

DECISION MEMO

PANDORA MINE VENT HOLES

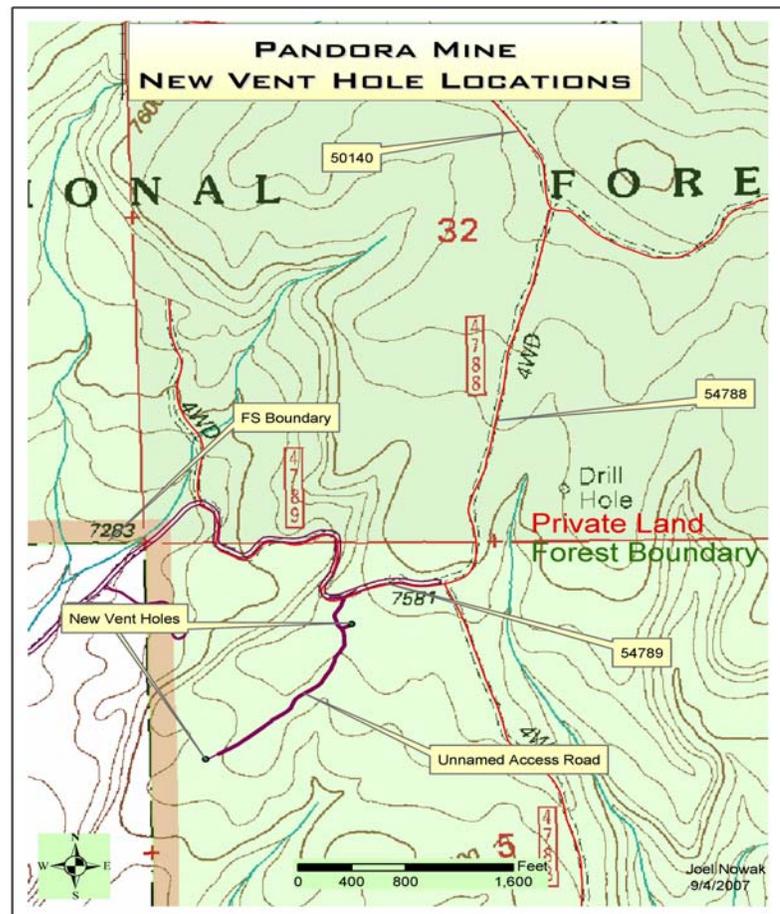
Manti-La Sal National Forest
Moab/Monticello Ranger District
San Juan County, Utah

INTRODUCTION

The Manti-La Sal National Forest, Moab/Monticello District proposed to authorize Denison Mines Corporation to install two vent holes in connection with Pandora Mine located in the northwest quarter of Section 5, Township 29 South, Range 25 East, Salt Lake Base Meridian, San Juan County, Utah (see general location map on page 8 of this document). The Pandora Mine is located on BLM lands approximately 1 mile southwest of the proposed vent holes. The vent holes will be approximately 6 feet in diameter with screened metal diffusers above ground. Surface disturbance will be minimal as the holes will be drilled from underground and power will be provided from underground. The photo below shows approximate location for one of the vent holes.



Total surface disturbance for installation of the two vent holes, including use of an existing access road, will be approximately 1 acre. Standard design features plus any additional ones identified in the environmental process will be adhered to by the company.



PURPOSE AND NEED:

The Forest Service needs to evaluate the environmental effects of the proponent's proposal and to assure compliance with applicable laws, regulations, and Manti-La Sal Forest Plan management direction. The Forest has an obligation to act on NOI's/Plans of Operations relating to the prospecting and development of mining claims (36 CFR 228.1) if the area is not withdrawn from locatable mineral location (p. III-12 LRMP). In acting upon proposals, NOI's, and applications, the Forest needs to evaluate whether or not to issue a Special Use Permit/Plan of Operations through an environmental analysis and public participation process.

DECISION TO BE IMPLEMENTED

It is my decision to amend/up-date the Plan of Operations to allow for construction and operation of the vent holes. Through the environmental process, including public involvement, the Forest has decided upon design features/environmental protection measures that will be included with the Plan of Operations and which are included with this decision. Other specific details of the operation will be worked out within the plan design and before operations begin. This decision will allow the proponent to construct the vent holes and improve the access roads but with measures taken to minimize any effect the operation may have on the environment.

