

**INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST**

**Project Title:** Daneros Mine Project

**NEPA Log Number:** UT-090-07-43

**File/Serial Number:** UTU-74631

**Project Leader:** Ted McDougall

**DESCRIPTION OF ALTERNATIVES, INCLUDING the PROPOSED ACTION**

This document analyzes two Alternatives: Alternative A - Proposed Action and; Alternative B - No Action. Under the Proposed Action Alternative, underground uranium mining would occur at the proposed Daneros mine. Under the No Action Alternative, the Mining Plan of Operations (MPO) would not be approved and mining operations would not occur. The No Action Alternative is included to provide a baseline for analysis and to show the consequences of not meeting the need for action. No issues or unresolved conflicts concerning alternative uses of the resources in the proposed project area (PPA) were identified that would necessitate consideration of other alternatives.

Alternative A – Utah Energy Corporation (UEC) proposes to develop an underground uranium mine called the Daneros Mine. The project location is shown in Figures 1 and 2 (Appendix K). Included in the Proposed Action are plans to drill 22 development holes, primarily on existing roadbeds, to delineate the ore body. Plans also include development of two portals (a main portal and a vent portal), a mine yard area, stockpile areas, waste pile areas, two mine ventilation boreholes, and an office/shop area where there would be a water well. Total project disturbance would be 4.5 acres, of which, 3.5 acres of surface disturbance are existing. Ore would be transported by truck on existing county roads to the existing Denison Mines' White Mesa Mill near Blanding, Utah. No ore processing would occur at the site. Mining would continue through 2016. The total amount of uranium ore proposed for extraction is 100,000 tons. Mining would begin once all authorizations (required bond, water rights, etc.) are received.

The Proposed Action summarizes more detailed information provided in the MPO. Some key information is included as appendices to the EA; the entire MPO is incorporated by reference. The Proposed Action incorporates the requirements of all applicable federal, state and local laws, regulations and permits as specified in Section 1.6. The Proposed Action also incorporates all applicable management actions prescribed in the BLM Land Use Plan, including stipulations. The Proposed Action includes mitigation measures to reduce the impacts to sensitive resources. These built-in mitigation measures include public and worker protection from radiation exposure, stormwater pollution prevention measures, weed control, proper waste disposal, and approved revegetation and reclamation methods; these are incorporated as an integral part of the Proposed Action.

For a more detailed description of the Proposed Action and No Action Alternatives refer to Chapter 2 of the EA.

**DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)**

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present, with potential for significant impact analyzed in detail in the EA; or identified in a DNA as requiring further analysis

Determination	Resource	Rationale for Determination	Signature	Date
<b>CRITICAL ELEMENTS</b>				
PI	Air Quality	The issue is that Federal and State emission thresholds for designated gaseous and particulate air pollutants may be exceeded. Emission sources include: particulate matter (dust) from construction and mining activity, including transportation; exhaust emissions from vehicles, diesel generators and mine ventilation, including carbon monoxide, nitrogen oxides and; radon gas from waste rock, ore pads and mine ventilation. Regional haze or other potential effects of emissions on visibility in any Class I area is also an issue. See the EA for further analysis.	Tammy Wallace	05/15/09
NP	Areas of Critical Environmental Concern	The BLM, Monticello Field Office designated seven (7) Areas of Critical Environmental Concern (ACEC) in its Resource Management Plan (RMP) dated November 17, 2008. The proposed project is not within or adjacent to any of the lands designated as ACECs (RMP table 4.133 and map 53). In addition, the proposed project is not within any previously designated ACECs. There would be no impact.	Brian Quigley	05/15/09
NI	Cultural Resources	Two cultural resources inventories were conducted for the Daneros project (State Project Nos. U-08-ST-0678b and U-08-BL-0929b). The first (U-08-ST-0678b) was conducted by SWCA Environmental Consultants (SWCA) in July 2008 and a second supplemental inventory (U-08-BL-0929b) was conducted by BLM on October 7, 2008. A total of 29.8 acres was surveyed (19.19 by SWCA and 10.6 by the BLM) covering the Area of Potential Effect (APE), including buffer areas around all project components and access roads.  No National Register of Historic Places (NRHP)-eligible or otherwise significant cultural resources were found in the APE. No historic properties would be affected by the proposed project. The Cultural Resource Inventory reports for the Daneros Mine project are on file with the BLM Monticello Field Office and the Utah State Historic Preservation Office.	Laura Kochanski	05/15/09
NI	Environmental Justice	Executive Order (EO) 12898 requires identifying and addressing disproportionately high and adverse human health and environmental impacts of federal programs, policies, and activities on minority or low income populations.  Approximately 56 percent of the population in San Juan County is Native American.	Ted McDougall	05/15/09

