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July 31, 1995

In Reply Refer To:
AESO/SE
2-21-94-F-186

MEMORANDUM

TO: District Manager, Phoenix District Office, Bureau of Land Management,
 Phoenix, Arizona

FROM: State Supervisor

SUBJECT: Cyprus Tohono Mine Expansion Biological Opinion

This is in response to your letter of January 27, 1995, requesting formal consultation with the Fish and Wildlife Service (Service) under section 7 of the Endangered Species Act (Act) for the proposed Cyprus Tohono Mine expansion project on the Tohono O'Odham Indian Reservation in Arizona. The formal consultation period began on January 30, 1995, the day we received your request. The species of concern for this consultation is the lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) which is listed as endangered under the Act. On May 20, 1995, the Bureau of Land Management (BLM) also accepted a April 18, 1995, request from the Corps of Engineers to be the lead agency for section 7 consultation required for issuance of a permit under section 404 of the Clean Water Act. The best scientific information available, including data in our files and the scientific literature, were used in this biological opinion.

DESCRIPTION OF THE PROPOSED ACTION

Although Alternative A was identified as the proposed action in the draft environmental impact statement for this project, the Service was advised on February 6, 1995, that Alternative B was the selected alternative. This consultation is for Alternative B. The proposed project site is located in south-central Arizona, approximately 32 miles southwest of Casa Grande on Indian Highway 15. The mine is situated on the southwestern flank of the Slate Mountain formation. The Slate Mountains are a low Sonoran desert range with a maximum elevation of 3,332 feet. Elevations of the proposed project site range from 1,800 to 2,252 feet. The proposed action consists of conversion from in-situ mining to open pit

mining operations at the mine. Implementation would result in the disturbance of approximately 1,850 acres. That figure would include a total of approximately 295 acres previously disturbed by exploration and mining activities. Approximately 1,555 acres of new disturbance would result from construction and operation of the open pit mine, relocation of the mine access road, and minor modification of some existing facilities. The project involves the construction and/or operation of the following: open pit mine expansion, overburden disposal area, heap leach pads and ponds, stormwater collection and recycling, processing facilities, access and service roads, support facilities, utilities, spill prevention, health and safety plans, and reclamation and closure.

The existing open pit would be continuously expanded throughout the life of the mine (13 years). Pit size at the anticipated life of the mine would be approximately 4,000 feet in diameter and 1,000 feet deep. Extraction of ore using an open pit process would require removal of overburden by drilling and blasting. Charges for blasting would be designed based on rock type, water conditions, and local geology. Blasting would occur on the order of once per day. Ore would then be loaded into haul trucks for transport to the processing area.

The overburden disposal area would be located southwest of the open pit, south of the existing access road. It would be approximately 1,025 acres (of which 5 acres are previously disturbed) and contain approximately 367 million tons of overburden at the end of mine life. Initial overburden would be used to form a 50-foot high starter berm. Overburden would then be placed behind the berm until it reached a maximum height of 200 feet with an 85-foot setback. No liner will be placed under the disposal area; the overburden is acid consuming.

Construction of heap leach pads would disturb approximately 435 acres. Pads are proposed for two areas. The primary heap leach pad would be constructed south of the open pit. Ultimate design capacity would be 128.2 million tons with leach ore on the pad reaching an average height of 200 feet. The secondary heap leach pad would be located east of the open pit, north of the existing access road. Design capacity for the secondary pad would be 29.6 million tons, with an average height of 50 feet. The area under the proposed pads would be cleared and topsoil removed to a depth of 6 inches to 2 feet. The pad base would be constructed of compacted fill overlain by fine bedding material. The pad would be lined with a single synthetic liner of 80 mil high density polyethylene. Interliners may be installed to prevent further leaching and/or leaking of solutions and drain to the side collection system. The solution collection sumps on the pad edges would be equipped with a single liner collection system. A series of underliner collection pipes spaced on 1,000-foot centers under the main liner would be installed. The underliner pipes would serve to collect any potential leakage. The pregnant leach solution would be channeled to the collection ponds through a combination of a lined ditch and piping. Two pregnant leach solution collection ponds would be constructed directly west of the pads. The ponds would disturb approximately 3 acres of undisturbed lands. The ponds would be excavated, lined, and designed for capacity of 7 million gallons each. Secondary containment lines would be

placed over the bottom liner for leakage protection. Installation of a leakage system would divert leakage between the liners to a collection sump which in turn would pump volumes back into the ponds. After the third year of pad construction and operation, the pregnant leach solution collection pond capacity would be insufficient to contain a 100-year, 24-hour storm event. A lined overflow ditch would be installed to allow overflow to drain into the solar evaporation ponds which have sufficient capacity and are lined with sulfide mill tailings.

