CANYON URANIUM MINE REVIEW

Review of the Canyon Mine Plan of Operations and Associated Approval Documentation in Anticipation of Resumption of Operations

US Forest Service, Southwestern Region, Kaibab National Forest
6/25/2012
Executive Summary
Canyon Uranium Mine Review
June 25, 2012

On September 13, 2011, Denison Mines informed the Kaibab Forest Supervisor they intended to resume operations at Canyon Mine under the existing Plan of Operations and Record Of Decision. A review has been completed of the Canyon Mine Plan of Operations and associated approval documentation in anticipation of the resumption of operations.

Canyon Mine is within the area segregated in 2009 and then ultimately withdrawn in the Northern Arizona Withdrawal process by the Secretary of Interior on January 9, 2012. Under the segregation and subsequent withdrawal, any mining claimant pursuing approval for exploration or mining would need to prove their claims had valid existing rights prior to the 2009 segregation. Denison Mines’ mining claims at the Canyon Mine were evaluated by US Forest Service mineral examiners with regards to valid existing rights under the 1872 Mining Law. This mineral validity examination, completed on April 18, 2012, confirmed that the mining claims have valid existing rights.

In addition to the mineral validity examination, the Forest undertook a review of the 1986 Environmental Impact Statement and Record of Decision, and associated documents. Resource specialists from the Kaibab National Forest and the Southwestern Regional Office reviewed the documents to determine if any modification or amendment of the existing Plan of Operations was required and whether there was any new information or changed circumstances indicating unforeseen significant disturbance of surface resources. It was determined that no amendment or modification of the Plan of Operations was required and that there was no unforeseen significant disturbance of surface resources. Therefore, Denison Mines will resume operations under the existing Plan of Operations.

For background, in October 1984, Energy Fuels Nuclear submitted a proposed Plan of Operations to mine uranium from the Canyon claims, approximately 6 miles south of the Grand Canyon National Park boundary. The US Forest Service completed an Environmental Impact Statement to evaluate the Plan, including significant comment and input from federally recognized tribes. The final Environmental Impact Statement and Record of Decision were issued on September 29, 1986, approving the Plan of Operations with modifications. Mine site surface preparation activities began in late 1986. Appeals of this decision were made to the Southwestern Regional Forester, and the Chief of the Forest Service, who both affirmed the Forest Supervisor’s decision. The Havasupai Tribe and others then sued over this decision in the U.S. District Court for the District of Arizona. The District Court ruled for the US Forest Service on all counts, and a subsequent appeal was filed with the U.S. Court of Appeals for the Ninth Circuit, which affirmed the District Court on August 16, 1991.

In 1992, due to the economic downturn in the price of uranium, the Mine was put into standby status. In 1997, Denison Mines acquired the Mine from Energy Fuels Nuclear.
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Review of the Canyon Mine Plan of Operations and Associated Approval Documentation in Anticipation of Resumption of Operations

Kaibab National Forest
Tusayan Ranger District
June 25, 2012

The Kaibab National Forest (KNF or Forest) was verbally notified on August 22, 2011 by Denison Mines that they plan on resuming operations at the Canyon Uranium Mine on the Tusayan Ranger District, Kaibab National Forest. A follow-up letter was sent by Denison Mines on September 13, 2011. Denison Mines intends to resume operations, as outlined in the 1986 Record of Decision (ROD) and Plan of Operations (PoO), as soon as possible.

An interdisciplinary team consisting of various specialists from the KNF and the Southwest Regional Office (R3) was assigned to review the Environmental Impact Statement (EIS) and analysis, ROD, PoO, and any related information or documentation in the project record, in relation to each of their areas of expertise. The team was to document and assess whether there is any new federal action required before re-starting operations and if there is any new information or any changed circumstances relating to the environmental impacts indicating a need for further federal actions. The following summary documents the findings and conclusions of each specialist.

Original NEPA Decision, Background, and Current Conditions

Background: Canyon Mine is located approximately 6 miles south of the Grand Canyon National Park boundary, within the area segregated in 2009 and then ultimately withdrawn in the Northern Arizona Withdrawal process by the Secretary of Interior on January 9, 2012. Denison Mines’ mining claims at the Canyon Mine were evaluated by US Forest Service (USFS) mineral examiners with regards to valid existing rights (VER) under the 1872 Mining Law, due to the segregation and withdrawal. This mineral examination, completed on April 18, 2012, confirmed the existence of valid existing rights.

Energy Fuels Nuclear submitted a proposed Plan of Operations (PoO) to mine uranium from the Canyon claims in October 1984. The USFS completed an Environmental Impact Statement (EIS) to evaluate the plan, including consultation with federally recognized tribes. The final EIS and Record of Decision (ROD) were issued by the Forest Supervisor on September 29, 1986, approving the PoO with modifications.

Twelve administrative appeals were received on the ROD, including appeals from the Hopi and Havasupai Tribes. Sinking of the shaft was stayed by the Deputy Regional Forester and affirmed by the Chief, pending the appeal decision; however, mine site surface preparation activities began in late 1986. On June 9, 1988, the Chief affirmed the ROD and PoO. The Secretary of Agriculture decided not to review the appeal. The Havasupai Tribe and others sued in the U.S. District Court for the District of Arizona, challenging the USFS’s decision. The District Court ruled for the USFS on all counts (Havasupai Tribe v U.S., 752 F.Supp. 1471(1990)). The Havasupai Tribe appealed to the U.S. Court of Appeals for the Ninth Circuit, which affirmed the District Court on August 16, 1991.
In 1992, active operations were suspended at the Canyon Mine and the Mine was put into standby status. Denison Mines acquired the Canyon Mine from Energy Fuels Nuclear in May 1997. All major surface structures are in place. The Plan of Operations Approval remains unchanged at this time.

**Current Status:** On September 13, 2011, Denison Mines submitted a letter advising the Forest Service that the activities associated with the resumption of active mining operations at the Mine will not differ from the approved mining operations under the current PoO and ROD. The current PoO consists of the 1984 PoO in combination with the modifications required in the ROD and has been in place since the 1986 decision. An approved PoO has been in place since 1986, with no lapses or breaks in time. The letter also states that there will be no unforeseen disturbances to surface resources or other impacts previously reviewed by the USFS based on Denison’s operation of the Mine under the approved PoO.

The mineral validity examination on Canyon Mine was completed April 18, 2012. Based on the results, the Forest Service has determined that Denison Mines has valid existing rights at Canyon Mine.

**Assessment of New Information or Changed Circumstances**

The Interdisciplinary Team (IDT) is made up of the following USFS specialists:

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**Minerals and Geology**

A thorough review of the approved Plan of Operations, the FEIS and ROD, and Federal Regulations was made. The findings are described below.

**Period of Time Covered by the Plan of Operations**

Due to the lapse in time since operations were conducted at the Canyon Mine, it is important to determine if the PoO is still in effect. The PoO was approved in 1986 without an expiration
date. For this analysis, the approved plan was evaluated in terms of the Forest Service minerals regulations at 36 C.F.R. 228 Subpart A. The regulations speak to the temporal aspect of a PoO.

Forest Service regulations in 36 C.F.R. 228.4(c) lists the information that should be included in a Plan of Operations (PoO or Plan). The regulations address the duration of a PoO by stating that information in a PoO must be sufficient to describe “the period during which the proposed activity will take place”. 36 C.F.R. 228.4(c)(3)

In practice, PoOs give a proposed date when operations are expected to begin and end, and a description of the operations. PoOs can be approved with a specific expiration date, but it is provided in the regulations that it is possible to have an approved PoO with an estimated period of activity and an unspecified final completion date.

In 36 C.F.R. 228.4(d) “the plan of operations shall cover the requirements set forth in paragraph (c) of this section, as foreseen for the entire operation for the full estimated period of activity: Provided, however, That if the development of a plan for an entire operation is not possible at the time of preparation of a plan, the operator shall file an initial plan setting forth his proposed operation to the degree reasonably foreseeable at that time, and shall thereafter file a supplemental plan or plans whenever it is proposed to undertake any significant disturbance not covered by the initial plan.”

Denison Mines’ PoO (pg. 10) states “The period of time estimated to exhaust the reserve is currently estimated to be 10 years. However, the duration of activities will ultimately be determined by the extent and mining grade of the deposit, as well as milling capacity and market conditions.”

The emphasis in the regulations as to a PoO’s duration is that it be in effect over the full operations and reclamation of surface disturbing activities. According to the regulations, the plan covers the entire operation and is in effect from approval until the time that final reclamation is completed. Denison Mines’ PoO specifically addressed that the timing of operations could be affected by market conditions, as it has been in the interval since the PoO was approved. According to the regulations covering timing of operations, the PoO is in compliance. The approved 1986 PoO is currently in effect.

**Surface Disturbing Activities as Foreseen by the Original Plan**

The original PoO included the full area of operations as 14.7 acres, plus 2.7 acres disturbed around the area of operations due to an adjacent drainage-diversion channel. Total disturbance equals 17.4 acres. In response to requirements in the Arizona Department of Environmental Quality’s (ADEQ)-issued permits, Denison Mines has indicated (letter of November 1, 2011) there would be upgrades to the stormwater evaporation pond liner and an increase in the holding capacity of the stormwater pond. The two identified ADEQ requirements would not require a change to the PoO. The liner is a ‘replacement in kind’ to increase the safety of the evaporation pond by further preventing the infiltration of stormwater into the soil. The proposed enlargement of the pond remains inside the footprint of the approved area of operations and insures the capacity of the pond to handle the designed flood specifications. The pond (as built) is 1.73 acres and would be expanded to 2.32 acres (Denison Mines, 11/1/2011) to meet the
ADEQ requirements for a 100-year 24-hour flood event (as determined by ADEQ). The final size of the stormwater pond is not specified in either the PoO or the ROD which modified the PoO with additional mitigation. The FEIS (p. 2.12) analyzed the pond as having a variable volume depending on water encountered during the sinking of the shaft. The FEIS (p. 2.13) evaluated the internal site (area of operations) configuration as changeable, noting that “…buildings or the holding ponds could be relocated within the project area but the change in environmental impacts to the area would be minimal”, such that no alternative configurations were analyzed. The entire area of 17.4 acres which was proposed to be disturbed by mine activities was analyzed through NEPA and approved as the full acreage proposed. The outer diversion channels require no modification or enlargement to meet the ADEQ requirements that they handle a 500-year, 24-hour flood event. The total footprint of approved mine disturbance is unchanged from that approved in the PoO, and no significant surface disturbance is proposed which was not covered through NEPA.

It is also important to note that the ROD modified the PoO to include the possibility of future mitigation to be required as needed. The September 1986 ROD approved the proposed PoO with the following operational features: “Expanded monitoring of soil, air and water to determine the environmental impacts, if any, of mine operations and ore transport, and the need for imposing additional mitigation measures, if necessary …” (page 2, II(1)) This language adds the further flexibility of continual monitoring during the life of the mine to adjust best management practices (BMP)s, as needed, to protect surface resources. Taken in total, the Forest does not reasonably anticipate any “unforeseen significant disturbance of surface resources” as contemplated in 36 C.F.R. 228.4(e).