Determination	Resource	Rationale for Determination	Signature	Date
		<p>Despite the population data that indicates non-minority status within San Juan County, Native Americans are considered a minority group for the purposes of analyzing and ensuring environmental justice. The Native American population in San Juan County has the highest poverty level at 48%, or 3,809 individuals. The environmental analysis documented in the FEIS prepared for the Monticello Field Office RMP, which this EA is tiered to, concluded that no management actions proposed under any of the alternatives or the Proposed Plan would cause disproportionate adverse impacts to minority or low income populations within the planning area (BLM 2008b:4-421).</p> <p>The project location is in a remote area of San Juan County. The nearest communities (Blanding, Bluff and Mexican Hat) are 40-50 miles away. Employment at the proposed mine and at the White Mesa Mill would provide equal opportunities to low income and minority populations. Disproportionately high and adverse human health or environmental effects would not be borne by low income and minority populations.</p>		
NP	Farmlands (Prime or Unique)	<p>None of the lands in or near the PPA meet the criteria for prime, unique or state important farmlands. Prime farmland in Utah normally requires irrigation, acceptable levels of acidity or alkalinity, an acceptable content of salt and sodium and few or no rocks. Soils in the area do not meet these criteria or that of unique farmlands which are generally orchards. San Juan County has not designated any state important farmlands and lands in the PPA would very likely not qualify as they do not meet or nearly meet the criteria for prime or unique.</p>	Paul Curtis	05/15/09
NP	Floodplains	<p>Flood hazard or risk to human safety within the PPA is not likely. The State of Utah does not impose restrictions for floodplain management on BLM administered lands. There is no FEMA floodplain mapping available for this area (<a href="http://www.FEMA.com">http://www.FEMA.com</a>). Stormwater runoff at the PPA would be managed in conformance with Utah DOGM mining and UDEQ stormwater requirements; and controlled with ditches, berms, or other flood control structures (Storm Water Pollution Prevention Plan [SWPPP] Appendix E) and Hydrology Report [Appendix G]). The Proposed Action includes provisions to avoid adverse effects and incompatible development in areas subject to flooding, including: reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore/preserve the natural and beneficial values served by floodplains. Mine facilities would be protected from flooding with engineered structures and avoidance of the 100-year 6-hour floodplain. UEC has submitted a stream alteration permit application to the State of Utah, Division of Water Resources. The permit is currently pending.</p>	Paul Curtis	05/15/09
NI	Invasive, Non-native Species	<p>There are no known State of Utah listed noxious weeds that occur in the vicinity of the Proposed Action. The combination of the Proposed Action, Utah Energy Corporation Noxious Weed and Invasive Plant Control plan (Appendix H), proposed mitigation measures, and associated re-vegetation of disturbed sites should effectively prevent any impact from invasive, non-native plant species.</p>	Jed Carling	05/15/09