A system of diversion ditches and drainages would be installed to route stormwater around and away from the mine site and work areas. Unlined sediment basins would be installed to collect these diversions. The existing stormwater permit for the mining operation would be modified as construction begins to expand the existing diversion ditch and drainage system. The mill tailings impoundment would continue to be maintained as the primary stormwater runoff control base. The existing evaporation pond would be used in case of overflow during heavy rainstorms. Stormwater runoff upslope of the heap leach pads and ponds would be diverted to the tailings pond through an unlined ditch. Runoff contacting roads downslope of the heap leach pad would be channeled to the solar evaporation ponds, which are lined with tailings. An emergency overflow system for the heap leach ponds would be installed after the first three years of operation, when the pond capacity is insufficient to handle a 100-year storm event in addition to projected leach solution capacities. This overflow system would be used only during emergency stormwater events. Water collected in the open pit mine from rainfall and/or minor seepages, as well solution from the in-situ operation, would be collected in a sump and pumped back into the process water system. A sedimentation basin would be constructed downhill of the overburden disposal area.

A second solvent extraction unit would be constructed as part of the existing solvent extraction/electrowinning plant when solution flows exceed 3,000 gallons per minute. This facility would be placed directly west of the existing plant. Roaster production would be maintained on an as-needed basis only, and roaster ponds would not be used for open pit operations.

Proposed new disturbances for access roads are limited to the construction of a small connecting haul road, north of the pit, from the existing access road. Approximately 1.7 miles of new access road would be required to link the existing access road to the open pit haul road.

A maintenance/truck shop which would accommodate 240-ton haul trucks would be constructed adjacent to the open mine pit. A 100,000 gallon fuel tank would be installed adjacent to the shop, as well as two new 2,000-ton capacity sulfuric acid storage tanks. A haul truck dispatch tower would be constructed near the main haul road into the open pit to regulate the flow of trucks.

Water would be pumped from existing wells and existing water lines would deliver the water to the main storage tanks. New distribution piping would be installed to the proposed crushers, conveyors, truck shop, and security building. A new 69 kV power line and associated transformers would be required at the open pit operation. Onsite sewage disposal would continue to be directed to the four existing sedimentation-type lagoons. The restrooms within the proposed truck dispatch tower would drain to a septic tank which would be pumped to the lagoons. No additional disposal systems are required.

All existing and proposed storage tanks would have spill control measures such as berms to contain spills. All existing and proposed ponds would be designed to either contain maximum runoff from a 100-year 24-hour storm event, or divert runoff through overflow systems to other ponds.

Reclamation of the site includes the following areas and activities. Remaining in-situ ore would be relocated to the heap leach pad for additional leaching. Several million tons of vat tailings residue would be relocated through excavation and leached on the heap leach pads. The remaining tailings would be capped with coversoil, graded, and revegetated upon closure. Concrete remnants from building demolition would be buried in the pit. The pit would be fenced to prevent access. The total dissolved solids can be expected to increase in time in the pit; calcium, magnesium, sodium chlorides, and other salts can be expected to precipitate as the ion concentrations increase with continued evaporation. Overburden would be used to cover disturbed areas prior to revegetation. Revegetation would begin at year 5 and include other native species transplants from the original site. Reclamation of the heap leach facilities includes rinsing the heap leach piles until pH reaches three or higher. The heap piles would be shaped, graded, and sloped.

The cover soil stockpiled during construction would be stored for revegetation of the piles. Methods of revegetation may include drill seeding, hydroseeding, and/or transplanting. If required, surface disturbed areas would be capped with topsoil or overburden in conjunction with seeding. All buildings except those that revert to the Tohono O'Odham Nation (Nation) would be removed. For the buildings that remain, roads, water, power, communications, sanitary disposal lagoons, and the mine construction materials would be left in place. Soils surrounding the processing plant and heap leach area would be investigated and those not meeting Environmental Protection Agency standards would be removed to the heap leach areas. Overburden would be used to backfill any removed soils. The surface of the backfilled plant area would be graded and sloped to promote drainage. Surface water runoff uphill of the plant area would be routed away from the disturbed areas, and surface water runoff inside the plant area would be routed to the tailings impoundment area for evaporation. Ongoing monitoring programs would continue through the life of the mine and continue for two years following closure. Quarterly monitoring would measure both groundwater quality and quantity.

