative.

Furthermore, stormwater system maintenance may be needed long after the facility is closed.

(5) Regulatory Concerns – Hydrology

A facility that would require perpetual pumping should not be permitted.

(6) Spill Prevention Control and Countermeasures (SPCC)

Describe the project's spill prevention, control, and countermeasures plan, and petroleum-contaminated soil management plan.

(7) Regulatory Concerns – Wildlife

It is the policy of the Arizona Game and Fish Commission that the Department shall seek compensation at a 100% level (i.e. no net loss), when feasible, for actual or potential habitat losses resulting from land and water projects. This policy requires the Department to develop plans for means and measures to mitigate for impacts to wildlife and habitat resulting from land and water projects.

When conservation measures cannot minimize or avoid 100% of the impacts of the facility, the Department supports offsetting impacts through the transfer of lands to conservation ownership. However, transfer alone is unlikely to discernibly offset the impact to the injured species. Conservation lands *must unquestionably offset the loss of habitat* by demonstrating no net loss of wildlife values through higher benefits such as funded habitat enhancement activities, activities increasing ecological integrity, or actions that increase viability for species.

The Department understands the project footprint for the proponent's preferred alternative is 2,129 acres. The Department will consider this a starting point when considering compensation at 100% level. Preservation of 2,129 acres of existing habitat through a purchase and transfer, or conservation easement still results in a 2,129 acre net loss of existing habitat. Therefore, the Department suggests that compensation lands be protected at a higher than 1:1 acreage and be funded to enhance habitat that will achieve 100% replacement value for the habitat lost. Only through enhancement of the habitat on these and other lands will there be an additive effect.

I THINK THIS MINE PRESENTS A CHALLENGE TO THE NEIGHBORHOOD.

The community is growing with new families moving in. We are concerned that the mine with all of its weight will disregard our community and not be accountable to such a small community. Please regard this as a concern that I am voicing and please note it.

Also see comments on Recreation — where several comments made on tourism and its important to the region and communities.

Soils (Growth Medium)

For each alternative, the EIS should describe the availability, properties, and sources of growth medium, discuss how growth medium would be applied to disturbed areas, and identify any additional measures (e.g., amendments) that may be needed to ensure successful reclamation and revegetation of all disturbed areas.

Transportation/Roads

This wash allows access to the upper reaches of Ripsey as well as the crossover road into Hackberry and what the locals call the flats above Ripsey from the Florence Kelvin road to the Tecolote ranch and beyond.

Changing the highway, putting in pipes to divert water, trucks running up and down the roads to and from the storage facility is not conducive to this area.

I need to know what is planned for The Ripsey Wash Road from the Florence-Kelvin Highway to Proposed Detention Pond to Old Ripsey Mine. I use this road (The Ripsey Wash Road) to travel from Florence-Kelvin Highway to the Old Ripsey Mine, to haul ore from this mine and to supply as needed.

Vegetation

(1) Protection of Riparian Habitat

... The EIS should identify non-jurisdictional wetland and riparian habitat as well as other unique or important habitat areas that could be affected by each alternative. The EIS should describe their functions and values and the acreages likely to be affected. The EIS should address opportunities for improving the quality and quantity of these areas in designing facilities.

It is the policy of the Arizona Game and Fish Commission (the Commission) that the Department shall recognize riparian habitats as areas of critical environmental importance to wildlife and fisheries and that the Department shall actively encourage management practices that will result in maintenance of current riparian habitat, and restoration of past or deteriorated riparian habitat in accordance with the Department's Wildlife Habitat Compensation procedures.

Riparian habitat is defined by the Commission as distinct vegetation and land shape, which occur in or adjacent to drainage ways and/or their flood plains. It is characterized by different species or life forms, both plant and animal, than those of the immediately surrounding habitat. Ripsey Wash, and the Gila River, which would be indirectly impacted by the project, meet the definition of riparian areas. As such, the Department recognizes the area as being of critical environmental importance.

(2) Spread of Invasive Species

The Department is concerned with potential for spread of invasive species and pathogens. The Corps should determine if there is any potential for the introduction of noxious weeds, pathogenic fungi (chytridiomycota), and other organisms which may cause disease or alteration to ecological functions.

(3) Threatened and Endangered Vegetation Species

Endangered Cacti , bird species; other animals such as deer, javelina, ground squirrels, etc are a prime example of those affected by this massive structure.

(4) Waters of the U.S.

The EIS should describe all waters of the U.S. that could be affected by the project under each alternative, including past impacts. The discussion should include acreages and channel lengths, habitat types, values, and functions of these waters.