PUBLIC PARTICIPATION

A Legal Notice informing the public of the proposed project was published in the *San Juan Record* and *Times-Independent* newspapers the week of June 17, 2007. A scoping letter was sent to various tribes, agencies, organizations, and individuals. Four comments were received during the 30 day comment period. These comments were taken into consideration when making my decision. (See Response to Comments in project record.)

REASONS FOR CATEGORICALLY EXCLUDING THIS ACTION

Approving this Plan of Operations does not have individual or cumulative significant effects on the quality of the human environment. The project falls under FSH (Forest Service Handbook) 1909.15 Chapter 31.2, which states that there are routine actions that require documentation in a Decision Memo of the rationale for not preparing an environmental assessment or environmental impact statement. Specifically, it falls into FSH (Forest Service Handbook) 1909.15 Chapter 31.2:

3. Approval, modification, or continuation of minor special uses of National Forest System lands that require less than five contiguous acres of land.

DECISION RATIONALE

This decision was made after careful consideration of the proposal, public involvement, and the entirety of the supporting record. No one fact or single piece of information led to this decision. Rather, a combination of factors contributed to it.

My decision is not unique. Approving Plans of Operations for activities related to mining is understood and complies with existing Law, Regulation and Policy. Effects on the environment are minimal individually and collectively. My decision represents an action, which effects are specifically understood and will be minimal. Some of the key factors used in reaching my decision are summarized below.

Existing User Need:

The need for vent holes in relation to underground mining continues to exist. These vent holes will allow for the safety of the miners while minimizing the effect on the environment. Without these, the mine could not operate in a safe manner. The mine provides job opportunities and needed commodities to the general public and surrounding communities. My decision will meet this objective.

Best Available Science:

My conclusion is based on a review of the record that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. The methods of construction, operation and monitoring of these vent holes are standard for the industry.

Consistency with the Forest Plan:

National Forest System lands are generally available (except for areas that are withdrawn; this area is not) to exploration and development of locatable minerals under the U.S. General Mining Law of 1872 and its amendments. Under the regulations in 36 CFR 228, the Forest Service approves exploration and mining operating plans and administers those operations to ensure protection and reclamation of affected surface resources (p. II-51).

The general direction for minerals management is to:

- Avoid or minimize significant and conflicting public or private investments near sites where mineral activities may occur within the foreseeable future.
- On classified lands not withdrawn from operations under the general mining laws provide for reasonable protection of the purposes for which the lands were classified and for reclamation of disturbed lands to a condition suitable for the purposes for which the lands were classified. Such lands may include Research Natural Areas, national recreation trails, special interest areas; such as scenic, geologic, or national historic sites, or some other type of specific classification. The status of classified lands with respect to withdrawal must be checked before an operating plan can be approved.
- On unclassified (remaining) lands, provide for reclamation of disturbed lands to achieve the planned uses specified in the Forest Plan, when those lands are no longer needed for mineral operations (P. III-35).

In addition, this project falls specifically in Range Management Area Direction. Management for this area is defined as: Timber types are managed to produce wood fiber and, where appropriate, forage. Other uses occur, and the use or its rehabilitation emphasize rangeland maintenance or enhancement.

The Forest Management Goal for Range is:

- Bring livestock obligation in line with rangeland carrying capacity.
- Maintain upward or stable trends in vegetation and soil condition.
- Invest in range improvements where they will provide the greatest benefit.
- Control noxious weeds and poisonous plants in cooperation with Forest users and State and local agencies.

This project conforms to these sections of the Plan and is consistent with other portions relative to this type of activity.

Extraordinary Circumstances:

Existing resource conditions and potential extraordinary circumstances have been considered in making my decision. I have determined that there are no extraordinary circumstances related to the project.