BACKGROUND - LESSER LONG-NOSED BAT

The lesser long-nosed bat was listed (originally, as Sanborn's long-nosed bat) as endangered on September 30, 1988 (53 FR 38456). No critical habitat has been designated for this species. The lesser long-nosed bat is a small, leaf-nosed bat. It has a long muzzle and a long tongue. These features are adaptations to collect nectar from the flowers of columnar cactus, such as the saguaro and organ pipe, and from paniculate agaves (Hoffmeister, 1986). This migratory species is found throughout its historic range from southern Arizona, through western Mexico, and south to El Salvador. It occurs in southern Arizona from the Picacho Mountains southwest to the Agua Dulce Mountains and southeast to the Chiricahua Mountains and south to Mexico. Arizona roosts are occupied from late April to September (Cockrum and Petryszyn, 1991). Adult females, most of which are pregnant, and their recent young are the first to arrive, and they form maternity colonies at lower elevations near concentrations of flowering columnar cacti. After the young are weaned, these colonies disband in July and August; some females and young move to higher elevations, primarily in the southeastern parts of Arizona near concentrations of blooming paniculate agaves. Adult males are known mostly from the Chiricahua Mountains but also occur with adult females and young of the year at maternity sites (Fleming, 1994).

STATUS AND ENVIRONMENTAL BASELINE - LESSER LONG-NOSED BAT

Loss of roost and foraging habitat, as well as direct taking of individual bats during animal control programs, particularly in Mexico, have contributed to the current status of the species. Suitable day roosts and suitable concentrations of food plants are the two resources that are critical for the lesser long-nosed bat (Fleming, 1994). As indicated above, the lesser long-nosed bat consumes nectar and pollen of paniculate Agave flowers and the nectar, pollen, and fruit produced by a variety of columnar cacti. Caves and mines are used as day roosts. The factors that make roost sites useable have not yet been identified. Whatever the factors are that determine selection of roost locations, the species appears to be sensitive to human disturbance. Instances are known where a single brief visit is sufficient to cause a high proportion of lesser long-nosed bats to temporarily abandon their day roost and move to another. Perhaps most disturbed bats return to their preferred roost in a few days. However, the sensitivity suggests that the presence of alternate roost sites may be critical when human disturbance occurs. Interspecific interactions with other bat species may also influence lesser long-nosed bat roost requirements.

Known major roost sites include 16 large roosts in Arizona and Mexico (Fleming, 1994). According to surveys conducted in 1992 and 1993, the number of bats estimated to occupy these sites was greater than 200,000. Twelve major maternity roost sites are known for Arizona and Mexico. According to the same surveys, the maternity roosts are occupied by over 150,000 lesser long-nosed bats. The numbers above indicate that although there may be relatively large numbers of these bats known to exist, the relative number of known large roosts is small. Disturbance of these roosts and the food plants associated with them could

lead to the loss of the roosts. The limited numbers of maternity roosts may be the critical factor in the survival of this species.

EFFECTS OF THE PROPOSED ACTION ON LISTED SPECIES

The closest identified roosting site is a maternity roost that is located approximately one mile from the limit of the proposed pit. This is one of only three maternity roosts of this species known to exist in Arizona. Foraging areas for the lesser long-nosed bat are located adjacent to the roosting site and the project area. Approximately 3,600-4,000 bats were estimated to occupy the roost site during surveys in 1992-93 (Fleming 1994; Dalton and Dalton 1994). The implementation of the project may have serious impacts on lesser long-nosed bats. The proximity of the roost to the project site exposes the bats to possible direct disturbance from mining activity, contaminated water sources, and will result in loss of potential food plants. Unknowns concerning the biology, and especially the foraging ecology, of this species remain. Consequently, evaluating the full effects of the action is difficult.