Modification or Other Supplement to the Plan of Operation
A supplemental plan is needed if there is a proposal to undertake any significant disturbance not covered by the initial PoO. (36 C.F.R. 228.4(d)) A modification to an approved PoO is indicated when there is unforeseen significant disturbance of surface resources. “At any time during operations under an approved plan of operations, the authorized officer may ask the operator to furnish a proposed modification of the plan detailing the means of minimizing unforeseen significant disturbance of surface resources.” 36 C.F.R. 228.4(e)

The immediate superior of the authorized officer shall then determine “(1) Whether all reasonable measures were taken by the authorized officer to predict the environmental impacts of the proposed operations prior to approving the plan, (2) Whether the disturbance is, or probably will become of such significance as to require a modification of the operating plan in order to meet the requirements for environmental protection specified in §228.8 and (3) Whether the disturbance can be minimized using reasonable means.” 36 C.F.R. 228.4(e)

“Lacking such determination … no operator shall be required to submit a proposed modification of an approved plan of operations. Operations may continue in accordance with the approved plan… unless [it is determined that] operations are unnecessarily and unreasonably causing irreparable injury, loss or damage to surface resources …” 36 C.F.R 228.4(e) As mentioned above, no operations presently exist or are proposed which would be unnecessarily and unreasonably causing irreparable injury, loss or damage to surface resources. A comparison with the regulations verifies that no modification or amendment is indicated. Therefore, modification
or other supplement to the Canyon Mine Plan of Operation is not needed before operations can begin.

**New Information or Changed Circumstances**
There is no new information or changed circumstances relating to the environmental impacts documented in the analysis (see above). The upgrades that Denison Mines plans to make in starting up the mine provide for further environmental protection, rather than impacts outside of those envisioned in the original analysis. The proposed work was already allowed (foreseen) in the language of the PoO and ROD as it is within the total area identified in the PoO for disturbance.

**Forest Plan Consistency**
The Kaibab National Forest Land Management Plan 1988, as amended (Forest Plan) is new since the 1986 approval of the PoO and was reviewed for consistency with the PoO. The Forest Plan was found to be consistent with activities authorized under the approved 1986 Canyon Mine Plan of Operations.

**Conclusion**
The PoO is still in effect and no amendment or modification to the PoO is required before Canyon Mine resumes operations under the approved PoO. As discussed above, the Forest Service regulations only provide for a PoO modification in cases of “unforeseen significant disturbance of surface resources” as in 36 C.F.R. 228.4(e). There are no indications that any unforeseen significant disturbance of surface resources exist or would exist due to operations conducted under the existing PoO. Lacking new information or changed circumstances that might indicate the potential for significant surface resource damage, there is no requirement to modify the approved PoO.

Information from the references, documentation and data bases, below, was considered and incorporated into this Minerals & Geology Review:

Approved Plan of Operation, September 1986
Record of Decision, September 1986
Kaibab National Forest, Land Management Plan, 1988, as amended
Denison Mines’ letter to Forest Supervisor Mike Williams, November 1, 2011
36 C.F.R. 228.4(e).

**Heritage Resources - Canyon Mine Section 106 Compliance**

The review of Heritage Resources involved determining if there is any further federal undertaking subject to NHPA Section 106 compliance required before Canyon Mine resumes operation under the approved PoO, and if there is new information or changed circumstances to the original analysis.

**NHPA Section 106 Compliance (36 C.F.R. 800)**
A review of the original National Historic Preservation Act (NHPA) Section 106 compliance analysis for the Canyon Mine was conducted and the KNF informally sought the advice of both the Advisory Council on Historic Preservation (ACHP) and the Arizona State Historic Preservation Office (AZSHPO). The Forest determined that the quality of the work conducted for the Canyon Mine was up to standard and fully addressed the activities proposed in the ROD and the PoO. Since Denison Mines has not proposed any new activities which would require a modification of the existing PoO or a new PoO, there will be no new federal undertakings subject to NHPA Section 106 compliance.

**Background Information on Section 106 Analysis for Canyon Mine**

The Canyon Mine Plan of Operation (PoO), as proposed, included the 17-acre mine site, an access road and a proposed power line to supply electricity to the Mine. The mine site was inventoried by contractor Abajo Archaeology in November of 1984. Two sites, AR-03-07-04-586 and site -587 were recorded. In 1984, Forest Archaeologist Tom Cartledge conducted an intensive inventory along a 2.58 mile section of the mine access road in an effort to avoid impacting two sites (AR-03-07-04-572 and 573).

In 1985, Abajo Archaeology in consultation with the Forest, AZSHPO and ACHP, developed a testing plan and conducted archaeological tests to determine the NR eligibility of the sites AR-03-07-04-586 and site -587. The tests concluded that site AR-03-07-04-586 did not meet the criteria for NR eligibility; however, site AR-03-07-04-587, because of the possible presence of subsurface features, did meet the criteria for NR eligibility and that the Mine as proposed would have an adverse effect on the site. The AZSHPO concurred with the recommendations. Abajo Archaeology conducted data recovery at site AR-03-07-04-587 in 1986 as mitigation for the adverse effect to site AR-03-07-04-587. No subsurface cultural features were defined during the excavation and the majority of the cultural material was deposited in a single soil unit no more than 15 centimeters thick. The Forest determined that the excavation “constituted total data recovery; further work at this site would yield no further additional useful information about the occupation at the site.” (Westfall, 1986)

In 1987, Abajo conducted a cultural resource survey of the proposed power line, located adjacent to Forest Road (FR) 305, which would supply power to the mine site. One small lithic scatter (AR-03-07-04-717) was located and recorded. The site was determined not to be eligible for inclusion on the NR in consultation with the AZSHPO.

**Canyon Mine EIS and Tribal Involvement**

Detailed information about tribal participation in the EIS analysis and the subsequent appeal and litigation of the decision is discussed in detail in the Tribal Relations section of this review. Relevant to the Heritage review is the fact that during the appeal and ligation of the Canyon Mine decision the Havasupai tribe provided a significant amount of detailed information to the court regarding the sacred values associated with the clearing in which the Canyon Mine would sit and Red Butte, located about 4 miles to the south of Canyon Mine. TCPs, as defined in 36 C.F.R. 800.16, were generally not recognized as historic or cultural properties under NHPA until after its amendment in 1992. Consequently, the information submitted for the appeal and litigation was in relationship to AIRFA and the First Amendment and focused on the effects of the Mine on the tribe’s religious practices.
Effects on Historic Properties (36 C.F.R. 800.5)
Denison Mines is not proposing new activities that would modify their existing PoO (letter of November 1, 2011). Therefore, there will be no changes or alterations in effects on historic properties as described at the time of the ROD.

A review of the NHPA Section 106 compliance analysis and ROD for the Canyon Mine indicates that the agency did adequately address all the effects to historic properties that had been identified in the ROD. See discussion below for additional information about the Section 106 compliance analysis for Canyon Mine.

Unanticipated Effects on Historic Properties (36 C.F.R. 800.13(b))
The potential effects to the tribes’ religious practices under AIRFA and the First Amendment were examined as part of the EIS analysis. However, it is important to recognize that there was no analysis of the effects to Red Butte as a historic property under NHPA. Section 106 of NHPA applies to those properties listed or eligible for listing on the NR. NHPA and the implementing regulations, 36 C.F.R. 800, at the time the ROD was signed, did not have a provision for including properties of cultural importance in the NR. As a result, Red Butte was not recorded as a site or determined eligible for the NR. Even though the tribes knew about the importance of Red Butte, and the KNF was becoming aware of it, Red Butte was not a historic property under NHPA so the process as described in the current 36 C.F.R. 800 regulations did not take place.

Because there was no prior planning for inadvertent discoveries during the EIS analysis, the section of 36 C.F.R. 800.13 that applies is paragraph (b).

“(b) Discoveries without prior planning. If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties”

The construction for the Mine has commenced, consequently the next section that applies in this case is (b) (3).

“(3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond
within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

Under the current 36 C.F.R. 800 regulations, the newer definition of historic property includes “properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.” The full definition is presented below.

§ 800.16 Definitions.

“(l)(1) Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.”

Because the earlier definition did not include properties of traditional religious and cultural importance, Red Butte was only recorded as a TCP and evaluated as eligible for inclusion on the NR after the ROD but before the project has been completed. Therefore, it could be considered a newly “discovered” historic property, and section 36 C.F.R. 800.13(b) of the regulations would apply. Similarly, as noted above, the effects to the tribes’ religious practices under AIRFA and the First Amendment were considered during the appeal and the litigation on the ROD, but the potential effects to Red Butte as a historic property had not been analyzed. These effects could then be considered “unanticipated effects” to a historic property and 36 C.F.R. 800.13(b) of the regulations would apply in this situation as well.

The intent of 36 C.F.R. 800.13 is to allow for reasonable considerations of effects to historic properties if they were not anticipated or if new historic properties are “discovered” after the 106 process has been completed, but before the undertaking has been completed and there is still an opportunity to avoid or minimize effects from the undertaking. It is in a sense an emergency measure to ensure historic properties are not inadvertently damaged during project implementation. The timelines of 48 hours to notify the consulting parties and tribes and 48 hours to respond illustrates the intent to address potential impacts quickly, and to avoid delaying projects.

The Canyon Mine project is a somewhat unusual situation in that the Section 106 process was completed more than 20 years ago, but there was a long period of inactivity. The Forest can notify the tribes, AZSHPO and ACHP within 48 hours of making the determination that the section applies, and summarize the process the Forest intends to follow, but it is unlikely that there can be an adequate discussion or response within that
short amount of time. Nevertheless, the current situation seems to fall within the intent of 36 C.F.R. 800.13.b, and consulting with the tribes to seek reasonable ways to minimize the effects would be prudent. It appears that this would not result in project delays, nor prohibit the company from reinitiating mining, but would be an opportunity to continue tribal consultation on ways to minimize the effects. This would also conform to Stipulation III. C. of the KNF’s Programmatic Agreement with the ACHP and AZSHPO which states "(w)hen it is determined that an undertaking may affect a property identified by a Tribe as having traditional cultural or religious significance, the FS shall consult further with the Tribe regarding the identification, evaluation, assessment of effects, and the resolution of adverse effects, if applicable, with respect to the property."

Although further NHPA consultation under 36 C.F.R. 800.13 will be aimed at ways to minimize any effects on the characteristics that make the Red Butte TCP eligible for the NR, it would also be consistent with the Canyon Mine Record of Decision which states consultation “will continue during the review, construction and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs.” (USDA 1986b:8) Further consultation would also be consistent with the final agency decision on Canyon Mine. The Chief’s decision states “The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellants’ religious beliefs and practices. The Forest Service remains open to any information which the appellants can provide which will assist in avoiding or limiting any unnecessary effects on Indian religious practices or beliefs.” (A.R. Doc. 256: page 5233)

**Overview of Changes Since the Canyon Mine Decision**
Changes in the legal and policy framework, and the political climate have occurred affecting historic properties management, sacred sites, and government-to-government Tribal consultation since the original decision. These changes include:

- 1990 Forest Service American Indian and Alaska Native Policy
- 1990 Native American Graves Protection and Repatriation Act
- 1992 Amendments to National Historic Preservation Act of 1966
- 1993 Religious Freedom Restoration Act
- 1994 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income People
- 1996 Executive Order 13007, Sacred Sites
- 1999 Amendments to 36 C.F.R. 800, Protection of Historic Properties
- 2000 Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
- 2000 Amendments to National Historic Preservation Act of 1966
- 2000 Amendments to 36 C.F.R. 800, Protection of Historic Properties
- 2004 Revised Forest Service American Indian and Alaska Native Policy, FSM 1500, Chapter 1560 and FSH 1509.13
- 2004 Amendments to 36 C.F.R. 800, Protection of Historic Properties
Since 1992, there were also several archaeological pedestrian surveys conducted within 2 miles of the Mine for roads maintenance, fuels and timber projects, and as part of the proposed VANE Minerals Uranium Exploration Project. There have also been two new cultural properties listed or determined to be eligible for listing on the NR within one mile of the mine site, access road and power line.

**Grand Canyon Airport Historic District**

The Historic District was listed on the NR in 2007 under criteria A and C. Located about 0.2 miles east of FR 305 and about 3 miles south of the Canyon Mine site, the Historic District consists of 7 buildings and two airstrips.