Determination	Resource	Rationale for Determination	Signature	Date
NI	Native American Religious Concerns	Consultations were conducted with 15 tribal entities. Comments were received from the Hopi Tribe and Navajo Nation. As a result of the comments received from the Hopi and Navajo, the BLM conducted additional consultations with those two tribes in order to identify specific places of traditional and cultural importance which may be affected by the proposed action, and to address other concerns expressed by those tribes. The BLM has concluded that the proposed action would not affect sites or places of traditional or cultural importance to the Hopi or Navajo. BLMs consultation efforts and conclusions are described in Appendix M and Chapter 5 of the EA.	Laura Kochanski	05/15/09
NP	Threatened, Endangered or Candidate Plant Species	SWCA Environmental Consultants (SWCA) compiled a list of federally listed and candidate species, species listed by the State of Utah, and BLM special management species with the potential to occur in San Juan County, Utah (USFWS 2007, UCDC 2008). After consultation with BLM, SWCA conducted a site survey of threatened, endangered or candidate species in May of 2008 to determine if the species identified by BLM are potentially located in the PPA. The results of the survey indicated there are no federally listed or BLM special status plant species within the PPA (Appendix B).	Paul Curtis	05/15/09
NI	Threatened, Endangered or Candidate Animal Species	Based on surveys and habitat assessment conducted by SWCA in May 2008 (see Appendix B), it was determined that none of the ten federally listed species have the potential to occur within the PPA. The habitat is not suitable for any of the listed species and is not within any designated critical habitat for Mexican spotted owls or the four endangered fish species.	Tammy Wallace	05/15/09
NI	Wastes (hazardous or solid)	Solid wastes that would be generated as a result of the mining activity would include general household wastes (e.g. paper products, glass, plastics, metals and sewage), scrap iron, and overburden. Household type solid wastes would be placed in industrial type roll off trash containers and sewage would be contained in chemical toilets and holding tanks. Contractors would provide services for removal, transportation and proper disposal for these wastes. The regulations at 40 CFR 261.4(b)(7) states in part, that overburden from the mining of uranium ore is not classified as a hazardous waste. The waste rock piles would be reclaimed under an approved reclamation plan submitted to the BLM and UDOGM.  Hazardous materials that would likely be used at the site include fuels, lubricants, antifreeze, lead acid batteries and explosives. Spill containment dikes and a synthetic liner would be constructed for the 2,000 gallon diesel tank to prevent uncontrolled releases and seepage into the soils. A Spill Prevention Control and Countermeasure Plan (SPCC) would be prepared and maintained at the site as required by 40 CFR 112. Explosives would be stored in accordance with the Mining Safety and Health Administrations (MSHA) regulations and requirements. The other hazardous materials	Jeff Brown	05/15/09

Determination	Resource	Rationale for Determination	Signature	Date
		<p>would be secured in a locked shop. A written Hazardous Communication Plan (Hazcom Plan) covering the requirements for training, labeling, listing of chemical inventory at the site, disposal procedures and, Material Safety Data Sheets (MSDS) would be on site. Hazardous wastes that would be generated consist of used oils, spent solvents, lead acid batteries and any spills of any of the hazardous materials used at the site. The used oils and batteries would be recycled and would therefore not be included in the hazardous wastes determination. Since UEC would produce less than 100 kg (approximately 220 pounds) of hazardous waste each month they would be considered a Conditionally Exempt Small Quantity Generator (CESQG) under the regulations at 40 CFR 261.5. The BLM would be immediately notified of any spills or releases and take immediate action to contain and clean up such spills. No extremely hazardous substances, as defined at 40 CFR 355 would be used, produced, stored, transported, or disposed of in association with the proposed action.</p> <p>Given the combination of waste management mitigation and controls to be utilized on site there would be no impacts associated with hazardous or solid wastes.</p>		
PI	Water Quality (drinking/ground)	The issue is that Utah State water quality standards may be exceeded or, that the leaching of metals or hazardous materials may impact or degrade surface or ground water resources. Potential sources of pollutants include: waste and ore piles and particulate in mine exhaust with elevated levels of heavy metals and/or radionuclides including radium, thorium, and uranium; storage areas for oils, lubricants, fuel, blasting agents and other chemicals, and; shop or other work areas where these materials are used. See the EA for further analysis.	Tammy Wallace	05/15/09
NP	Wetlands/Riparian Zones	The site of the proposal lacks appreciable surface and/or sub-surface waters for the establishment and maintenance of wetlands/riparian zones. The Biological Survey Report (see Appendix B) outlines common plant species at the site, which only includes upland plants and not any riparian obligated species. Therefore, there would be no impacts to wetlands/riparian zones because they are not present within the PPA.	Paul Curtis	05/15/09
NP	Wild and Scenic Rivers	The BLM, Monticello Field Office determined in its Resource Management Plan (RMP) dated November 17, 2008, that four (4) river segments are suitable for designation into the National Wild and Scenic River System (BLM 2008a:table 4.135 and map 55). There are no rivers or river segments designated as Wild and Scenic Rivers within or adjacent to the PPA and none of the river segments which were found to be suitable for possible designation as a Wild and Scenic River are within the PPA. There would be no impact.	Brian Quigley	05/15/09
NP	Wilderness	There are no lands under study by Congress (Wilderness Study Areas status [WSA]) for potential wilderness designation or designated wilderness areas (WA) within or in proximity of the PPA. There would be no impact.	Brian Quigley	05/15/09