Vegetation of the project area is classified as transitional between the Arizona Upland and Lower Colorado River Valley subdivisions of the Sonoran Desert. Representative species include saguaro and organ pipe cactus. There is a significant population of saguaro cacti present, with sparse densities in the southwestern portion of the area and higher densities in the northern and eastern portions. Organ pipe cacti are limited to the northern portion of the mine area associated with the Slate Mountain foothills. The mine lease area has been extensively grazed in many areas, and has been subject to some removal of saguaros in the recent past. However, the vegetation is generally healthy with no wide scale vegetational degeneration evident. Approximately 1,555 acres of undisturbed Sonoran desertscrub and 295 acres of previously disturbed land would be affected. A direct impact to lesser long-nosed bats would be the eventual loss of potential foraging habitat. Noise and vibration from construction and operation could also constitute impacts. The level of increased noise and vibrations associated with blasting and other mine expansion operations is not definitely known. The heap leach pads and the acid solution ponds may affect lesser long-nosed bats. The odor (fumes) may alter the bats' normal behavior and perhaps even interfere with their detection of food plants. Depending on such things as wind direction, which was not analyzed in the biological evaluation, the roosts that are only one mile from the project, could be "washed" in the fumes from the pads and the ponds. This species may use open sources of water such as the open solution ponds for watering.

A 1994 study investigated the roosting requirements of and use of foraging habitat by lesser long-nosed bats at the project area (Dalton and Dalton 1994). Determining the use of abandoned mine sites in the vicinity of the proposed project, the use of the proposed mine expansion area for foraging, and the proportion of cacti in the proposed area used as food sources were the objectives of the study. All abandoned mine sites within 2 miles of the maternity roost were checked for use by bats. Bats from the maternity roost were light-

tagged and their subsequent movement and activity (foraging) were observed. Saguaro flowers within portions of the proposed project were rigged with Watkins Detectors to determine the use of the flowers by bats. Three abandoned mine sites (the known maternity roost and two night roosts) that are clustered together were found to be used by lesser long-nosed bats. For the two-night study, four local foraging areas were identified and all observed foraging was observed within 0.75 miles of the maternity roost. No lesser long-nosed bats were observed to forage in the areas to be cleared for the mine expansion. However, some of the bats were observed flying in the proposed heap leach pad and mine pit areas. Only 1.2 percent of the saguaro flowers in the proposed mine expansion areas that were rigged to detect use by bats indicated such use. The researchers stated "from this study, the areas within the proposed mine expansion sites were not significantly utilized by Leptonycteris as part of its foraging territory during the summer of 1993," but also "because this was such a small study and so little is known of the foraging [of Leptonycteris]..., we are reluctant to state unequivocally that bats do not use the areas of the proposed expansion." They also stated data are not sufficient to indicate the bats' utilization of the site under, for example, different climatological conditions, and that the importance of the area to the bats is simply unknown.

The lesser long-nosed bat forages on the nectar and pollen of the columnar cacti (saguaro and organ pipe) that occur in large numbers adjacent to the project area. It may also forage in the habitat contained within the project area. The effects of the action on the bat are the expected loss of food plants due to the construction of the proposed project, noise and vibration due to construction and operation, and possible contamination from the heap leach pads and solution ponds.

CUMULATIVE EFFECTS

Cumulative effects are those effects of future non-Federal (State, local government, or private) activities on endangered or threatened species or critical habitat that are reasonably certain to occur in the foreseeable future. Future Federal actions are subject to the consultation requirements established in section 7, and, therefore, are not considered cumulative in the proposed action.

Mining operations closest (within 50 miles) to the proposed project site consist of ASARCO Silver Bell Mine, ASARCO Sacaton unit, ASARCO Santa Cruz research project, and Golden Green Placer Mine. A new pit is planned slightly northwest of the existing open pits in the Silver Bell Mountains. The research facility has begun preliminary studies and permitting to determine the feasibility of a pilot-scale operation. The Golden Green Placer Mine is a private mine claim within the Nation, and approximately 20 miles southwest of the proposed project site; it has disturbed 40 acres. ASARCO's Mission Mine complex is within the San Xavier District of the Nation; approximately 2,500 acres have been disturbed at this mine. No other mining projects are planned within the Nation, although 145 patented and 15 unpatented mining claims are present.

No other major projects are currently under consideration in the vicinity of the mine in Pima County. One potential future project, an Aero America theme park, was identified in Pinal County to be located north of Interstate 8. Development associated with the town of Casa Grande is over 25 miles away.