Threatened and endangered species or their critical habitat. A review of the project finds there are no T&E plant or animal species in the project area. There will be no effect to any federally listed T&E plant or animal species. With regards to R4 sensitive wildlife species, there may be impacts to individuals, but these would not likely contribute to a trend towards federal listing or loss of population. There will be no effect to any R4 sensitive plant species (See BA/BE for this project).

Management Indicator Species

Management Indicator Species (MIS) are a select group of species that can indicate change in habitat resulting from activities on the Forest. Management Indicator species associated with the Manti-La Sal National Forest are Elk, Mule Deer, Abert's squirrel, Macroinvertebrates, Goshawk, and Golden Eagles. Due to the limited scope and intensity of the proposed project on NFS lands, there would be no measurable effects to populations/trends of any of the management indicator species. (See BA/BE).

Floodplains, wetlands, or municipal watersheds. There are no floodplains or wetlands in the project area that are or will be affected. Floodplains or wetlands have not been mapped in this project area. Application of the Soil and Water Conservation Practices would ensure that the proposed activities would not result in occupation or modification of flood-prone areas. There will be no effect on any municipal watershed. (See CE Checklist, Hydrology)

Congressionally designated areas, such as wilderness, wilderness study areas, or National Recreation Areas. Wilderness, wilderness study areas, or National Recreation Areas are not in or around the project area. The nearest wilderness is Dark Canyon Wilderness which is approximately 50 miles to the southwest. Any impacts would be localized to the project area. Wilderness areas will not be affected. There are no wilderness study areas or national recreation areas on the Moab/Monticello Ranger District on the Manti-La Sal National Forest (See Attached Map).

Inventoried roadless areas. There are no roadless areas in the project area that will be affected. There will not be any impact by the amended Plan of Operations. The current character of inventoried roadless areas will not be affected (See Attached Map).

Research Natural Areas. The project area is not located within or adjacent to any Research Natural Areas (RNAs). RNAs will not be affected.

Native American religious or cultural sites, archeological sites, or historic properties or areas. Cultural and Paleontological reports were completed for the project by a consultant and reviewed by the Forest Service. The Forest sent a copy of the cultural report to the Utah State Historic Preservation Office (SHPO) and subsequently to several interested Tribes. SHPO did not submit a formal comment within the 30 day comment period, which indicates our compliance with Section 106 of the National Historic Preservation Act. The Hopi Tribe submitted comments on August 13, 2007. (See email to Don Irwin from SHPO, and Letter from The Hopi Tribe, Project Record)

- There are no conditions associated with this action that were identified during scoping and project analysis as potentially having effects that may significantly affect the environment. There are no extraordinary circumstances present related to this proposed action as listed in section 1909.15 of the Forest Service Handbook, Chapter 30, section 31.2 (8).
- There are existing vent holes in relation to the Pandora Mine that have been in the area for many years. There are no known significant environmental effects associated with the vent holes. The monitoring reports that were submitted to the EPA indicate the levels of radon are well below the limit set by the EPA. (See Response to Comments for additional decision rationale pertaining to radionuclide emissions.)

V. FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

To the best of my knowledge, my decision to approve the proposed Plan of Operations with attached design features/environmental protection measures would comply with all applicable laws and regulations. My decision in relation to pertinent legal requirements is summarized below.

National Forest Management Act of 1976: The Forest Plan (1986) was developed as required by this Act. This long-range land and resource management plan provides guidance for all resource management activities in the Forest. The National Forest Management Act requires all projects

and activities to be consistent with the Forest Plan. The Forest Plan has been reviewed in consideration of this project. My decision will be consistent with the Forest Plan and this Act. (Pages II-51-53, III-15, III-34-36, III-64, and III-66 of the Manti-La Sal National Forest Land and Resource Management Plan)

National Historic Preservation Act: My decision complies with this Act. No known cultural resources sites are present within the proposed project's area of Potential Effect. Consequently, the Forest Service has determined that amending the Plan of Operations to include the vent holes will have no effect on cultural resources. (Cultural Report and emails, Project Record)

Clean Water Act: My decision complies with this Act. Soil and Water Conservation Practices (SWCP's) and Best Management Practices will be followed according to District Hydrologist's recommendations (CE Checklist, Hydrology Section). The proposed action with the specified design features, SWCP's and other requirements designed to minimize impacts to soils, the potential for erosion, and impacts to water quality complies with the Clean Water Act.