**Red Butte Traditional Cultural Property (TCP)**

The majority of the following was taken from the Determination of Eligibility completed in 2010 (Lyndon, 2010).

Red Butte consists of several un-eroded layers of rock that overlie the Kaibab limestone capping the relatively flat Coconino Plateau and is located about 4 miles south of the Canyon Mine and less than a mile from the mine access road and power line. The Kaibab National Forest has recognized Red Butte as a sacred site to the Havasupai and other area tribes for some time. In the mid-1980s, the Havasupai Tribe disputed a Forest decision to permit the Canyon Uranium Mine on the grounds that mining in the area would destroy Red Butte as a sacred site (USDA 1986b). During the environmental analysis process for the Canyon Mine, the Havasupai Tribe was guarded about specific information regarding Red Butte. However, numerous other comments submitted during the Canyon Mine appeal process reiterated the importance of Red Butte to the traditional culture of the Havasupai people and to the central role Red Butte plays in the Havasupai religion, and traditional practitioners have argued that significant physical impacts to the area would result in irreparable damage to their ability to practice the Havasupai religion.

Since the early 1990s, the Kaibab worked with the tribes to insure the continued use of Red Butte for traditional gatherings, conducting ceremonies and collecting medicinal plants. The Forest has also made management decisions to better protect Red Butte, such as restricting motor vehicle use around the butte and identifying the butte as a Land Management Area in the proposed revision of the Kaibab National Forest Land Management Plan.

In 2008, in response to the proposed Vane Minerals Uranium Exploration Project, the KNF began to work with the Havasupai, Hualapai, Navajo, Hopi and Zuni Tribes to conduct an evaluation for a Determination of Eligibility (DOE) of Red Butte for inclusion.
on the NR as a TCP under Criteria A, B and D, in accordance with 36 C.F.R. 800.4. The DOE included a combination of the information provided by the Havasupai as part of the Canyon Mine decision appeal and court case records, notes from government-to-government consultation meetings, and ethnographic information about religious and sacred values ascribed to the butte provided by the Havasupai, Hualapai, Navajo, Hopi and Zuni Tribes. The AZSHPO confirmed the KNF eligibility recommendation for the Red Butte TCP in 2010.

One of the issues that needed to be addressed during the DOE evaluation was the location of a boundary to delineate the TCP. The Park Service, who are the managers of the National Register, require that a NR eligible historic or cultural property be delineated with a boundary that includes all of the elements that contribute to the eligibility of the historic or cultural property. In general, some tribes did not believe that there should be a boundary, while other tribes agreed that there could be a boundary, but did not agree on how to define or locate the boundary. Therefore, the KNF created a boundary for the purposes of the DOE evaluation. According to Lyndon (2010):

“(t)he proposed boundary includes all of the contributing elements associated with the TCP that are known to the Forest without identifying the exact locations of these elements. These contributing elements include shrines, ceremonial areas, traditional gathering sites, potential eagle collecting areas, medicinal plant collecting areas, and sacred grounds associated with Red Butte. The exact locations of several contributing elements have been retained by the tribes in order to protect their confidentiality and are not known to the Forest.

The Havasupai did, however, explicitly discuss the spiritual relationship of Red Butte to the clearing where the Canyon Mine is located (Lyndon 2010). Because the clearing is considered a contributing element to the TCP, the Mine was included within the TCP boundary.

Potential Unanticipated Effects to National Register Eligible Sites
When conducting a NR evaluation on a historic property, a variety of aspects and qualities are taken into consideration to meet the criteria for inclusion on the NR. These include environmental setting, physical and visual integrity and characteristics, design, workmanship, feeling, associations and the current and past impacts to the property. The integrity of a historic property can be affected if there is a direct or indirect change to the characteristics that made the property eligible for inclusion on the NR. In the case of the Canyon Mine, both the Grand Canyon Airport Historic District and the Red Butte TCP were listed or determined to be eligible for listing on the NR after the Canyon Mine was authorized, but while the mine was not in operation. Therefore, the effects of the mine operations on the integrity of these properties were not been taken into consideration when they were evaluated for the NR.

Grand Canyon Airport Historic District
The Grand Canyon Airport Historic District is located near the mine access road, FR 305A, located west of the District, and some of the buildings can be viewed from the road in a few locations. During normal mine operations, there will be an increase in trucks
using FR 305 to transport materials from the Mine to the mill in Utah. The sound of trucks along the road will likely impact the atmosphere and feel of the Historic District. However, this will be temporary and will not have a physical impact on the individual elements that constitute the Historic District. These impacts could have temporary unanticipated effects on integrity of setting.

**Red Butte Traditional Cultural Property (TCP)**
When conducting the evaluation for the DOE, the physical effects of the Canyon Mine facilities and associated power line and other modern features, such as roads and the Grand Canyon Airport, on the aesthetic and cultural values, and visual quality of the TCP were taken into consideration. Lyndon (2010) pointed out that while Red Butte has been impacted by modern improvements, the site currently retains sufficient physical integrity as a cultural landscape for inclusion on the NR. Furthermore, ongoing ceremonial and traditional practices conducted at Red Butte demonstrate that the site clearly retains integrity of relationship and condition in the minds of traditional practitioners.

However, Havasupai elders have stated that past activities have “wounded” the sacred site, and that future significant impacts could “kill” the sacred site, and by extension, the religion of the Havasupai people. Consequently, the actual mining activities (i.e., the removal of material from the mine shaft) will be considered by the Havasupai and other tribes as a significant wound or impact to the sacred and religious values ascribed to the TCP. According to the Havasupai, the clearing in which the mine is located is directly connected to Red Butte. They believe that “a mine will kill and destroy the resting place of the Life Spirit and the Mother” and therefore significantly impact the religious significance of the TCP to the area tribes and the religion of the Havasupai people. (Lyndon 2010) These impacts could have unanticipated effects on integrity of setting, feeling and association.

**New Information or Changed Circumstances**
The Red Butte Traditional Cultural Property (TCP), which includes the Canyon Mine location, was determined to be eligible for the National Register of Historic Places (NR) in 2009. According to the Havasupai and other tribes who ascribe religious and sacred values to the Red Butte TCP, the mining operations at Canyon Mine will have a very negative impact on the religious and sacred values important to the tribes. The religious and sacred values constitute a very strong integrity of association which in part makes the Red Butte TCP eligible for inclusion on the NR. Therefore, damage to this integrity could affect the TCPs continued eligibility for the NR. See discussion below for additional information about the Red Butte TCP.

According to the Final Environmental Impact Statement (FEIS) for the Mine, the Havasupai, the Hopi, and the Hualapai Tribes, and the Navajo Nation “responded to the “Notice of Intent to Publish an EIS,” the Scoping Letter, or have otherwise expressed an interest in receiving the document.” (USDA 1986a:6.1). In the Record of Decision (ROD), it states that “The potential impact of the Canyon Mine on Indian religious sites and practices was considered in the Draft EIS in conjunction with a general analysis of impacts on American Indians.” (USDA 1986b:4) Tribal comments and continuing consultation on the Draft EIS prompted the KNF to revise the EIS to add Indian religious concerns to the list of issues evaluated in detail by the EIS.
However, the information provided by the tribes prior to the signing of the ROD appears to have not been considered very definitive by the KNF. For example, the Havasupai tribe stated that “…sacred camping and burials sites are present in the general area north of Red Butte…” however; they refused to disclose the actual location of these sites (USDA 1986b:8). Moreover, this information was considered in the EIS in the context of First Amendment and the American Indian Religious Freedom Act (AIRFA), not as a NR eligible property. Traditional Cultural Properties, as defined in 36 C.F.R. 800.16, were generally not recognized as historic or cultural properties under the NHPA until after its amendment in 1992. As noted in the Tribal Relations section of this review, after the ROD was signed the tribes appealed the Canyon Mine decision and later litigated the decision under the First Amendment and AIRFA.

A Determination of Eligibility (DOE) for the Red Butte TCP, which includes the Canyon Mine location, was completed in 2010. The affects of the Canyon Mine operations on the TCP could not have been analyzed as part of the original EIS because it was not identified as a historic property until well after the ROD was signed.

**Forest Plan Consistency**

The Canyon Mine site is located in Forest Plan Management Area 10 (MA-10). A review of MA-10’s relevant management direction includes Geologic and Mineral Resource Operations guidelines 8, 9, and 10 (Forest Plan p.44). Guideline 8c states “Prohibit surface occupancy yearlong in foreground of all sites listed on the National Register to protect historic values” and guideline 9b states “Prohibit the construction of mine surface facilities … in foreground of heritage resource sites with National Register status.”

Red Butte TCP is eligible to the National Register, but has not been nominated; therefore, it is not listed. The KNF will work with the tribes to protect the TCP to the best of its abilities. Had the TCP been nominated, this prohibition in the Plan would probably require a mineral withdrawal, which was only recently undertaken, and would still be subject to valid existing rights. NFMA allows the continuance of permitted pre-existing non-conforming use under valid existing rights. (16 U.S.C. 1604(i) In the recent mineral exam of Canyon Mine dated April 18, 2012, the USFS determined that Denison Mines has valid existing rights.

Information from the references, documentation and data bases, below, was considered and incorporated into this review:

Cartledge, Thomas R.  

Hanna, Augustine  

Kaibab National Forest Heritage Program Geographic Information System (GIS) and I-Web INFRA Databases.

Lane, Liz  
2003 The Kaibab National Forest’s Heritage Program: Brokering Culture Inside and
Outside the Forest, Unpublished Internship Paper, Northern Arizona University, Ms. on file at Kaibab National Forest Supervisor’s Office.

Lyndon, Michael G.

Parker, Patricia L. and Thomas F. King

USDA, Forest Service

USDA, Forest Service

USDA, Forest Service

USDA, Forest Service

USDA, Forest Service

USDA, Forest Service

United States District Court
1990 The Havasupai Tribe, et al V. United States of America. Judgment in a Civil Case, Case Number Civ 88-971-PHX-RGS. On file at the Kaibab National Forest Supervisor’s Office. Also, see Appendix II.

Stine, Pat
2007 National Register of Historic Places Registration Form: Grand Canyon Airport Historic District. On file at the Kaibab National Forest Supervisor’s Office.

Westfall, Deborah A


**Tribal Consultation and Tribal Relations**

The review of Tribal Consultation and Tribal Relations involved determining if there is any new information or changed circumstances to the original analysis.

**Background Information**

The Canyon Uranium Mine is controversial with Federally recognized tribes (Tribes). Tribes opposed construction of the Mine in 1986, and continue to oppose any uranium exploration or mining in northern Arizona. Past uranium exploration and mining on tribal lands have left a legacy of legal, environmental and public health issues. Tribes have voiced numerous concerns about uranium mining that include environmental, cultural, religious, public health and economic concerns. This discussion focuses on the religious concerns related to Canyon Mine. Heritage Resource issues are discussed in the section above.

In 1986, the Kaibab National Forest (KNF) issued a decision to permit Energy Fuels Nuclear (EFN) to construct a uranium mine at the Canyon Mine site. Prior to the decision, the KNF sought input from Tribes on the proposal by sending scoping letters to the Navajo, Hopi, Havasupai, and Hualapai Tribes. The Havasupai and the Hopi Tribes submitted comments stating environmental concerns. The Draft EIS (DEIS) was published in February of 1986 and stated, “No areas of sacred or religious significance have been identified near the mine site or proposed ore haul routes.”

Both the Havasupai and Hopi Tribes commented on the DEIS and raised additional concerns on cultural and religious issues, the consultation process, and environmental issues. The KNF hosted a meeting in Tusayan, AZ in August of 1986 with the Havasupai and Hopi Tribes to discuss religious and cultural concerns.