On Nation lands, local projects in the Sif Oidak District that are currently under consideration for future implementation include the following. A multi-purpose commercial complex on Indian Highway 15 would be located between Cyprus and Jackrabbit and disturb approximately 40 acres. The Vaiva Vo cotton farm, which is located north of the proposed project site, would expand to an additional 800 to 1,000 acres. The Sif Oidak District may be considering the development of a casino which would disturb approximately 100 acres. Agricultural development (farming of cotton, wheat, or alfalfa) is currently being considered for approximately 10,000 acres located south of North Komelik village; corn and potato farming is also being considered to grow crops for distribution to the Frito-Lay factory in Casa Grande.

BIOLOGICAL OPINION

Based on the best scientific and commercial data available, it is the biological opinion of the Service that the proposed Cyprus Tohono Mine expansion is not likely to jeopardize the continued existence of the lesser long-nosed bat.

INCIDENTAL TAKE

Sections 4(d) and 9 of the Act, as amended, prohibit taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempting to engage in any such conduct) of listed species of fish and wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of the agency action, is not considered a prohibited taking provided that such taking is in compliance with the incidental take statement.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The BLM has a continuing responsibility to regulate the activity covered by this incidental take

statement. If the BLM (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

The Service anticipates incidental take of lesser long-nosed bats will be difficult to detect for the following reasons. Take is expected to occur due to loss of an unknown number of saguaros and organ pipe cacti on 1,422 acres of foraging habitat of the bat. Take could also result from noise and vibration from construction and operation and poisoning from heap leach pads and solution ponds. Impacts to the species as a result of such loss would be difficult to detect and measure. However, the level of take of this species could be indicated by monitoring the nearby maternity roost. Our records indicate that the mean number (excluding outliers) of bats detected in counts conducted at this roost is approximately 2,800. The Service recognizes that bats are difficult to count, and that the nature of the structure providing this roost site exacerbates that difficulty. If the number of lesser long-nosed bats in the maternity roost that can be counted is below 2,000 for each of any 3 consecutive years at any time during the life of the mine, the anticipated level of incidental take will be considered to be exceeded, and reconsultation with the Service on this project will be required. The above does not mean that the Service is expecting or allowing take between the above figure and the maximum number (or even the mean number) of bats that have been found in the roost. The figure of 2,000 will be used as a decision point for reconsultation.

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of lesser long-nosed bats. Implementation of these measures shall be conducted in accordance with the terms and conditions in the following section.

1. Minimize disturbance of the bat's foraging habitat as much as possible.
2. Salvage as many columnar cacti that will be affected by the project as possible, and transplant some of these plants to lands adjacent to the project site.
3. Cover the solution ponds and ditches or make them an enclosed system to prevent any possible contact by lesser long-nosed bats with these features. Alternatively, determine if lesser long-nosed bats use open water sources on the project site. In addition, determine the actual composition of the contaminant sources.
4. Monitor the maternity roost for the life of the mine plus three years.

5. Investigate the appropriateness of controlling access to roost sites through fencing, gates, or bat gates, to preclude unnecessary human access to reduce the possibility of disturbance.
6. Stabilize and/or improve the integrity of the mine site(s) that are used as maternity roosts as necessary.

Terms and Conditions for Implementation

In order to be exempt from prohibitions of section 9 of the Act, the BLM must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

- 1.1 All clearing of land within the project area will be minimized to the greatest extent possible. The BLM and Cyprus Tohono will investigate and implement all possible measures to reduce the extent of disturbed land resulting from the project.
- 2.1 There may be appropriate locations, adjacent to the project area, that are suitable for the transplantation of columnar cacti of sizes and in densities that could function as food plants for lesser long-nosed bats. As a result, viable stands or clusters of columnar cacti (saguaro and organ pipe) that would be lost due to clearing of land, or for any other reason, of this project will be transplanted to such areas within the lease area or to adjacent lands. Transplantation will be performed according to techniques currently recognized as successful. The transplantation effort will be monitored and results will be reported to the Service.
- 3.1 All solution ponds and ditches will be covered or converted to a closed system to prevent any contact between lesser long-nosed bats and the solutions. No covers may be utilized that could possibly result in the entanglement or entrapment of the bats. As an alternative to the above, the solution ponds and ditches may be constructed if a robust effort to determine the presence of lesser long-nosed bats at these open water sources is conducted. The water sources will be mist-netted systematically throughout the period that lesser long-nosed bats are in Arizona. In addition, observation for activity of the bats at the water sources will be included in any studies involving light-tagging (or other tracking) conducted at the nearby roosts. This survey/monitoring effort will be done for two full seasons (April-September) of lesser long-nosed bat occurrence in Arizona. The first full season of survey/monitoring may be performed at the currently existing solution ponds and ditches. If any evidence (i.e., any captures or observations of lesser long-nosed bats) is obtained that lesser long-nosed bats are found in or use the areas of the open water sources, then those ponds and ditches will be covered with material as described above. Once such covering is done, the water sources will be monitored to ensure that bats are not being entrapped in the coverings. In addition, whether the water sources are covered or not, the solutions will be sampled and the actual