Endangered Species Act: My decision complies with this Act. A review of the project finds there would be NO effect on T&E species or their habitat. With regards to R4 sensitive wildlife species, there may be impacts to individuals, but these would not likely contribute to a trend towards federal listing or loss of population (See BA/BE).

Executive Order 12898. "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The decision for this document will not amend or preclude any existing private or treaty rights in the National Forest. A review of potential effects to human health and safety and natural resources in the vicinity of minority and low-income communities did not identify any significant or disproportionately high or adverse effects in these areas because of the lack of residential houses in the vicinity of the existing and proposed development.

Executive Order 13186. Responsibilities of Federal Agencies to Protect Migratory Birds. January 10, 2001. The proposed action complies with the intent of the Migratory Bird Treaty Act and Executive Order 13186 as there is limited potential for unintentional take of individuals from the proposed activities of this project. Seasonal restrictions on project activity would minimize unintentional take of individuals (See BA/BE for this project).

National Environmental Policy Act: The entirety of documentation for this project supports that the analysis and decision comply with this Act.

VI. IMPLEMENTATION DATE AND APPEAL OPPORTUNITY

Copies of this decision will be made available to those who expressed interest in this proposed action by participating in the scoping process.

Implementation of this decision may occur immediately.

This decision is not subject to appeal in accordance with 36 CFR 215.8 a (4) Decisions for actions that have been categorically excluded from documentation in an EA or EIS pursuant to FSH 1909.15, Chapter 30, section 31.1 and 31.2.

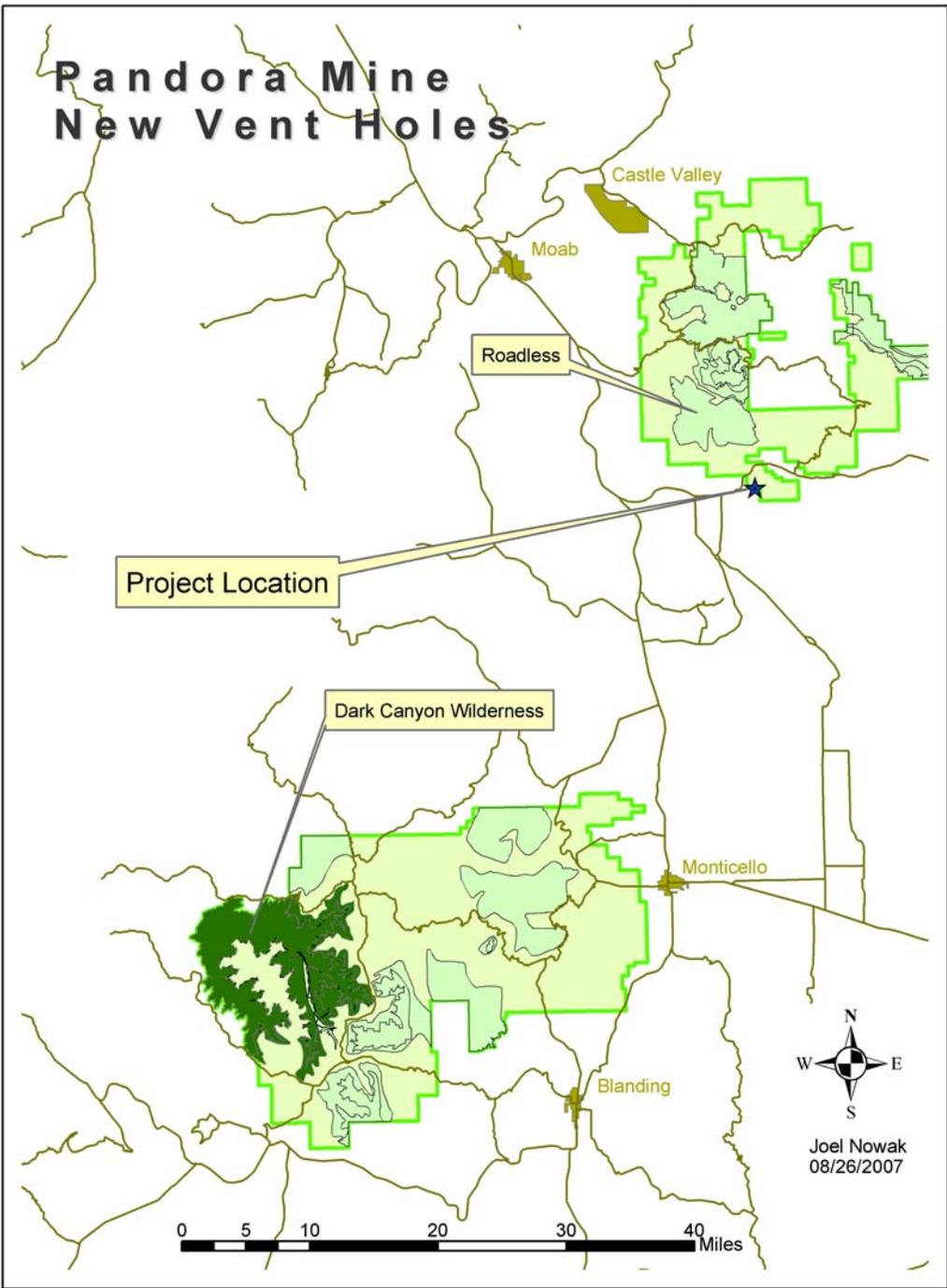
This decision is subject to appeal pursuant to 36 CFR 251.82. Notice of appeal must be postmarked or received by the Appeal Reviewing Officer within 45 days of this decision. The notice of appeal should be sent to: Attn: Rod Player, Manti-La Sal National Forest, 599 West Price River Drive, Price, UT 84501. A copy of the notice of appeal must be filed simultaneously with Katherine Fosters at 62 East 100 North, P.O. Box 386, Moab, UT 84532. Appeals must meet the content requirements of 36 CFR 251.90.