In September 1986, the KNF released the Final EIS (FEIS) for the Canyon Uranium Mine which included “Indian Religious Concerns” as a major issue, and the ROD permitting construction of the Mine. The FEIS indicates that specific information on potential impacts was not available for analysis and consideration.

“The Hopi and Havasupai Tribes have suggested that sacred religious sites…exist at or near the mine site and haul routes. However, consultation with the Tribes and experts on Indian religious sites and practices as well as archaeological inventories have failed to identify any specific Hopi or Havasupai sites of sacred or religious significance near the proposed mine site.” (USDA 1986a:3.58)
The ROD documented that the Havasupai Tribe asserted potential religious and cultural impacts. However, due to the available information, no specific impacts related to the mine were identified.

“The Havasupai Tribe has also recently stated that the general area around the mine is important to the Tribe’s religious well-being because it lies within a sphere of existence or continuum of life extending generally from the Grand Canyon to Red Butte. They explain that any uranium mining or similar activity within the sphere or continuum will violate unidentified Havasupai religious values and, may pose a threat to their very existence. The Havasupai have steadfastly declined to provide any additional information concerning the nature or importance of this sphere of existence because, they stated, to discuss it further would be sacrilege.” (USDA 1986b:8)

The ROD indicates that no specific information related to potential cultural and religious impacts was submitted to the KNF for analysis and consideration prior to the ROD, and therefore, no specific mitigation measures could be proposed at the time.

“Further consultation with the Havasupai and Hopi people will continue during project review, construction and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs.” (USDA 1986b:8)

Based on information available at the time, the ROD concludes that:

“Development of the mine site under Alternatives 2-5 and haul route options requiring the new road construction (Alternatives 2-4) could slightly reduce the land area available for Indian religious practices consisting of plant gathering and ceremonial activities. However, the current level of religious activity is not expected to be curtailed by any alternative nor will access to any known religious sites or areas be restricted.” (USDA 1986b:8)

EIS Scoping Process
The process of consultation with federally recognized tribes has changed significantly since the 1999 amendments to the National Historic Preservation Act (NHPA). In 1986, the KNF sought input from Tribes on the Canyon Mine proposal by sending scoping letters to the Navajo, Hopi, Havasupai, and Hualapai Tribes, and by publishing a Notice of Intent (NOI) in the Federal Register.

After review of the Administrative Record, it appears that the Forest was diligent and thorough in its efforts to solicit tribal input and understand tribal concerns. The tribal scoping process used during development of the EIS probably exceeded the standards of the time. Furthermore, the District Court Ruling (USDC 1990:32) found that “the Forest Service took appropriate action under NEPA and the policy of the AIRFA to investigate and consider the religious concerns of the Havasupai Tribe.”
Since the Decision, the Hualapai Tribe, Navajo Nation, and the Pueblo of Zuni have claimed cultural affiliation to the Red Butte TCP. The Navajo Nation raised no cultural concerns during the original scoping process although a previous publication cited Red Butte as a Navajo sacred site prior to the analysis. (Van Valkenburgh 1974)

Summary of Appeals
Both the Havasupai and Hopi Tribes appealed the Decision. The Hopi Tribe appealed on several grounds including potential cumulative impacts to religious sites across the landscape (A.R. 10:938-939). The Havasupai Tribe filed an Affidavit (A.R. 122) and made oral presentations to the Regional Forester (A.R. 176 and 62a). These comments included new statements about religious concerns specific to the Canyon Mine location and Red Butte that were not analyzed during the NEPA process. These also included some explanation of Havasupai cultural taboos regarding the disclosure of religious information. A few examples of comments specific to the Canyon Mine are below. (Appendix III, Citation 2)

The Forest-level decision was affirmed by the Regional Forester in 1987. The Regional Forester found that the Forest had fulfilled its requirements under AIRFA and NEPA. (AR 188)

[AIRFA] “does not establish Indian religions as having a more favored status than other religions. The Act does not mandate protection of Tribal religious practices to the exclusion of all other course of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices.” (A.R. 188:7)

“Religious concerns were not raised by appellants until after completion of the DEIS. All of the Tribal comments were responded to and the EIS was substantially revised to reflect the information provided by the Havasupai and Hopi.” (A.R. 188:7)

“A decision was made on the basis of the information disclosed after adequate opportunity and time was made available. The record clearly displays the Forest’s full commitment to and understanding of AIRFA and compliance with the law.” (A.R. 188:7)

“I continue to have utmost regard and appreciation for a people’s religious beliefs and practices and have given serious consideration to all the information relating to this issue … However, I conclude that operations at the Canyon Mine site … do not interfere with continued religious belief and practice in any manner prohibited by AIRFA. (A.R. 188:8)

See Appendix III, Citation 3:

“The record supports the Forest Supervisor’s conclusion that no Tribal beliefs are penalized by this action.” (A.R. 188:9)
The Havasupai Tribe and Hopi Tribe appealed to the Chief of the Forest Service (A.R. 195, 197). The Havasupai Tribe essentially argued that potential impacts to Havasupai religion from the mine had been misunderstood or ignored. (Appendix III, Citation 4)

The Chief of the Forest Service issued a decision in June of 1988 affirming the Regional Forester’s decision (A.R. 256). This was the final agency decision (Decision) and considered all information presented to the record at that time. The Chief found that the Forest provided many opportunities for Tribes to submit comments, and considered all submitted comments. The Chief cited Lyng v. Northwest Indian Cemetery Protection Association on First Amendment issues. The Secretary of Agriculture decided not to review the appeal. In his decision, the Chief stated:

“I find that the Forest Supervisor’s decision complies with the requirements of AIRFA as interpreted by the Supreme Court. The Forest Supervisor sought the early involvement of the Indian tribes, prepared a draft EIS which considered Indian beliefs, responded to their comments on the draft EIS…selected the alternative which fulfilled the agency’s statutory responsibilities and minimized any impacts on the Indians’ opportunity to exercise their religious practices.” (A.R. 256:7)

“The Forest Supervisor, Regional Forester, and I have provided appellants a variety of forums to consult, comment, discuss and ultimately appeal this matter…We recognize the difficult position of the Havasupai, who have declined to provide additional information regarding their religion or religious practices in the area on the basis that to discuss it further would be sacrilege. The Forest Service recognizes and respects this belief. The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellants’ religious beliefs and practices.” (A.R. 256:8)

The Supreme Court's recent decision in Lyng v. Northwest Indian Cemetery Protection Association, supra, holds that the Court's prior decisions interpreting the Free Exercise Clause of the First Amendment cannot be read to "imply that incidental effects of government programs, which may make it more difficult to practice certain religions but which have no tendency to coerce individuals into acting contrary to their religious beliefs, require government to bring forward a compelling justification for its otherwise lawful actions . ." Slip op. at 10. The Court found this to be the case even if the government's action could virtually destroy an individual's ability to practice their religion. (A.R. 256:7)

Summary of Litigation
The Havasupai Tribe and others sued in the U.S. District Court for the District of Arizona, challenging the USFS’s decision. The District Court ruled for the USFS on all counts (Havasupai Tribe v U.S., 752 F.Supp. 1471(1990)). The Havasupai Tribe appealed to the U.S. Court of Appeals for the Ninth Circuit, which affirmed the District Court on August 16, 1991. No further
agency decisions were made following the appeal to the Chief. Below, are passages which summarize the final District Court ruling. (U.S.D.C 1990)

“The court recognizes that the nature of the Havasupai religion is inherently a personal and secret issue. However, the law requires revelation in exchange for further recognition, consideration, and mitigation. The Forest Service took every reasonable step to develop these comments and discussed each in the final EIS. The Forest Service agency repeatedly sought clarification of plaintiff’s comments. However, the Administrative Record reflects that the Havasupai declined to participate or structure their participation in a meaningful manner during the administrative action.” (U.S.D.C. 1990:32)

“The court recognizes the sincerity of the beliefs held by the Havasupai Tribe and the sincerity of the disagreements it has with EFN and the Forest Service, however, the court finds no violations of” [NEPA]. (U.S.D.C. 1990:37)

Ultimately, the District Court assumed all religious claims made by the Havasupai Tribe to be true, including assertions that “the Canyon Mine site is sacred and any mining will interfere with their religious practices at and near the mine, will kill their deities, and destroy their religion or Way.” (U.S.D.C. 1990:18) However, the Court ruled against the Tribe on all AIRFA and First Amendment claims following Lyng.

Additional information regarding the Havasupai Tribe and the Canyon Mine issue is available in Lane (2003:73-74).

Development of the Kaibab Tribal Relations Program
Both Hanson and Lesko (1997) and Lane (2003) argue that the Canyon Mine, combined with another dispute over a ski area on Bill Williams Mountain, served as the catalysts for the Tribal Relations program on the Forest. Following these lawsuits, KNF leadership recognized a need to improve the consultation process and develop stronger working relationships with Tribes. As former Forest Archaeologist John Hanson and former American Indian Liaison Lawrence Lesko state (1997):

“[T]he Kaibab National Forest has not always had respectful relationships with our tribal neighbors. In fact, for a long time we had almost no relationships at all. Interaction with the tribes was sporadic and usually confined to bureaucratic letters sent to satisfy legal requirements. These poorly developed relationships grew strained as confrontations over a ski area expansion and uranium mines turned into court battles. Although the courts upheld the U.S. Forest Service for following the letter of the law, good will was compromised and mistrust prevailed between the parties”.

The KNF established a formal Tribal Relations program in 1997 by designating the first American Indian Liaison (Lesko) position in the U.S. Forest Service Region 3, and developed the first Memorandum of Understanding (MOU) with a southwestern Tribe to guide the consultation process. The KNF has entered into MOUs with four Tribes, has established strong
relationships, and is now considered a leader in regional Tribal Relations. The KNF works with Tribes in a proactive manner in the spirit of “shared stewardship” and is frequently lauded by tribes for its collaborative approach. There have been no appeals or litigation regarding a Forest decision since Canyon Mine, and excellence in Tribal Relations is considered a “niche” for the Forest.

Consultation Changes Since the Decision
The USFS has updated tribal consultation procedures significantly since the decision at both the national and local level. The KNF has since developed Memoranda of Understanding with the Havasupai Tribe, Hopi Tribe, Hualapai Tribe and Kaibab Band of Paiute Indians to guide the consultation process, and would additionally consult with the Navajo Nation, Yavapai-Prescott Indian Tribe, and Pueblo of Zuni on uranium-related projects today. The Kaibab Band of Paiute Indians, Yavapai-Prescott Indian Tribe and Pueblo of Zuni were not scoped during development of the DEIS and did not respond to the NOI.

1990  Forest Service American Indian and Alaska Native Policy
1990  Native American Graves Protection and Repatriation Act
1992  Amendments to National Historic Preservation Act of 1966
1993  Religious Freedom Restoration Act
1994  National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties
1994  Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income People
1996  Executive Order 13007, Sacred Sites
1999  Amendments to 36 C.F.R. 800, Protection of Historic Properties
2000  Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
2000  Amendments to National Historic Preservation Act of 1966
2000  Amendments to 36 C.F.R. 800, Protection of Historic Properties
2004  Revised Forest Service American Indian and Alaska Native Policy, FSM 1500, Chapter 1560 and FSH 1509.13
2004  Amendments to 36 C.F.R. 800, Protection of Historic Properties
2008  USDA Policy on American Indian and Alaska Natives, Departmental Regulation 1340-007, implementing EO 13175
2008  USDA Tribal Consultation Policy, Departmental Regulation 1350-001
2009  Presidential Memorandum on Tribal Consultation, reaffirming EO 13175
2011  USDA’s Office of Tribal Relations and Forest Service Sacred Sites Policy and Procedures Review (Ongoing)

None of these legal and policy changes are retroactive or require re-examination of prior agency decisions. These changes will apply to any new consultation.