**OTHER RESOURCES / CONCERNS**

NI	Rangeland Health Standards and Guidelines	<p>The proposal occurs in a Semi-desert Stony Loam ecological site, which naturally lacks appreciable biotic production due to the high content of stone, shallow soils, steep slopes, and arid environment (see Biological Survey Report). Existing functional / structural plant communities are as expected; thereby providing soil stability against erosive hydrologic functions within their potential range.</p> <p>Overall, no impact to Rangeland Health Standards and Guidelines would occur as a result of the action because proposed mitigation measures, such as reclamation efforts and stormwater discharge operations, would offset potential negative influences to the continuation of meeting Health Standards. Also, the scale of the proposal is limited in relation to the surrounding rangelands which would continue to be functional and provide site integrity. See Biological Survey Report (Appendix B), reclamation plan and the SWPPP (Appendix E) for additional information.</p>	Paul Curtis	05/15/09
NI	Livestock Grazing	<p>The project occurs within a portion of the winter range on the White Canyon grazing allotment. This allotment encompasses 226,713 acres, provides nearly a year-long grazing season for a total of 456 permitted cattle, and has 5616 active Animal Unit Months (AUMs) allocated for livestock.</p> <p>The area of proposed activity is located in a Semi-desert Stony Loam and Upland Shallow Loam ecological sites, which naturally lacks appreciable forage production for livestock due to the high content of stone, shallow soils, steep slopes, and arid environment (see Biological Survey Report). These conditions negate long-term forage losses associated with the Proposed Action to approximately 0.2 AUMs due to a minor reduction of forage availability, which is negligible for livestock grazing overall. Also, the individual Proposed Action would have minimal impacts on the authorized grazing use because the amount of new surface disturbance (1 acre) is nominal in regards to the scale of the allotment (226,713 acres).</p> <p>Soil and vegetation disturbances (4.5 acres) would be offset in the long-term by successfully reclaiming disturbed areas with a seed mix that is suited for this site. Therefore, a minimal forage source for livestock would occur upon successful re-vegetation.</p> <p>Proposed mining activities that occur during the grazing period may potentially have a minor influence to livestock practices, such as a modification in livestock distribution, increased vehicular use, possible injury/loss to livestock due to vehicular collisions, and impediments to livestock grazing and movement. Cattle guards would be installed as necessary so that gates would not be left open.</p> <p>Overall, there would be no appreciable impact to livestock grazing for reasons listed above on the White Canyon allotment.</p>	Paul Curtis	05/15/09