VII. CONTACT PERSON

For additional information concerning my decision, please feel free to contact Joel Nowak at (435) 636-3364.

_____/S/ Katherine Foster_____
Katherine Foster
Acting District Ranger (Responsible Official)
Manti-La Sal National Forest

_____/9/13/2007_____
Date



**DESIGN FEATURES AND CONDITIONS OF APPROVAL
FOR THE
PANDORA MINE VENT HOLES**

The following conditions of approval include all of the environmental protection measures and design features developed by the Forest Service as a result of the public scoping and analysis processes.

General

- Before construction begins, the Forest Service will record the radiation levels in the proposed vent hole locations. This measurement will be the target level that will be achieved after reclamation.
- Signs warning the public of the vent holes and construction equipment will be located next to access road during construction.
- During construction, temporary fencing and signs will be located around the holes when the crew is not on site.
- Grating hole size will be small enough to keep out wildlife as approved by the Forest and will be of sufficient durability to protect wildlife and people from falling in the hole.
- Monitoring of radionuclide emissions from each of the vent holes as required by the Environmental Protection Agency will be conducted and a copy of the report sent to the Moab/Monticello Ranger District of the Manti-La Sal National Forest. If determined necessary by the Forest, Denison Mines will erect a fence at a safe distance around the vent holes.
- A Forest Service approved gate will be installed on the access road only if members of the public use motorized vehicles on the road and the FS determines that it is causing undue erosion and/or other unwanted environmental/safety concerns.
- The Forest will be notified if the mine suspends operations of more than 1 month. The Forest will prepare a plan in conjunction with Denison Mines to minimize any detrimental environmental effects the suspension may have. In addition to other precautions, this may include sealing the shaft so no radon gas escapes and no vandalism occurs that may create a safety hazard.
- Reclamation will take place no longer than 6 months after the vents are no longer needed/used for mine operation.
- Reclamation of the unclassified road used to access vent hole sites would depend on the amount of use the road received during construction of the vent holes. If the vegetation currently present on the road bed appears to retain the ability to recover, ripping and

seeding would not be necessary. If the vegetation is beyond recovery and compaction of the road bed has occurred, then the following would be necessary:

1. Re-grading any cuts and fills to re-establish the original ground contours and drainages.
 2. Ripping the roads to a depth of 12 to 18 inches.
 3. Placing 6 inches of loose topsoil in locations where topsoil was removed (if applicable).
 4. Seeding the soil with a Forest Service approved seed mix.
 5. The first one hundred feet or so of the access road will be ripped, seeded and blocked according to Forest Service specifications.
- Reclamation of the vent holes will be according to the Plan of Operations and with any/all additional Forest Service requirements at the time of reclamation.