The KNF conducts regular government-to-government consultation with Tribes, and Canyon Mine has been the subject of ongoing dialogue since the Decision. Canyon Mine has regularly been discussed during consultation meetings and additional updates on the issue have been provided by letter. During these ongoing consultations, Tribes have provided increasingly more detailed information on cultural and religious concerns related to the Red Butte area.
Recently, the KNF worked with the Havasupai, Hopi, Hualapai, Navajo and Zuni Tribes to determine the eligibility of Red Butte as a Traditional Cultural Property (TCP) under NHPA. During the Determination of Eligibility (DOE) process, KNF officials informed Tribes that cultural information regarding Red Butte would be considered in analyzing any new undertakings that may impact the TCP. The Canyon Uranium Mine is located within the boundary of Red Butte TCP based on tribal comments specifically linking the mine site to Red Butte. Additional information on Red Butte TCP and potential impacts are included in the Heritage section, above.

Over the last two years, Denison Mines has pursued the acquisition of necessary permits from Arizona Department of Environmental Quality (ADEQ). During the State public involvement process, Tribes have repeatedly expressed opposition for the Canyon Mine, and other uranium mines in the area.

Over the years, KNF staff have anticipated that a proposal to reopen the Canyon Mine would be initiated by Denison Mines. Recently, Denison Mines notified the KNF of its intent to proceed with operations at the Canyon Mine under the existing PoO.

During the course of this review, the Forest has contacted tribal representatives to update tribes on the review process, address questions, and ensure that tribal issues are considered during this review. These contacts have included phone calls to tribal representatives, conference calls with the Hualapai Tribe, Kaibab Band of Paiute Indians, Navajo Nation, and Pueblo of Zuni, and face-to-face meetings with the Hopi Tribe and Havasupai Tribe. Tribes have stated opposition to the Canyon Mine and request additional environmental analysis of the proposal based on the age of the Decision. As documented above, new information regarding tribal religious and cultural concerns is available.

**New Information or Changed Circumstances**

As documented below, information regarding religious and cultural concerns was limited for the NEPA analysis as outlined in the ROD. Additional specific information regarding these concerns was submitted during the appeal and subsequent legal challenge. All information provided by tribes was considered by the Chief as part of the final agency decision in June of 1988 (Decision). Additional specific religious information was considered by the courts.

New information and/or changed circumstances since the Decision include the following: 1) In 2010, the Kaibab determined that Red Butte is a Traditional Cultural Property (TCP) eligible to the National Register of Historic Places (NR) due to its ongoing, and historic, cultural and religious significance to multiple tribes. The Canyon Mine site is within the boundary of the Red Butte TCP; 2) Additional information related to Havasupai and Hopi religious and cultural use of the Red Butte TCP has been provided to the Forest since the Decision (Appendix III, Citation 1); 3) The Hualapai Tribe, Navajo Nation, and Pueblo of Zuni have claimed cultural affiliation with Red Butte TCP and have provided additional information related to the TCP. These tribes were not involved in the original NEPA analysis of the Canyon Mine; 4) There have been numerous legal and policy changes related to consultation with Federally recognized tribes since the
Decision; and 5) Navajo Nation is now opposed to the transportation of uranium through the Navajo reservation as approved in the ROD.

The Decision considered specific significant impacts to the Havasupai and Hopi religions as a result of permitting the Canyon Mine but determined that the USFS had adhered to the process mandated by law, and addressed known concerns appropriately during the NEPA analysis. Effects to the religious practices of the Navajo, Zuni and Hualapai tribes were not known or considered prior to the Decision. Current available information on specific religious practices related to the Red Butte TCP may allow for mitigation of specific concerns that were not addressed under the Decision. Much of the specific information related to religious concerns was considered by the Chief as part of the final agency decision, but was not documented as part of the original analysis.

**Conclusion**

Existing Forest Service policy, post-dating the Canyon Mine decision, directs KNF leadership to be sensitive to Native American traditional and cultural issues, protect sacred sites, and consult on issues of importance to Federally recognized Tribes. The Draft USDA Sacred Sites Policy recently submitted to the Secretary of Agriculture recommends that the Forest Service use all available discretion to protect sacred sites (while acknowledging that agency decision space is limited under the 1872 Mining Law). As discussed above, the Canyon Mine site has the potential to impact Native American sacred sites and is an issue of importance to area tribes.

Since the Decision, the KNF has worked to establish strong, mutually-beneficial relationships with area tribes that are valued within the Region. The KNF has and will continue to use all available discretionary authority to mitigate impacts to Native American religious activities. Tribes have commented that most anticipated impacts, including the most serious impacts, cannot be mitigated if uranium mining is conducted at the Canyon Mine site.

Following conclusion of this review, the KNF will initiate government-to-government consultation with federally recognized tribes in an effort to understand, and possibly mitigate, impacts to Native American religious values. This is consistent with the Canyon Mine Record of Decision which states consultation “will continue during the review, construction, and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs.” (USDA 1986b:8) Further consultation would also be consistent with the final agency decision on Canyon Mine, the Chief’s decision which states “The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellants’ religious beliefs and practices. The Forest Service remains open to any information which the appellants can provide which will assist in avoiding or limiting any unnecessary effects on Indian religious practices or beliefs.” (A.R. Doc. 256: page 5233)

Information from the references, documentation and data bases, below, was considered and incorporated into this review:
Wildlife and Threatened, Endangered, and Sensitive Species

The review of Wildlife and Threatened, Endangered and Sensitive (TES) Species involved determining if there is any new information or changed circumstances to the original analysis.

Previous Consultation with US Fish and Wildlife Service (T&E Species)
At the time of the signing of the ROD, the peregrine falcon and bald eagle were listed as endangered species under the Endangered Species Act (ESA). Both species have since been delisted and no longer have federal protection under ESA. However, they are both now on the U.S. Forest Service Region 3 (R3) sensitive species list. Re-consultation is not required for either of these species since there is no information that the birds are using the area any differently since 1986 and also, both species are no longer on the ESA threatened and endangered species list.

New TES Species Since the Original FEIS
California condor (Gymnogyps californianus) was reintroduced in 1996 on the BLM’s Arizona Strip District as a nonessential experimental population (section 10 (j) ESA). A “nonessential experimental population” is a reintroduced population whose loss would not be likely to
appreciably reduce the likelihood of survival of the species in the wild. For section 7 consultation purposes, section 10(j) requires the following: 1) any nonessential experimental population located outside a National Park or National Wildlife Refuge System unit is treated as a proposed species; and 2) critical habitat is not designated for nonessential experimental populations. (USDI 1998) Conference is only required when the proposed action is likely to jeopardize the continued existence of a proposed species or adversely modify proposed critical habitat. (USDI 1998) Since, by definition, a nonessential experimental population loss would not jeopardize the species population in whole and there is no critical habitat associated with a nonessential experimental population, conferencing is not required for the California condor for actions taken on National Forest land within the 10(j) management area.

The project area is within the California condor 10(j) management area. There are nesting condors in the Grand Canyon near the south rim and the birds are often seen along the south rim. The condor is occasionally seen on the Tusayan Ranger District of the KNF. On January 20, 2012, the Forest discussed with the US Fish and Wildlife Service (FWS) the intent of this project going forward. Based on this discussion, the Forest entered into informal conferencing with the FWS on this project. On February 9, 2012, the Forest received an informal conferencing letter (AESO/SE 02EAAZ00-2012-IC-0093) from FWS that contain recommendations to reduce potential impacts to the condor. These recommendations will be provided to Denison Mines before they begin operations.

As mentioned above, there are nesting California condors in the Grand Canyon near the south rim and the birds are often seen along the south rim. Radio telemetry has shown that the condor occasionally use the Tusayan Ranger District for foraging (TPF 2010). Condors will forage over large areas and there is always the potential that they could use the general area where the mine site is located. Condors are also very curious about human activities and will visits sites where people are working. The project area only has foraging habitat and the nearest potential nest site is over 6 miles away, at the Grand Canyon.

The following discussion will demonstrate how the Canyon Mine EIS and PoO meet or do not meet the recommendations and how that might impact the condor. The recommendations provided by the FWS are listed below.

1. Prior to the start of any remaining construction activities, the Forest will contact personnel monitoring condor locations and movement to determine the location and status of the condors in or near the project area.
2. All workers at the mine will be advised of the possibility of the occurrence of California condors in the project area.
3. All workers at the mine will be instructed to avoid interaction with condors and to immediately contact the appropriate KNF or Peregrine Fund personnel if and when condor(s) occur at the project area. To avoid injury both to condors and personnel, mine personnel will not haze condors.
4. If a condor occurs at the project site, permitted personnel will employ appropriate techniques to cause the condor to leave the site. “Permitted” means those with the necessary federal and state permits.
5. The project area will be kept clean (e.g., trash disposed of, scrap materials pick up) in order to minimize the possibility of condors accessing inappropriate materials. The Forest will complete a site visit to ensure clean-up measures are adequate.

6. To prevent water contamination and potential condor poisoning, a hazardous material (including vehicle fluids) leakage and spill plan will be developed and implemented. The plan will include provisions for immediate clean-up of any hazardous substance, and will outline how each hazardous substance will be treated in case of leakage or spill. The plan will be reviewed by the Forest to ensure protection for condors.

7. Any pesticide use at the project area will follow the guidelines for California condor in the April 2007 Recommended Protection Measures for Pesticides Applications in Region 2 of the U.S. Fish and Wildlife Service.

8. Mine site ponds containing water will be made inaccessible to condors in order to prevent use by condors.

9. Unless it already meets them, the 1.7-mile connecting powerline will be approved to current Avian Power Line Interaction Committee (APLIC) standards (http://aplic.org).

10. If condors consistently occur at the project area, then additional conservation measures may be necessary. The Forest will report consistent condor occurrences at the mine area to FWS in a timely manner, and will facilitate any necessary consideration of additional measures by the mine operator, the Forest and FWS.

11. Condors nesting in the vicinity of the mine area are unlikely; however, if condors nesting activity occur within 0.5 mile of the mine area, the additional conservation measures may be necessary. The Forest will report such occurrences to FWS in a timely manner, and will facilitate any necessary consideration of additional measures by the mine operator, the Forest, and FWS.

The September 1986 ROD approved the proposed PoO with the following operational features, “Expanded monitoring of soil, air and water to determine the environmental impacts, if any, of mine operations and ore transport, and the need for imposing additional mitigation measures, if necessary.” (ROD, II(1)) This language adds the further flexibility of continual monitoring during the life of the Mine to adjust best management practices (BMPs), as needed, to protect surface resources, such as wildlife.

For recommendations #2-5, the Forest will work with the Denison Mines requesting them to contact the Forest if condors visit the worksite or are seen in the area. The Forest will provide Denison Mines with information on who to contact and about not interacting with the condor. The Forest will work with Denison Mines to determine the effects to the condor and what actions they could take to reduce impacts to the condor. Denison Mines is required to keep the work area clean.

With regards to recommendation #6, as part of the ADEQ permit for uranium mining, the site is required to have a hazardous material spill plan. The hazardous material on site will likely be diesel and gasoline for fueling equipment. The potential for a spill impacting condors is very low.
The only potential for pesticide use will be during the reclamation process after mining is completed. The Final EIS for Integrated Treatment of Noxious or Invasive Weeds (2005) (Weeds EIS) would be used for any weed treatment within the mining site. The Weeds EIS includes the protective measure in recommendation #7.