Wildlife

(1) General – Species and Habitat

The Department requests that The Corps evaluate the project in the context of Arizona's State Wildlife Action Plan (SWAP) and use the species lists found in the SWAP when considering impacts to wildlife to ensure that impacts to state trust responsibility species are evaluated and considered. These lists include Species of Greatest Conservation Need (SGCN) and Species of Economic and Recreational Importance (SERI.) The EIS should contain a discussion of the Department's conservation policies underlying the SWAP and include analysis of project impacts to the SGCN and SERI. The Department expects that The Corps will require a thorough survey of the wildlife resources in the project area and an evaluation of impacts to those resources as part of the EIS. The Corps should first consult with the Department in determining the reasonable scope of such evaluation.

Discuss how surveys were conducted for each species, the findings of each survey, and all follow-up surveys

The local rancher of the A Diamond Ranch knows first hand about the unique wildlife which resides in the wash area and I know that the Game and Fish Department will be commenting on this area as an important wildlife corridor.

The Department also expects a thorough discussion of cumulative impacts, to include existing and planned mining activity in the Gila watershed which could have a detrimental effect on the biota of the Gila River and associated riparian area.

The Department fully expects the EIS to identify all significant impacts to SGCN and SERI species, recreational use, and economic impacts related to wildlife resources and recreation.

The EIS should discuss all direct, indirect, and cumulative impacts to surface water and groundwater quality and quantity from the proposed project and alternatives both during operations and after closure. Effective chemical and/or physical controls to prevent uncontrolled seepage through the tailings should be thoroughly analyzed in the EIS. The EIS should describe all potential project discharges, seepage, temporary ponding, diversions, and groundwater pumping, as well as the potential effects of these activities on water rights, beneficial uses, and wildlife.

The EIS should assess the likely impacts of each alternative on the water quality, water availability, and habitat for organisms in waterbodies in the CESA, including indirect impacts to waters upstream and downstream of the tailings impoundment. All major water bodies in the CESA area are perennial and carry the Aquatic and Wildlife warm water (A&Ww) designated use, which means there are plants and animals to protect and more stringent water quality standards apply. A&Ww water bodies are protected by the suspended sediment concentration standard (which does not apply to ephemeral or effluent dependent waterbodies). In Arizona Department of Environmental Quality standards, the A&Ww designation signifies the "the use of a surface water by animals, plants or other organisms for habitation, growth or propagation." The A&Ww designation includes the Gila River, from San Pedro River to Mineral Creek; Devils Canyon, from Headwaters to Mineral Creek; Mineral Creek, from Devils Canyon to Gila River; Gila River, from Mineral Creek to Ashurst Hayden Dam; and Walnut Creek, a tributary to the Gila River.

(1) General - Species and Habitat (continued)

The Corps may find the Department's Wildlife Habitat and Mapping tools such as Habimap™ Arizona, and the Environmental Review Tool useful in evaluating potential impacts and comparing between alternatives. Ripsey Wash, a major intermittent tributary to the Gila River, is populated with a high density of saguaros and ironwood trees, and is potential habitat for rare species such as the cactus ferruginous pygmy owl and, candidate for federal listing, the Sonoran desert tortoise, as well as being of high value to game species such as desert mule deer and javelina. The Department has ranked the area as having some of the highest wildlife habitat values in the state. The SWAP identifies the area as of the highest importance for both SERI and SGCN species on a statewide scale. The Department's Species and Habitat Conservation Guide (SHCG) ranks the area in the most important areas of the state for conservation of wildlife and habitat. As such, the Department places a high priority on review of projects that may negatively impact that habitat.

The Department is concerned with take of birds or disturbance of birds nesting, roosting, and utilizing the area. The Gila River is important habitat for many avian species including breeding habitat for the federally Endangered southwest willow flycatcher. Ripsey Wash is potential reintroduction habitat for cactus ferruginous pygmy owls whose population the Department intends to augment through our active captive breeding program. The Department recommends that the proponent develop an avian conservation plan in consultation with the Arizona Game and Fish Department to be authorized by the Arizona Game and Fish Commission to address the potential for take and disturbance of birds and nests. Arizona Revised Statutes §17-236 is more restrictive than the Migratory Bird Treaty Act in that it prohibits the take of birds (and disturbance of nests and eggs) including migratory *and non-migratory* birds.

(2) Sensitive, Threatened and Endangered Wildlife Species

Identify all petitioned and listed threatened and endangered species and critical habitat, as well as sensitive species, that might occur within the project area;

.. We recommend that the Corps work closely with the U.S. Fish and Wildlife Service (USFWS) and the Arizona Game and Fish Department to determine potential impacts of the project alternatives on plant and wildlife species, especially species classified rare, threatened, or endangered on either state or federal lists.

Include the biological assessment by reference or as an appendix, if one is prepared

If a biological opinion is prepared by the USFWS, it should be summarized or included as an appendix in the Final EIS to demonstrate that the preferred alternative is consistent with the biological opinion.

Endangered Cacti, bird species; other animals such as deer, javelina, ground squirrels, etc are a prime example of those affected by this massive structure.