Erosion Control and Water Quality

- Project will not begin until surface soil is dry to minimize compaction, rutting and erosion.
- Vehicles will not cross perennial water features, except on existing roads or pre-designated crossings.
- Wetlands will be avoided.
- If any petroleum or other environmentally detrimental products are spilled on the ground, the FS will be notified and the spill and contaminated soil will be contained and removed to dispose of at an approved facility.
- All disturbed areas will be seeded with seed mixtures developed for the project. The seed will be certified weed and noxious weed free. Seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting. If the soil surface is crusted, take appropriate measure to break up the crusted areas prior to seeding.
- The normal operating season on National Forest land in this area is from May 15th to October 30th. Construction and other activities outside the normal operating season require approval from the District Ranger.
- Rutting will be used as an indicator of wet conditions. Vehicle traffic and equipment operation will be restricted to prevent rutting in excess of one inch on gravel roads, 2 inches on native surface roads and 4-6 inches in other work areas. Proponent will provide maintenance equipment to repair rutting as soon as ground conditions permit.
- During extended periods of dry weather, additional measures, including vehicle and equipment restrictions, may be necessary to prevent powdering of soils, to maintain firm

working surfaces, to limit fugitive dust, and to maintain appropriate moisture conditions to protect topsoil during reclamation.

- The proponent should schedule and conduct most operations within the normal operating season. The normal operating season includes the time period that typically has suitable soil moisture and runoff conditions for most Forest activities and operations.
- The proponent shall conduct all activities to prevent erosion and sedimentation. Temporary erosion control measures may be required to prevent, control, and mitigate erosion and sedimentation. Temporary and permanent erosion control work must be kept current with ongoing operations, especially when construction occurs outside of the normal operating season.
- The proponent is responsible for submitting an operating plan that includes erosion control measures and storm water management.
- Were possible, topsoil should be removed and stockpiled for use as surface dressing during reclamation.
- All construction activities will follow the Soil and Water Conservation Practices and Best Management Practices outlined in the hydrologist report contained in the project record.

Fire Protection

- Vehicles with catalytic converters will be restricted to existing roads and trails; parking or idling will not be permitted in portions of roads or trails with taller vegetation.
- All vehicles will have working mufflers and spark arresters. Electrical equipment must be properly insulated.
- All vehicles will be equipped with fire extinguishers and shovels.
- The following operational procedures will be followed:
 1. Smoking will only be allowed in company vehicles and/or designated smoking areas; all cigarette butts will be placed in appropriate containers and not thrown on the ground or out windows of vehicles.
 2. Cooking, campfires, or fires of any kind will not be allowed.

Existing Facilities/ROWs Protection

- Any damage caused by the proposal will be repaired or replaced as soon as practical before the end of the project.

Hazardous and Solid Waste/Trash Disposal

- All spills or leaks of diesel fuel, hydraulic fluid, lubricating oil, and coolant, including contaminated soil material, will be excavated to an appropriate container and transported to an approved disposal site.
- All solid waste or trash will be transported for disposal to an approved solid waste disposal facility (most likely the Grand County sanitary landfill in Moab).
- All other trash associated with project will be removed within one week of completion.

Cultural and Paleontological Resources

- The operator and its contractors will inform their employees about Federal regulations intended to protect paleontological and cultural resources. All personnel will be informed that collecting fossils and artifacts is a violation of Federal law.
- If fossils or cultural resources are uncovered during surface-disturbing activities, the operator and its contractors will suspend all operations at the site and the discovery will be immediately reported to the Forest Service representative, who would arrange for a determination of significance, and if necessary, recommend a recovery or avoidance plan.
- All vehicular traffic, personnel and equipment movement, and construction activities will be confined to the locations surveyed for cultural and paleontological resources as referenced in the report contained in the project record, and to the existing roadways and/or inventoried access routes.