With regards to recommendation #8, there are no requirements for open pits or ponds to be made inaccessible to bird species in the FEIS for this project. The evaporation pond has already been constructed. The pond is to collect surface water runoff from the production site and any water collected during the mining process, so it may or may not retain standing water for much of the Mine’s life. If the pond had standing water and a condor was to drink or bathe in these waters it could affect the health of the bird. The Forest will work with the mining company to determine the necessity and practicality of such a covering or determine if there are any other actions the company could take to mitigate this possibility of an impact to the condor when standing water is in the evaporation pond.

With regard to recommendation to #9, the EIS for this project has a mitigation that the overhead power lines must have a 60-inch minimum separation of wires. This is the same recommendation that is in the Avian Protection Plan Guidelines (APLIC 2005) that is on the website provided by the FWS. The Forest will work with the company to see if other remedial options have been conducted such as covering of conductors and equipment or installing bird perch guards or triangles with perches. It can be noted that since the construction of the power line, there has been no California condors death associated to the power line.

Access to the mining site is achieved by turning east off State Highway 64 to Forest Road (FR) 305. The route follows FR 305 for two miles and then turns onto the north fork of FR 305A. This leads due north for four miles past Owl Tank. There is a side road then leading due west ½ mile, and terminates at the Canyon Mine project site. Haul routes from the mine will use the same roads. Once the trucks leave the forest roads, they will use Highway 64 to Interstate 40, traveling east and exiting onto Highway 89 traveling north. The haul route off forest roads will be on roads systems that have a high daily use and the addition of approximately 10 trucks per day is within their normal background use. No condor has been recorded killed or injured on any of these roads and the use of these roads should have no effect to condor.

In 2007, a new R3 sensitive species list was approved by the Regional Forester. In addition to the bald eagle and peregrine falcon being on the R3 sensitive species list, there are four other wildlife species on the new list that have the potential of occurring within the project area. The four species are the spotted bat (*Euderma maculatum*), Allen’s lappet-browed bat (*Idionycteris phyllotis*), pale Townsend’s big-eared bat (*Corynorhinus townsendii pallescens*) and Navajo Mogollon vole (*Microtus mogollonis navaho*). The three bat species would primarily use the area for foraging. There is the potential of the Navajo Mogollon vole occurring within the 34 acre meadow adjacent to the site. A review of the 2007 R3 sensitive species list shows there is no new sensitive plant species that could potentially be in the project area. There is no new information since the original analysis for plants.
For the spotted bat, Allen’s lappet-browed bat and pale Townsend’s big-eared bat, the project area would be used as foraging only. None of the roosting habitat for these bat species is found in the mining site area. Since most of the vegetation in the area has already been removed as part of the development of the site, there is not much habitat left to support prey species. However, the development of the evaporation pond may have resulted in the bats using the area for drinking and creating habitat for some prey species. Reserve pits associated with oil or gas drilling operations can be a source of bat mortality because bats can often mistake them for natural water sources. Various bat species have drowned in these ponds in Wyoming (Luce and Keinath 2007). There is potential for bat mortality by either drowning or drinking the water from the evaporation pond due to the siltation levels and potential concentration of heavy metals. However, this would likely affect very few bats and would not lead toward federal listing of any of the three bat species.

The Navajo Mogollon vole uses meadow habitat for den sites. There is the potential that the vole could be in the 34-acre meadow adjacent to the mine site. It is not clear if the removal of the top soil at the mining site in the early 1990’s has totally removed the vole from the mining site. Since the area has not been used since around 1992, there has been some vegetation that has returned to the site. Once operations begin again and mining starts, the 17 acres within the area would not be suitable habitat for the vole. If Navajo Mogollon vole is present in the meadow adjacent to the mining site, then it could be impacted by any elevated uranium and arsenic concentrations. Because the vole uses subterranean habitat, there is potential of inhalation, ingestion or direct exposure to uranium and other radionuclides while digging, eating, preening and/or hibernating. Individual Navajo Mogollon voles may experience mortality; however, these impacts would not alter their distribution or result in changes to overall population viability. It would not lead toward federal listing of the species.

The new information and changed circumstances for listed and sensitive species would not require a new analysis of the project since no new federal action is being proposed. The PoO, as approved with modifications by the ROD, did not contain a discretionary involvement or control for Threatened or Endangered species to be retained by the Forest as contemplated in 50 C.F.R. 402.16.

Conclusions

While there could be direct and indirect affects to wildlife species from the mining activities in the area, due to the limited amount of area and number of animals affected, this would likely be a localized impact.

Since the signing of the ROD, the Forest has also developed a Land Management Plan (LMP) for the Kaibab National Forest. The project is in consistent with Forest Plan direction for wildlife species and their habitats. The LMP designed Management Indicator Species (MIS) under the EIS for the LMP. Pronghorn antelope is the MIS designated as an indicator for grasslands. Since only 34-acres of grassland habitat would be affected by the mining activities, this would not change the Forest-wide habitat or population trend for the pronghorn.
The bird species meeting the Migratory Bird Treaty Act have been reviewed and none of the grassland species are found in this location.

The following references and documents were considered in this review:

Canyon Mine ROD for FEIS
Canyon Mine Final EIS Chapters 3 and 4
Appendix A, Draft Canyon Uranium Mine EIS – Plan of Operation
Appendix C, Draft Canyon Uranium Mine EIS – Wildlife Section
Appendix G, Draft Canyon Uranium Mine EIS – Comments and Responses
Northern Arizona Proposed Withdrawal DEIS
50 C.F.R. 402.16

**Air Quality**

After reviewing Final Environmental Impact Statement for the Canyon Uranium Mine (August 1986), the Canyon Mine ROD (September 1986), and the Plan of Operation (October 1984), air quality should not trigger a need for federal action. The EIS includes an air quality section that discusses fugitive dust and radon, the two primary pollutants of concern with the Canyon Uranium Mine. Since publication of the ROD, the Environmental Protection Agency (EPA) has regulated more air pollutants at more stringent levels defined as the National Ambient Air Quality Standards (NAAQS).

The EIS looks at total suspended particulates (TSP or PM10), whereas EPA has since started to regulate PM10 and PM2.5, separately. While the EIS estimates TSP concentrations well within the current NAAQS for PM10, the EIS does not address PM2.5 concentrations. Despite this, the analysis of TSP concentrations shows compliance with both the current PM10 and PM2.5 standards. With the majority of construction complete, particulate matter emissions from mine operations should be less than what was estimated by the EIS. Fugitive dust from truck hauling, and wind erosion of stockpiles remain as the main sources of air-borne particulates. These fugitive emissions are adequately assessed in the EIS.

The EIS shows compliance with Federal standards for Radon-222 emissions.
In order to begin operations, Denison Mines must have an air quality control permit from the Arizona Department of Environmental Quality (ADEQ). In reviewing the permit application, it is apparent that Denison Mines utilized current modeling techniques to show NAAQS compliance and also performed a visibility impact analysis to demonstrate minimal visibility degradation. ADEQ issued Denison Mines an air quality control permit (No. 52552) on March 9, 2011, confirming the mine’s ability to meet all State and Federal air pollution regulations, including those not specifically addressed in the EIS.

The PoO allows for monitoring of air pollution and mitigation as needed to maintain NAAQS attainment status. The EIS is consistent with the Kaibab Forest Land and Management Plan, assuring that Clean Air Act compliance is mandatory. As such, the Canyon Mine is not anticipated to impair air quality or visibility.

The following references and documents were considered in this review:

Final Environmental Impact Statement for the Canyon Uranium Mine, August 1986  
Canyon Mine ROD, September 1986  
Plan of Operation, October 1984  
Arizona Department of Environmental Quality (ADEQ), Denison Mines permit application  
ADEQ air quality control permit (No. 52552)

**Surface and Ground Water Quality**

Very little has changed since the 1986 FEIS and ROD. The USGS paper; Scientific Investigations Report 2005-5222 Hydrogeology of the Coconino Plateau and Adjacent Areas, Coconino and Yavapai Counties, Arizona by Donald J. Bills, Marilyn E. Flynn, and Stephen A. Monroe shows that the gradient in the Redwall-Muav aquifer is to the southwest towards the Havasu Drainage and Cataract Creek. The Redwall-Muav aquifer is at least 2500 feet below ground surface at the location of the Mine. The southwestward gradient should also apply to any local perched aquifers in this area, due to the parallel-bedded, layer-cake style stratigraphy. The C-aquifer is generally not saturated this far to the west, and would not be affected. Also, as Bills and others (2005) state, “These perched zones generally are small and thus are unsuitable as long-term water supplies …” The single monitoring well at the mine site should be adequate for evaluation of any perched aquifers which may potentially be affected.

There does not seem to be any reason to reevaluate the groundwater conditions or mining effects to them, as there is no new information or changed circumstance related to ground water that would indicate the original analysis is insufficient.

The following references and documents were considered in this review:

Canyon Mine Plan of Operation, October 1984  
Canyon Mine Record of Decision, September 1986
**Transportation / Engineering**

**Transportation**

After a review of the Canyon Mine ROD, EIS, and Engineering Report it was noted that, as per the chosen Alternative 5, the haul route from the mine will be as follows: (1) Haul Route 6: FSR305A to FSR305 to Route 64 south to I-40, I-40 East to Route 89 North, 89 North to Utah or (2) Haul Route 7: FSR305A to FSR305, FSR305 to Route 64 south to Route 180, 180 to FSR417, and then along a more southern route passing through state and private lands in the SP crater area. The only portion of these routes that travel across National Forest System land is the initial 4.8 miles on FR 305A and 305 on the Kaibab NF and 4 miles of FSR 417 on the Coconino NF.

The Arizona Department of Environmental Quality (ADEQ), Arizona Department of Transportation (ADOT), EPA, Arizona Radiation Regulatory Agency (ARRA), and the City of Flagstaff have been contacted regarding the portion of the proposed haul route through the City of Flagstaff. ADEQ and ADOT reported no requirements, and the EPA is only concerned with radon emissions at the mine. Any additional requirements that may arise from ADOT/USDOT, will be followed. The City of Flagstaff requested the relevant NEPA documentation. The ROD and Engineering Report were sent electronically to City of Flagstaff. The City’s response is to coordinate with Coconino County emergency planning and ARRA.

Nothing has changed regarding the FSR305A to FSR305 to Route 64 or FSR417 haul routes and there does not seem to be any reason to reevaluate the potential affects of these haul routes to the Forests’ Boundaries. It is recommended that applicable USDOT guidelines be followed for hauling operations.

**Engineering**

A review of the Pond Design criteria in the Engineering Report was performed (Appendix B, DEIS). No detailed liner design was noted, however, pond design criteria from Arizona Engineering Bulletin No. 11 were referenced.

In addition, the ADEQ was contacted regarding the ore piles, lined impoundments, and Storm Water Pollution Prevention Plan (SWPPP). The facility currently has a 3.04 Aquifer Protection Permit for the lined impoundment. Denison Mines has applied for 2.02 APP permits for the ore stockpile and tailings pile. Denison Mines does not have a current industrial SWPPP permit and has not applied for one at this time.

**Conclusion**

There is no new information or changed circumstances relating to the environmental impacts documented in the analysis with regard to either transportation or engineering.
Prior to operation, this facility will be inspected by a Forest Service Engineer to verify sound engineering of the following: (1) the lined impoundments (to include berm and liner integrity), (2) the ore and tailings stockpile sites and associated drainage measures, and (3) adequate storm water pollution prevention Best Management Practices (BMPs).

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation, October 1986
Canyon Mine Record of Decision, September 1986

**Recreation, Special Uses, and Lands**

**Recreation**

The affected environment of the Canyon Mine area has not changed since the publishing of the FEIS in 1986, and subsequent ROD. Visitors use the Forest roads in this area to primarily drive for pleasure and for hunting. There are no developed recreation sites and no trails in the near vicinity.