NI	Woodlands	Piñon-juniper woodlands are present in the vicinity of the Proposed Action in the Upland Shallow Loam ecological site. No impacts to woodlands would occur because of the limited nature of the Proposed Action (4.5 acres), of which mostly occur outside of woodland habitat, in relation to the vastness of available woodlands. Harvesting potential of woodland products would also not be impacted because of the isolation of the site, limited scale, difficult access, and greater woodland gathering opportunities elsewhere.	Jed Carling	05/15/09
NI	Vegetation including Special Status Plant Species other than FWS candidate or listed species	<p>Less than 1 acre of new surface disturbance would result from the Proposed Action. The area of proposed activity is located in a Semi-desert Stony Loam and Upland Shallow Loam ecological sites, which naturally lacks appreciable vegetative production due to the high content of stone, shallow soils, steep slopes, and arid environment. Vegetation is primarily composed of shrublands (big sagebrush, shadscale, rabbitbrush, etc.) and Pinyon-Juniper woodlands. These sites also have naturally limited herbaceous understories (blue grama, galleta grass, etc.) (see Appendix B). Site conditions at the proposal area normally has hampered re-habilitation / re-vegetation efforts following a disturbance because of limited resources; thus potentially requiring repeated reclamation (seeding) and greater top soil levels. Overall, impact to non-listed vegetation would be negligible because of the lack of appreciable vegetation, scale of operation and proposed mitigation efforts such as re-vegetation and stabilization of the site. The minor adverse impact would largely be negated by the proposed reclamation of a part of the old waste rock dump by establishing vegetation on an otherwise barren site.</p> <p>The results of the survey indicated there are no federally listed or BLM special status plant species in the PPA (see Appendix B). Reclamation of the site would be in accordance with the approved Reclamation Plan. The BLM MFO has identified 21 BLM-sensitive plant species with potential to occur in San Juan County. Field investigations evaluated habitat requirements for these species and in the professional opinion of SWCA, none of the 21 BLM-sensitive species have the potential to occur in the PPA (see Appendix B). There are no known State of Utah-listed noxious weeds that occur in the vicinity of the Proposed Action, although cheatgrass (<i>Bromus tectorum</i>) was common throughout the PPA. There would be no impact to special status or candidate plant species.</p>	Paul Curtis	05/15/09
NI	Fish and Wildlife Including Special Status Species other than FWS candidate or listed species e.g. Migratory birds.	<p>Old and new mine openings provide habitat for several species of bats known to inhabit the area. A bat survey was conducted in the existing mine opening in the fall of 2008. No bats were detected and there was no sign (guano, insect parts, or roosting stains) of bats using the existing mine opening. Since there are currently no bats in the existing mine, the new mine openings would be closed during times of cessation to prevent bats from entering, and reclamation would be done at the end of the project; no bat species would be affected by the project.</p> <p>Raptor surveys would be completed if surface disturbing activities begin between January 1st and September 31. If raptors are found after appropriate surveys are conducted, modification may be required. The management of raptors, including buffer sizes and timing restrictions would be developed according to the Best Management Practices for Raptors and Their Associated Habitats in Utah. This would ensure that nesting raptors</p>	Tammy Wallace	05/15/09

would not be affected by the project.

Other wildlife such as reptiles, migratory birds, mule deer, and small mammals (such as chipmunks and mice) may be seasonally attracted to the area in small numbers. The mine is designed for total containment of groundwater from the mine workings, and no discharge to the dry washes is anticipated. Mine reclamation would occur when mining operations are concluded. This would protect the habitat surrounding the mine and continue to provide wildlife habitat in the future. Vehicular use would increase during mining operations and the potential for collisions with wildlife would increase; however, any increase in collisions with wildlife would not measurably impact wildlife populations because of the small number of these species that utilize the area. Except for initial portal development, blasting would occur underground, and would not appreciably affect the sound-scape over a large area.