content of substances harmful to wildlife (e.g., acid, heavy metals) in those samples will be determined and reported to the Service.

- 4.1 Exit counts of the maternity roost will be conducted at the appropriate time(s) of the year to determine the number of lesser long-nosed bats using the roost each year.
- 5.1 The BLM will work with the Tohono O'Odham Nation and Cyprus Tohono Corporation to appropriately control access to the known roost sites to prevent unauthorized human encroachment.
- 6.1 The roosts identified in the foraging study for this project will be left undisturbed with the exception of the main shaft and adit of the mine that serves as a roost for lesser long-nosed bats. That main shaft and adit will be stabilized if such action is found to be appropriate. The BLM will work with the Service, the Tohono O'Odham Nation, and Cyprus Tohono to determine the reasonable and appropriate actions that are necessary to stabilize the shaft and adit. The integrity of the roost will also be monitored at least every year in conjunction with the monitoring described in term and condition 4.1.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. With implementation of these measures, the Service believes that the number of lesser long-nosed bats using the nearby maternity roost that can be counted will not drop below 2,000. If the number of lesser long-nosed bats using the roost that can be counted drops below 2,000 for each of any 3 consecutive years during the life of the active mine plus three years, then the incidental take allowed by this incidental take statement will be considered to be exceeded. If, during the course of the action, this minimized level of incidental take is exceeded, such incidental take represents new information requiring review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Reporting Requirements

If, during the course of the action, incidental take occurs beyond that addressed above, such incidental take would represent new information requiring review of the project. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for review of the project.

Upon locating a dead, injured, or sick individual of an endangered or threatened species, initial notification must be made to the nearest Fish and Wildlife Service Law Enforcement Office. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered species or preservation of biological materials

from a dead animal, the finder has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed. In Arizona, contact (602/379-6443) or the Arizona State Office (602/640-2720).

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term "conservation recommendations" has been defined as Service suggestions regarding discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information. The recommendations provided here relate only to the proposed action and do not necessarily represent complete fulfillment of the agency's section 7(a)(1) responsibility for these species.

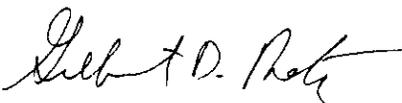
- A. All blasting that will be required for the project should only be done during the time that lesser long-nosed bats are not expected to be in the nearby maternity roost. The period when bats are not expected in Arizona is between September 1 and April 30.

In order for the Service to be kept informed of actions that either minimize or avoid adverse effects or that benefit listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

CONCLUSION

This concludes formal consultation on the project submitted to the Service by the BLM on January 27, 1995. As required by 50 CFR 402.16, reinitiation of formal consultation is required if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may impact listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for your continuing efforts to conserve and recover threatened and endangered species. If we can be of further assistance, please contact Bill Austin or Bruce Palmer.


for Sam F. Spiller

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (AES)
Director, Arizona Game and Fish Department, Phoenix, AZ

Literature Cited

- Cockrum, E.L. and Y. Petryszyn. 1991. The lesser long-nosed bat, *Leptonycteris*: an endangered species in the Southwest? Occasional Papers of the Museum, Texas Tech University. Number 142. 32 pp.
- Dalton, V.M. and D.C. Dalton. 1994. Roosting and foraging use of proposed mine expansion sites by the lesser long-nosed bat (*Leptonycteris curasoae*) and the California leaf-nosed bat (*Macrotus californicus*). Report to Cyprus Casa Grande Corporation, Casa Grande, Arizona.
- Fleming, T.H. 1994. Draft lesser long-nosed bat recovery plan. U.S. Fish and Wildlife Service. Albuquerque, New Mexico. 29 pp.
- Hoffmeister, D.F. 1986. Mammals of Arizona. University of Arizona Press. 602 pp.