As the environmental consequences section states, there will be increased truck traffic, noise and increased activity around the mine area; therefore, any visitor looking for solitude could be adversely impacted. These effects would be the same today.

**Special Uses**

To the east of Canyon Mine lies the original Grand Canyon Airport which is now on the National Register of Historic Places. There is no current special use permit for the private buildings which occupy this site and they are slowly deteriorating.

There may be an occasional recreation or other permitted event (e.g., Red Butte Tribal Gathering); however, there has been no interest in any event being located near the mine site.

**Lands**

Land use has remained the same since the FEIS/ROD were written for Canyon Mine. There have been no adjustments, exchanges, rights-of-way or trespasses. There is a grazing allotment under permit located to the east which the mine area does not impact.

There is no new information or changed circumstances relating to the environmental impacts documented in the analysis with regard to Recreation, Special Uses, and Lands.

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation, October 1986
Socio-Economics

Since the estimated costs and employment levels were the same for all project alternatives (except No Action) the Canyon Uranium Mine EIS found that the economic impacts would be the same for all alternatives. This has not changed.

Most of the socioeconomic impacts (jobs and income) were expected to occur in the town of Williams and considered to be beneficial. Any increases in employment and income in the town of Williams would indeed be beneficial. The effects in terms of increased employment and income in Coconino County were estimated to be less than 1 percent. The relative impacts would be even less today given that the County population and economy have grown considerably since 1986.

There is no new information or changed circumstances relating to the environmental impacts documented in the analysis with regard to the socioeconomic environment. The factors within the Plan of Operations that would result in changes in socioeconomic impacts are unchanged, thus the estimated socioeconomic effects remain unchanged. Impacts in terms of employment (jobs) and income remain within the scope and range of the original effects analysis. These would be relatively small and positive.

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation, October 1986
Final Environmental Impact Statement, Canyon Uranium Mine, August 1986

Vegetation

The 1986 FEIS, ROD and the 1984 PoO were reviewed with regards to how vegetation resources were analyzed compared to the 1988 Kaibab National Forest Land Management Plan (Forest Plan) to determine if there was new information or requirements for vegetation that had not been considered in the original analysis. The PoO was compared to the Denison Mines letter of November 1, 2011 to determine if there are any changes to the 1984 PoO that would affect the vegetation analysis in the 1986 FEIS.

There are no changed circumstances relating to the environmental impacts documented in the analysis relating to vegetation resources.
The analysis and decision are consistent with the Kaibab National Forest Land Management Plan direction concerning vegetation management. The mine site exists on 17 acres of a 34-acre site that was classified as a grassland before the mining use. Because this area is in a non-forest grassland vegetation cover type, and it has been changed to a mining use, it is not affected by any of the changes or requirements made in the current Forest Plan and amendments, including the 1996 Forest Plan Amendment for Mexican spotted owl and northern goshawk habitat management.

The following references and documents were considered in this review:

Approved Canyon Mine Plan of Operation (PoO), October 1986
Canyon Mine Record of Decision, September 1986
Kaibab National Forest, Land Management Plan, 1988, as amended
Denison Mines letter to Kaibab Forest Supervisor Mike Williams, November 1, 2011
36 C.F.R. 228.4(e).

**Forest Plan Consistency**

A review of the 1988 Kaibab National Forest Land Management Plan, as amended, has been completed to determine if there are any new issues or management concerns in relation to the Canyon Mine FEIS, ROD and PoO since the analysis preceded the date of the Forest Plan decision. Although there is not specific mention of the Canyon Mine in the Forest Plan, it is apparent that the planners were aware of the mine and the ongoing analysis, and as such, added issues regarding minerals management for the Kaibab National Forest. The Forest Plan, Chapter 2 – Public Issues and Management Concerns, Overview, page 7 states, “It became evident in the spring of 1985 that minerals management and mining in the Kaibab National Forest is controversial, and based on public comment, the issue regarding minerals management was added for the Kaibab National Forest.” Next, on page 13, a section for Minerals Management is included and can be summarized as: This plan provides for the timely analysis and processing of locatable and leasable mineral prospecting, exploration, leasing and development proposals. Lands potentially valuable for uranium and oil and gas production are available for exploration and development.

The Forest Plan again addresses minerals in Chapter 4 – Management Direction – Minerals, p. 19, which states “Administer the mineral laws and regulations to minimize adverse surface resource impacts. Support sound energy and minerals exploration and development.”

The Forest Plan gives additional management direction on page 50, which, in summary specifies providing intensive management of prospecting, exploration and development of mineral resources to protect surface resources and other environmental values. Direction is given to restrict or prohibit surface use in areas with habitat of threatened and endangered species, and heritage resources nominated or posted to the National Register. Also on page 50, the Forest Plan gives direction to “Evaluate the need for development of areas with substitute or surrogate habitats, facilities, structures, etc., to replace areas of substantial loss or destruction from mining.
activities. The direction is then applied to the various Management Areas of the Forest Plan, and there is no further direction pertinent to Canyon Mine.

NFMA expressly allows the continuance of permitted pre-existing non-conforming use under valid existing rights. See 16 USC 1604(i). Denison has a pre-existing PoO that predates the Forest Plan and remains in effect. Also, as determined in the recent mineral validity examination dated April 18, 2012, Denison Mines has valid existing rights at the claims comprising Canyon Mine. Furthermore, the Forest Plan provisions regarding nominated sites do not apply by its own terms because the applicable NR eligible sites have not been nominated to the NR. Regarding the substitute habitat provision, the FEIS includes replacement requirements for the 17 acres of meadow/grasslands, as directed in the Forest Plan on p. 50. There are no Forest Plan conflicts with the Canyon Uranium Mine FEIS, ROD or PoO.

The following references and documents were considered in this review:

Kaibab National Forest, Land Management Plan, 1988, as amended

**National Environmental Policy Act Compliance**

No new federal action subject to further NEPA analysis is required for resumption of operations of the Canyon Mine. The existing PoO remains in place and in effect, and there is no need for any amendment or modification of the PoO. There is a need for further administrative activities related to Canyon Mine including further tribal consultation and adaptive management measures related to wildlife issues. However, such administrative activities are not additional federal actions subject to further NEPA analysis but are continued implementation of the original decision which expressly provides for further consultation and additional mitigation measures.
Appendix I
Brief Summary of Selected Applicable Legal Concepts

Forest Service Mineral Regulation
The Forest Service administers and manages mining activities for locatable minerals pursuant to applicable mining laws, including the 1872 Mining Law and Forest Service regulations. The Forest Service regulations set forth at 36 C.F.R. Part 228, Subpart A are the principal regulations applicable to locatable mineral operations on National Forest System (NFS) lands. Among other things, these regulations require approval of a Plan of Operation (PoO) for activities which may cause significant surface disturbance. These regulations do not define the duration of such plans or require a termination date. The Forest Service may request an operator to submit a modification to the PoO if there are “unforeseen significant disturbance of surface resources” pursuant to 36 C.F.R. 228.4(e). There is no current Forest Service Manual or Handbook direction defining “unforeseen significant disturbance of surface resources”.

National Forest Management Act
The National Forest Management Act (NFMA) sets forth a variety of requirements for management of NFS lands. Among those is the requirement to establish Land and Resource Management Plans (LRMPs aka “Forest Plans”) for each National Forest. NFMA also requires that all instruments for use and occupancy of the forest be consistent with the LRMPs. See 16 USC 1604(i). However, NFMA recognizes there may be inconsistent pre-existing uses that are allowed to continue where there are valid existing rights. (See 16 USC 1604(i) which states that any revision in instruments for use and occupancy “shall be subject to valid existing rights.”) This consistency provision has been interpreted to apply prospectively only and not retroactively to already approved projects. See Forest Guardians v Dombeck, 131 F.3d 1309 (9th Cir. 1997).

National Environmental Policy Act
Under the National Environmental Policy Act (NEPA), approval of a PoO under 36 C.F.R. Part 228 is often considered a major Federal action requiring an Environmental Impact Statement (EIS). However, the continuing private mineral operations would not constitute an ongoing or continuing Federal action. See e.g. Center for Biological Diversity v Salazar, Slip Op. 2010 WL 2493988 (D. Ariz. 6/17/2010) (BLM’s approval of a plan of operations was the proposed action subject to NEPA and resumption of operations approximately 20 years later did not constitute an ongoing major federal action requiring supplementation); accord Cold Mountain v. Garber 375 F.3d 884 (9th Cir. 2004) (holding that after Forest Service issuance and approval of a special use permit, there was no ongoing major federal action requiring supplementation). Therefore in the absence of a new major Federal action, no supplemental NEPA analysis would be required for resumption of operations at an existing mine with a PoO.

Endangered Species Act
The Endangered Species Act and its companion regulations set forth various requirements applicable to agency actions that may affect threatened or endangered species. For already permitted projects or activities, there are limited circumstances where a Federal agency may have the authority or obligation to conduct further ESA compliance activities. Pursuant to 50 C.F.R. 402.16, re-initiation of consultation under the Endangered Species Act is required where discretionary Federal involvement or control over the action has been retained or is authorized by law and one or more conditions exist, including “if new information reveals effects
of the action that may affect listed species or critical habitat in a manner or to an extent not
previously considered,… [or] if a new species is listed or critical habitat designated that may be
affected by the designated action.”

For adequate discretion to be retained to trigger this re-consultation requirement, the
discretion must include the ability to impose conditions that inure to the species’ benefit.
Unrelated provisions that retain discretionary authority and control for other purposes would not
grant the necessary discretion to trigger re-initiation of consultation under 50 C.F.R. 402.16 See
Sierra Club v. Babbit, 65 F.3d 1502 (9th Cir. 1995) (Limited discretion over exercise of
reciprocal right of way agreement did not constitute discretion requiring BLM to engage in
reconsultation); E.P.I.C. v Simpson Timber Co., 255 F.3d 1073 (9th Cir. 2001) (FWS did not
retain sufficient discretionary involvement and control giving it a duty to reinitiate consultation
on Incidental Take Permit for newly listed species and holding “that the permit must reserve to
the FWS discretion to act to protect species in addition to the Northern Spotted Owl.”)

National Historic Preservation Act

The National Historic Preservation Act (NHPA) Section 106 requires Federal agencies to
consider the effect of an undertaking on historic properties. The U.S. Forest Service Region 3
conducts NHPA Section 106 compliance pursuant to a 2003 First Amended Programmatic
Agreement (Programmatic Agreement) with several states, including the State of Arizona and
the Advisory Council on Historic Preservation (the Council).

For purposes of compliance with NHPA, an “undertaking subject to Section 106
consultation is defined as a project, activity, or program… [including those] requiring a Federal
permit, license or approval.” 16 U.S.C. 470f; 36 C.F.R 800.16. Approval of a PoO is typically
considered an undertaking subject to Section 106 requirements.

After approval of a PoO, further Section 106 compliance may be required in limited
circumstances set forth in provisions of 36 C.F.R. 800.13 and 36 C.F.R. 800.8(c)(5).

Pursuant to 36 C.F.R. 800.8(c)(5), when Section 106 compliance was provided through
NEPA processes, if “the undertaking is modified after approval of the FONSI or the ROD in a
manner that changes the undertaking or alters its effects on historic properties, or if the agency
official fails to ensure that the measures to avoid, minimize or mitigate adverse effects (as
specified in either the FONSI or the ROD, or in the binding commitment adopted pursuant to
paragraph (c)(4) of this section) are carried out the agency official shall notify the Council and
all consulting parties that supplemental environmental documents will be prepared in compliance
with NEPA or that the procedures in §§800.3 through 800.6 will be followed as necessary”.