PI	Desert bighorn sheep	The PPA is within designated crucial desert bighorn sheep habitat. This habitat is important for sheep year-round, but especially during the lambing and breeding seasons. The increase in human activity associated with the proposed mine operation may cause the sheep to abandon habitat in Bullseye Canyon and may disrupt normal movement patterns within the canyon. See the EA for further analysis.	Tammy Wallace	05/15/09
NI	Soils	Soils within the PPA are primarily Strych-Skos-Badland Complex and Rizno-Rock Outcrop Complex. These soils typically have limited vegetative potential due to their shallow nature, low to very low available water capacities, high content of stone, steep slopes, and arid environment. Therefore, there are high levels of bare ground and associated run-off in these sites. The proposal would disturb approximately 4.5 acres, of which, 3.5 acres would involve areas of existing surface disturbance. See Soil Report Excerpts in Appendix F for further information.  Less than 1 acre of new soil disturbance would result from the Proposed Action. The Proposed Action incorporates interim measures to protect the topsoil stockpile from wind and water erosion, including a SWPPP (Appendix E) to control run-off and minimize erosion in areas of surface disturbance. The proposed reclamation measures include covering a part of the old barren waste rock dump with native soils and vegetation. Reclamation of the old waste rock pile would lessen runoff as the vegetated and topsoiled slopes absorb and stabilize rainwater erosion more effectively than the currently barren waste rock pile (see EA for further analysis). Reclamation of the old barren waste rock dump would help negate the minor impacts to soil resources caused by new surface disturbance. The application of gravel to the surface of the mine access road would help to reduce erodibility of native road surface and decrease sedimentation into the adjacent ephemeral drainage.	Paul Curtis	05/15/09
NI	Recreation	The PPA is used occasionally by motorized recreationalists, mountain bikers and hikers, although use is limited. One designated route provides access up Bullseye Canyon and onto Wingate Mesa. The route (D0029) is a county-maintained road which traverses the proposed mine site. For public safety purposes, access on route D0029 would be restricted for the duration of mine operations. Safety signs and a gate would be placed on route D0029 at the entrance to the mine to allow access to authorized mine personnel	Brian Quigley	05/15/09

only. Public access would be restored once mining operations are completed in approximately 2016. During the 7-year mine operation, motorized vehicles would not be allowed access beyond the mine site and onto Wingate Mesa. Although this would impact motorized recreationalists to some extent, motorized vehicle use on Wingate Mesa has been light in the past given the fact that the road is often impassable due to natural road closure from storm events. Wingate Mesa would remain accessible to hikers. Closure of route D0029 during mine operations would necessitate a two mile hike from the nearest designated route (B258) in order for the public to get onto Wingate Mesa. The Proposed Action would result in minor beneficial impacts for non-motorized recreationalists during the 7-year mine operation by providing greater solitude in the roughly 8,000-acre roaded area on Wingate Mesa.

Approximately 2,000 feet of route D0029 between the mine and route B258 may require gravel surfacing to support haul trucks during the mine operation. The short graveled segment would have little or no impact to motorized recreation use after operations are complete because the road surface would remain native soils beyond the mine site.

The PPA is largely concealed from public view because of its location in Bullseye Canyon and would not visually be intrusive for most recreationalists. Except for initial portal development, blasting would occur underground, and would not appreciably affect the sound-scape over a large area.

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Past mining and exploration disturbances are prevalent in the area of the proposed project. The proposed mine facilities would be situated, in part, on an old waste rock pad. The PPA is largely concealed from public view because of its location in Bullseye Canyon. The canyon terrain screens the project so it is not visible from the primary access road in the area (county road B258-Radium King).