Public/Crew Safety

- Signs warning the public of the vent holes and construction equipment will be located next to access road during construction.
- Temporary fencing will be located around the holes when the crew is not on site.

Soil Resource Protection

- Vehicles will be instructed to travel at slow speeds to limit disturbance to roads and creation of dust.
- As determined necessary by the Forest Service during the project, fugitive dust will be controlled by watering unpaved roads.
- Topsoil will be salvaged and protected during the life of the project to be used in reclamation.

Vegetation Resources Protection

- All equipment, including on-road and off-road equipment, will be cleaned to remove weed seed and soil (may contain weed seed) prior to commencing operations on public lands within the project area. Disturbed areas in the project area will be monitored for project-related establishment and spread of noxious weeds. Weed infestations will be treated as necessary and as approved by the Forest to prevent additional spread.
- Larger shrubs, trees, and other obstacles will be avoided where possible; no cutting or removal of shrubs or trees is proposed.

Wildlife Resources

- Project activities will be conducted in compliance with applicable requirements of the Endangered Species Act of 1973, as amended.
- Project personnel will be subject to the following requirements: no harassing of wild horses; no dogs may be brought to the project area; and no littering.
- Unless an emergency, maintenance personnel will walk into sites during wet periods to conduct any checks that may be required or needed.
- There will be no construction activity during the seasonal restrictions set by the Forest in connection with wildlife (March 1 – September 30) and outside the normal operating season unless specifically authorized by the Forest Service.

Livestock Grazing

- All gates within the project area will be left as they are found (i.e., open gates will be left open, closed gates will be left closed).
- Removal or alteration of existing range improvements will be prohibited unless prior approval from the appropriate Surface Management Agency is obtained.
- Construction personnel will be instructed to minimize contact with, and avoid harassment of, livestock.

The following are required and special mitigation statements for uranium drilling and associated projects to be made part of the Plan of Operations:

1. Approval of this Plan of Operations (Plan) does not constitute recognition or certification of the validity of ownership by any person named as owner herein.
2. Approval of the Plan does not constitute now or in the future, recognition or certification of the validity of any of the mining claims to which it may relate nor the mineral character of the land on which it lies.
3. Changes and additions to the Plan must be submitted to the District Ranger for approval as a revised or supplemental plan. The revised or supplemental Plan must be approved by the District Ranger before work may begin.

4. The operator shall furnish and maintain a reclamation bond in the amount of \$10,210 conditioned upon compliance with the terms and conditions of approval of the Plan. (Note: Reclamation does not include fire liability or other actions in connection with the operator.)
5. Prior to bond release, a final inspection of the project area must be made by the operator with the District Ranger or his designated representative.
6. All surface disturbing activities and operations must be supervised by a company representative knowledgeable of the design features and mitigation measures of the Plan.
7. Water must be legally obtained in accordance with State water laws.
8. The District Ranger or his designated representative must be notified when operations are completed and informed as to when reclamation work will begin. He must also be notified when operations are on stand-by and for approximately how long.
9. The vent holes, when no longer needed, must be plugged as soon as possible utilizing current accepted practices by the industry and with Forest Service approval.
10. All disturbed areas will be ripped and seeded in the late fall.
11. Reclamation of the unclassified road used to access vent hole sites would depend on the amount of use the road received during construction of the vent holes. If the vegetation currently present on the road bed appears to retain the ability to recover, ripping and seeding would not be necessary. If the vegetation is beyond recovery and compaction of the road bed has occurred, then the following would be necessary:
 - Re-grading any cuts and fills to re-establish the original ground contours and drainages.
 - Ripping the roads to a depth of 12 to 18 inches.
 - Placing 6 inches of loose topsoil in locations where topsoil was removed (if applicable).
 - Seeding the soil with a Forest Service approved seed mix.
 - The first one hundred feet or so of the access road will be ripped, seeded and blocked according to Forest Service specifications.