Pursuant to the Programmatic Agreement and 36 C.F.R. 800.13 “If historic properties are
discovered or unanticipated effects on historic properties found after the agency official has
completed the section 106 process… the agency official shall make reasonable efforts to avoid,
minimize or mitigate adverse effects to such properties and: If the agency official has approved
the undertaking and construction has commenced, determine actions that the agency official can
take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian
organization that might attach religious and cultural significance to the affected property, and the
Council within 48 hours of the discovery.” These parties have 48 hours to respond and the
agency must then take these responses into account according to the regulation.

In conducting consultation efforts, an agency may rely on prior consultation efforts on
related undertakings. See Te-Moak Tribe v Department of Interior, 608 F.3d 592, 609 (9th Cir.
2010) (In light of the BLMs previous consultation with affected tribe about an original mineral
exploration project and other projects in the area, BLM provided tribe with opportunities to identify its concerns about historic properties where it notified Tribe one month before an EA was submitted and three months before BLM issued its decision and FONSI).

Subsequent information submitted by interested parties does not necessarily require an agency to re-open section 106 consultation under 36 C.F.R. 800.13(b) where a project was previously approved by the action agency, SHPO, and Advisory Council. See SUWA v Norton, 326 F.Supp.2d 102 (D.D.C. 2004).

An agency is not required to re-open the Section 106 process based on information that would have been brought to the agency’s attention through full participation in an original NHPA process. Apache Survival Coalition v U.S., 21 F.3d 895911-912 (9th Cir. 1994) (Dismissing claim for violation of an ongoing duty to consult on the effect of the Mount Graham International Observatory on the San Carlos Apache religious practices associated with Mount Graham and stating that it would undermine the justifications for requiring an agency to conduct additional NHPA review to require re-consultation for information that would have been available had the Tribe originally participated in the NHPA process.)
Appendix II

Brief Summary of Appeals and Litigation on the Canyon Mine FEIS and ROD

The Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) for Canyon Mine were issued on September 29, 1986. The ROD approved the PoO with modifications. Eleven different parties filed administrative appeals, including the Hopi and Havasupai Tribe. (AR Doc. 188; page 3932) In total, these parties raised 25 different issues including First Amendment and American Indian Religious Freedom Act (AIRFA) challenges, a variety of NEPA challenges, alleged violation of trust responsibility, and challenges regarding ground water, surface water, air quality, wildlife, transportation, etc. (AR Doc. 188; page 3933)

The appeals of Havasupai and Hopi were not limited to the record developed at the time of the FEIS and ROD, but included the submission of significant new information in support of the AIRFA and First Amendment claim, most importantly:

1. The Havasupai Tribe filed an affidavit regarding tribal religious issues and sacred sites. (AR Doc. 122; page 3137 – 3143)

2. On February 25, 1987, a hearing was held in the Office of the Chief on the appeal of the Regional Forester’s denial of a stay of activities. A transcript of that hearing is in the record. (AR Doc. 176; page 3716 – 3825) This included discussions from Havasupai Tribe leaders and their counsel of tribal religious issues and sacred sites at AR Doc. 176; page 3733-3769).

3. On May 14, 1987, a hearing was held on the merits of the appeal before the Deputy Regional Forester. A transcript can be found at AR Doc. 62a; page 1882 – 1992. Havasupai Tribe representatives spoke on tribal religious issues and sacred sites (page 1927–1956) and Hopi representatives also spoke on these issues (page 1965-1978).

On August 28, 1987 the Deputy Regional Forester made his decision on the merits. (AR Doc. 188; page 3928, et seq.) The Deputy Regional Forester noted the record had been extensively supplemented and his decision on the merits was based on a complete review of all the record including supplementary material. (AR Doc. 188; page 3931, 3934, and 3935) The Deputy Regional Forester’s decision on the merits has a detailed discussion of the tribal religious issues at pages 3934-3936. Several important findings concerning AIRFA and the First Amendment challenge were made by the Deputy Regional Forester in his decision, notably;

[AIRFA] does not mandate protection of Tribal religious practices to the exclusion of all other course of action. It does require that Federal actions be evaluated for their impacts on Indian religious beliefs and practices. (AR Doc. 188; page 3934)

I continue to have utmost regard and appreciation for a people’s religious beliefs and practices and have given serious consideration to all the information relating to this issue…However, I conclude that operations at the Canyon Mine site…do not interfere with continued religious belief and practice in any manner prohibited by AIRFA. (AR Doc. 188; page 3935)
The record supports the Forest Supervisor’s conclusion that no Tribal beliefs are penalized by this action. Individual members of the Tribe can continue to express and act on their beliefs without undue governmental interference. The record does not support the contention that identified religious practices will be prohibited. (AR Doc. 188; page 3935)

I conclude, therefore, that the administrative record does not support any contentions that the Forest Service did not comply with the provisions of the First Amendment of the Constitution nor does it contain information of sufficient specificity to establish the First Amendment claim made by appellant. (AR Doc. 188; page 3935)

The Deputy Regional Forester’s decision was appealed to the Chief of the Forest Service and the issues were briefed again based on the record before the Deputy Regional Forester, i.e. no further evidence was added at this stage of the proceeding.

On June 9, 1988 the Chief issued his final decision on the merits affirming the decisions of the Regional Forester. (AR Doc. 256) This decision became the final agency action approving the PoO for Canyon Mine. The Chief expressly stated he included in his considerations all the information included in the record. (AR Doc. 256; page 5230) The Chief’s decision on the merits has a detailed discussion of the tribal religious issues at AR Doc. 256; page 5231-5239. Several important findings were made by the Chief in his decision, notably:

I find that the Forest Supervisor’s decision complies with the requirements of AIRFA as interpreted by the Supreme Court [in Lyng v Northwest Indian Cemetery Protective Association]. The Forest Supervisor sought the early involvement of the Indian tribes, prepared a draft EIS which considered Indian beliefs, responded to their comments on the draft EIS, identified the Indians concerns as one of the major issues to be analyzed in detail in the final EIS, and after careful consideration of the competing interests of all interested and affected parties, selected the alternative which fulfilled the agency’s statutory responsibilities and minimized any impacts on the Indians’ opportunity to exercise their religious practices (A.R. Doc. 256: page 5232)

The Supreme Court's recent decision in Lyng v. Northwest Indian Cemetery Protection Association, supra, holds that the Court's prior decisions interpreting the Free Exercise Clause of the First Amendment cannot be read to "imply that incidental effects of government programs, which may make it more difficult to practice certain religions but which have no tendency to coerce individuals into acting contrary to their religious beliefs, require government to bring forward a compelling justification for its otherwise lawful actions . . ." Slip op. at 10. The Court found this to be the case even if the government's action could virtually destroy an individual's ability to practice their religion. (A.R. Doc. 256: page 5232)
The ROD also notes that the further consultation identified in the EIS has taken place, and “will continue during the review, construction, and operation in an effort to better identify the religious practices and beliefs that the Havasupai and Hopi believe may be affected, to avoid or mitigate impacts and otherwise avoid placing unnecessary burdens on the exercise of Indian religious practices or beliefs.” ROD p. 8. (A.R. Doc. 256: page 5233)

The Regional Forester and Forest Supervisor have both identified their commitment to whenever possible accommodating the appellant’ religious beliefs and practices. The Forest Service remains open to any information which the appellants can provide which will assist in avoiding or limiting any unnecessary effects on Indian religious practices or beliefs. (A.R. Doc. 256: page 5233)

The Havasupai Tribe filed suit challenging the Chief’s decision in the United States District Court for Arizona on several grounds, including: claims that approval of the plan of operations violated the tribes’ first amendment rights to freely exercise their religion at the Canyon Mine site; breach of fiduciary duties owed to the tribe; aboriginal title claims; alleged violation of the Grand Canyon Enlargement Act, and claims that the EIS was deficient. The District Court ruled for the USFS on all counts. (Havasupai Tribe v U.S., 752 F.Supp. 1471(1990)). Specifically, concerning the AIRFA, First Amendment and NEPA issues the Court stated:

The Havasupai assert that the Forest Service's decision approving the modified plan of operations for the Canyon Uranium Mine violates their first amendment rights to freely exercise their religion at the Canyon Mine site. The Havasupai assert that the Canyon Mine site is sacred and any mining will interfere with their religious practices at and near the mine, will kill their deities, and destroy their religion or “Way.” E.g., Complaint, at 7–11; V.2B–D.59–P.1827 (Transcript of Oral Presentation before the Deputy Regional Forester, May 14, 1987); V.3B–D.122–P.3137–3143 (Affidavit of Four Havasupai Tribe members); V.3D–D.176–P.3716–3825 (Transcript of Oral Presentation before the Chief of the Forest Service, February 25, 1987). For purposes of this section of analysis, the court can assume that all of plaintiffs' assertions about the religious sanctity of the Canyon Mine site and adverse affects upon the Havasupai belief system are true. Havasupai Tribe v U.S. 752 F.Supp. at 1484-1485

The case of Lyng v. Northwest Indian Cemetery Protective Association, 485 U.S. 439, 108 S.Ct. 1319, 99 L.Ed.2d 534 (1988) is applicable to the instant case and is dispositive of plaintiffs’ first amendment claim. …in the instant case, the Forest Service’s approval of the Plan does not violate the free exercise clause of the first amendment. Havasupai Tribe v U.S. 752 F.Supp. at 1485

The court finds and concludes that the Forest Service has fulfilled its obligations to the Havasupai Tribe under AIRFA through its undertakings during the NEPA process. Havasupai Tribe v U.S. 752 F.Supp. at 1488
It is clear from this analysis, that the Forest Service complied with NEPA and took the required “hard look.” The Havasupai continuously claim that they are the only ones that know their religion, yet the record clearly shows that they were not forthcoming on the subject during the scoping process or the comment period leading up to the publication of the final EIS, nor would they identify specific sites of religious significance. The Havasupai Tribe argues that the Forest Service did not make a sufficient effort, but the record reflects that the plaintiffs did not respond to numerous attempts for more specific information.

The court recognizes that the nature of the Havasupai religion is inherently a personal and secret issue. However, the law requires revelation in exchange for further recognition, consideration, and mitigation. The Forest Service took every reasonable step to develop these comments and discussed each in the final EIS. The Forest Service agency repeatedly sought clarification of plaintiff's comments. However, the Administrative Record reflects that the Havasupai declined to participate or structure their participation in a meaningful manner during the administrative action. Accordingly, the plaintiffs cannot complain that the agency's consideration of their religious concerns was inadequate.

The court finds and concludes that the Forest Service took appropriate action under NEPA and the policy of AIRFA to investigate and consider the religious concerns of the Havasupai Tribe. The Forest Service complied with the applicable laws and did not make any findings that were arbitrary or capricious under the facts and circumstances of this case.

**Havasupai Tribe v U.S.** 752 F.Supp. at 1500

The Havasupai Tribe appealed the District Court decision to the 9th Circuit Court of Appeals, but the 9th Circuit Court of Appeals affirmed the District Court’s decision in a brief opinion. See **Havasupai v Robertson**, 943 F.2d 32 (9th Cir. 1991) A petition for certiorari was filed with the United States Supreme Court but was denied. See **Havasupai v. U.S.**, 503 U.S. 959, 112 S.Ct. 1559 (1992).
Appendix III
Confidential Information Related to Native American Religious and Cultural Issues

Notice: This document contains information subject to the confidentiality requirements in the Archaeological Resources Protection Act (codified at 16 USC 470hh), the National Historic Preservation Act (codified at 16 USC 470w-3), Executive Order 13007 – Sacred Sites, the Food, Conservation, and Energy Act of 2008 (codified at 25 USC 3056), and the US Forest Service Regulations at 36 CFR 296.18. This information is exempt from disclosure under the Freedom of Information Act (FOIA) exempt and shall not be made available to the public.