NI	Visual Resources	The proposed facilities are located in an area designated as visual resource management (VRM) Class IV (BLM 2008a:map 71). The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The proposal would be consistent with the objectives for this VRM Class. Although not necessary to meet VRM Class IV objectives, best management practices incorporated in the proposal includes painting mine facilities a color that corresponds to the natural setting. Lighting at the mine location would have minimal impact on night skies because of the small nature of the operation and the mine's location in Bullseye Canyon, which screens it from public view.	Maxine Deeter	05/15/09
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NI	Mineral Resources/Energy Production	The Daneros Mine project is located on the southwest shelf of the Paradox basin. Oil and gas resources in this area of the Paradox basin occur primarily in the Porous Carbonate Buildup and Fractured Interbed Plays within the Pennsylvanian Hermosa Group. These plays have a moderate potential for development in the area of the proposed project (BLM, 2008b). Currently, there is no oil and gas development or federal oil and gas leases in the PPA. The proposed uranium mine would not interfere with any future oil and gas development because of the relatively small mine size and the fact that the much deeper oil and gas targets would allow drilling and production activities to be sited	Ted McDougall	05/15/09
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outside the active areas of the mining operation.

The mine project is located within the White Canyon mining area. Uranium deposits occur primarily in channels of the Shinarump Member of the Chinle Formation. This area of San Juan County provides other opportunities for extraction of uranium resources. The proposed mine operation could have a positive impact for the energy minerals industry by potentially increasing the understanding of ore deposition controls and geology. The proposed extraction of 100,000 tons of uranium ore would yield approximately 600,000 lbs of U3O8 and constitute an irretrievable loss of the same.

Mine facilities and surface operations would not disturb bedrock exposures. Surface facilities would be located entirely on old mine waste rock material or Quaternary colluvial deposits which have little or no potential of containing paleontological resources.

NI	Paleontology	Underground mine development and production operations would occur in the Monitor Butte and Shinarump Members of the Upper Triassic Chinle Formation. Vertebrate fossils are known to occur in these members, although occurrences are scarce. It is unlikely that vertebrate fossils would be encountered during mining; however, in the event of an unanticipated discovery, the mine operator would be required to temporarily stop work in the immediate vicinity of the find and notify the BLM so that a BLM specialist could assess the situation and take appropriate action.	Laura Kochanski	05/15/09
NI	Lands / Access	The proposed mine project is located on public land administered by the BLM. Access to the PPA is via a year-round county maintained road (B258-Radium King) and a lesser county-maintained road in Bullseye Canyon (D0029). County roads B258 and D0029 are both designated routes in the Monticello Field Office Travel Plan. Route D0029 traverses the proposed waste and ore stockpiles and continues past the mine portal area, providing public access onto Wingate Mesa. For public safety purposes, access on County Road D0029 would be restricted for the duration of mine operations. Safety signs and a gate would be placed on route D0029 at the entrance to the mine to allow access to authorized mine personnel only. Public access would be restored once mining operations are completed in approximately 2016. During the 7-year mine operation, motorized vehicle access past the mine site and onto Wingate Mesa would not be allowed. The Proposed Action would not require realty action or affect an existing right-of-way.	Maxine Deeter	05/15/09
NI	Socioeconomics	Development of the mine is expected to provide up to 41 jobs for surface preparation, underground development, mine production, and reclamation phases through 2016. The same personnel could be used for multiple phases of work; therefore these numbers do not reflect total employment. Total employment over the life of the project is expected to be closer to 12–15 employees. As such, employment is not expected to increase significantly. Additionally, mining is a small portion of the regional economy; 3.3% of employment (141 jobs in 2000) in San Juan County is from the mining sector. The mine's ore, however, would be supplied to the White Mesa Mill, which is the largest non-government employer in San Juan County at 150 employees.	Ted McDougall	05/15/09
		Because employment is not expected to increase measurably, no concomitant increase in		

		population is expected. Mine employees would rely on existing non-traditional housing at the Fry Canyon Lodge; therefore, no additional demands on housing or public services would result. There would be a negligible increase in sales tax revenue generated from use of the Fry Canyon Lodge and the parts and service sector. Overall, the proposed mine expansion is not expected to have an appreciable effect on socioeconomic factors such as employment, population, tax revenues or housing.		
NP	BLM Natural Areas	The BLM inventoried and evaluated Natural Areas for wilderness characteristics as part of the RMP process. That evaluation process is documented in Appendix O of the Proposed RMP/FEIS, dated August 2008. The PPA is not within any of the lands found to have wilderness characteristics. The proposed project is within the part of the Red Rock Plateau B inventory area (Wilderness Characteristics Review 03/2007) which was found to lack wilderness characteristics (BLM 2008a:table 3.19 and map 33). There would be no impact.	Brian Quigley	05/15/09
PI	Human Health and Safety Concerns	There is concern that mine employees and the public may be exposed to unsafe levels of radon gas and gamma radiation both short term during mining operations and long term after reclamation is complete.  Additionally, there is a safety issue associated with increased traffic on county road B258 (Radium King) and the additive effects of ore trucks from the Tony M Mine and the Daneros Mine on State Highway 95. See the EA for further analysis.	Jeff Brown	05/15/09
NI	Climate	Climate change describes the variation in Earth's global and regional atmosphere over time. The rise in the Earth's average surface temperature is known as global warming. Scientists attribute the accelerating rate of global warming to human-made greenhouse gas (GHG) emissions. GHGs are any gas that absorbs infrared radiation in the atmosphere and forces the planet's average temperature to increase. Generally, recognized anthropogenic GHGs include: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Carbon dioxide is the primary factor in climate change, with atmospheric concentrations increasing by about 30 percent since the start of the Industrial Revolution (Intergovernmental Panel on Climate Change [IPCC] 2007). This increase occurs because man extracts fossil fuel from the earth and combusts it, thereby releasing carbon into the atmosphere that has been sequestered for millennia. Although plants and the oceans absorb carbon dioxide, the rate of anthropogenic generation exceeds nature's capacity for uptake. Atmospheric methane, a GHG about 20 times more potent than carbon dioxide, has doubled since 1750 (National Aeronautics and Space Administration [NASA] 2005). Methane is emitted by agriculture, de-forestation, oil and gas production, organic decomposition (land fills), and industry.  The National Climatic Data Center reports that, "Reflecting the long-term warming trend in the Earth's climate, U.S. and global annual temperatures are now approximately 1.0°F warmer than at the start of the 20th century, and the rate of warming has accelerated over the past 30 years, increasing globally since the mid-1970's at a rate approximately three times faster than the century-scale trend" (National Climatic Data Center 2007).	Ted McDougall	05/15/09

Greenhouse gas (GHG) emissions from the proposed project would be primarily carbon dioxide (CO<sub>2</sub>) resulting from fossil diesel fuel combustion. The mine would create about 690 tons of CO<sub>2</sub> annually (Appendix L). Total CO<sub>2</sub> emissions from the proposed project may contribute negligibly to cumulative rises in global CO<sub>2</sub> levels. However, the uranium produced from the proposed mining operations would be used in cleaner fuel technologies which may offset or actually result indirectly in a beneficial reduction in CO<sub>2</sub> levels globally.

Nuclear energy accounts for about 15 percent of the world’s electricity generation and avoids the emission of about 2.1 billion tones of CO<sub>2</sub> every year (The European Atomic Forum, 2008). Nuclear energy is in no way free of carbon emissions but it is much better (from a purely carbon-equivalent emissions standpoint) than fossil fuel electricity generators such as coal, diesel, or natural gas. Based on lifecycle estimates for electricity generators, nuclear generators produce 66 gCO<sub>2</sub>/kWh compared to natural gas (443 gCO<sub>2</sub>/kWh), diesel (778 gCO<sub>2</sub>/kWh), and coal (1,000 gCO<sub>2</sub>/kWh) (Sovacool, 2008).

**FINAL REVIEW:**

Reviewer Title	Signature	Date	Comments
NEPA / Environmental Coordinator	/s/ Mike Robinson	05/15/09	
Authorized Officer	/s/ Thomas A. Heinlein	05/26/09	

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