

**TONY M MINE PLAN OF OPERATIONS
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ATTACHMENTS

Attachment

- A Land Ownership - Table A1 and Figure A1 - Confidential
- B Baseline Soils Report for Tony M Mine
- C Baseline Vegetation Report for Tony M Mine
- D Geology and Groundwater Report
- E Dam Permit Application and Water Rights
- F Request for Ground Water Discharge Permit by Rule
- G Surface Drainage Plan
- H Storm Water Pollution Prevention Plan
- I Spill Prevention, Control, and Countermeasure Plan – Preliminary
- J Air Quality Notice of Intent
- K Evaporation Pond Sediment and Ore Stockpile Analytical Data
- L Reclamation Bond Estimate
- M Wildlife Resources Baseline Technical Report
- N Weed Management Plan
- O Evaporation Pond Dam and Clay Liner Plans and Specifications

1.0 INTRODUCTION

Denison Mines (USA) Corp. (DUSA) plans to reopen the Tony M Mine, an underground uranium mine that was previously operated by Plateau Resources. The mine was developed in 1977 and operated into the early 1980s when it was placed on standby due to low uranium prices. The Tony M Mine was reclaimed in stages between 1995 and 2003.

As shown on Figure 1, the Tony M Mine is situated on the south flank of the Henry Mountains in Garfield County, Utah. The mine is located approximately 50 miles south of Hanksville and 15 miles north of Bullfrog Marina. The main access road to the mine is via six miles of all-weather county maintained road proceeding 1.5 miles west from Utah Highway 276 and then 4.5 miles north through Shootaring Canyon as shown on Figure 2.

Figure 2 depicts the existing workings, identified ore deposit, and potential future production and ventilation holes. DUSA plans to reopen the mine using a phased approach. Phase 1 consists of reconstructing the surface facilities and further developing the underground workings utilizing the existing declines¹. Phases 2 and 3 consist of developing the full northern extent of the ore deposit, which will require construction of production shafts and additional roads and surface facilities. Phases 2 and 3 are contingent on the Phase 1 results and are not included in this Plan of Operations (POO).

During Phase 1, the mine is expected to initially employ approximately 10 to 20 miners and support personnel to rehabilitate and further develop the main declines and then expand to 60 to 70 employees during full production. Depending on market conditions and production rates, Phase 1 is expected to start in the third quarter of 2007 and extend over a 2- to 3-year period. Phases 2 and 3 have the potential to employ up to 300 miners and extend the mine life to 25 years or more.

This POO addresses proposed Phase 1 activities including rehabilitation of the existing mine workings, extension of the underground declines and laterals further to the north, reestablishment of the mine ventilation and dewatering systems, and construction of mine buildings and related surface facilities. These proposed activities, with a few minor exceptions, are limited to those surface areas that were previously disturbed and reclaimed by the former operator. A total of 1.25 acres of previously undisturbed land would be disturbed under the proposed activities. No concurrent reclamation is proposed during Phase 1, as all of the surface facilities are needed to support potential Phase 2 and 3 mine

¹ Declines are ramps that form the entrance to the underground deposits.

operations. Areas of proposed Phase 1 surface disturbance are described below and delineated in Table 1 and Figures 3, 4A, 4B, and 4C.

Attachments to this POO include Land Ownership (Attachment A), a Baseline Soils Report (Attachment B), a Baseline Vegetation Report (Attachment C), a Geology and Groundwater Report (Attachment D), Dam Permit Application and Water Rights (Attachment E), Request for Ground Water Discharge Permit by Rule (Attachment F), a Surface Drainage Plan (Attachment G), a Storm Water Pollution Prevention Plan (Attachment H), a Spill Prevention, Control, and Countermeasure Plan – Preliminary (Attachment I), Air Quality Notice of Intent (Attachment J), Evaporation Pond Sediment and Ore Stockpile Analytical Data (Attachment K), Reclamation Bond Estimate (Attachment L), a Wildlife Resources Baseline Technical Report (Attachment M), a Weed Management Plan (Attachment N), and Evaporation Pond Dam and Clay Liner Plans and Specifications (Attachment O).

The following is a list of known federal, state, and local approvals and permits required, identified by type and entity. All required permits and approvals will be issued in DUSA’s name.

Permit or Approval	Entity	Status
Air Order	UDEQ – Division of Air Quality	Issued
Groundwater Discharge Permit by Rule	UDEQ – Division of Water Quality	Issued
Water Rights Confirmation	Utah State Engineers Office	Pending
Dam Safety Permit	Utah SEO – Dam Safety Office	Issued
Large Mine Permit/Plan of Operations/Reclamation Plan	Utah DOGM	Issued
Septic System Construction Permit	UDEQ – Utah Water Pollution Control Committee and Southwest Utah Public Health Department (copy only)	Pending
Stormwater Diversion Construction Permit	UDEQ – Division of Water Quality	Issued
NEPA EA Approval	BLM	Pending

2.0 OPERATOR INFORMATION

In accordance with US Code of Federal Regulations (CFR) 43, Part 3809.401, Section (b)1, this section presents information about the operator of the Tony M Mine, the location and legal description of the Tony M Mine, and surface ownership and unpatented mining claims.

2.1 TONY M MINE OPERATOR INFORMATION

All mining operations will be conducted on claims controlled by:

Denison Mines (USA) Corp. (DUSA)

1050 17th Street, Suite 950

Denver, CO 80265

Phone: (303) 628-7798

Taxpayer identification number: 841372857

Point of Contact: Harold Roberts

Name of Officers:

Title:

Ron F. Hochstein

President and Chief Operating Officer

Harold R Roberts

Executive Vice President – US Operations

David C. Frydenlund

Vice President and General Counsel

Name Change and Ownership Information:

International Uranium (USA) Corporation (IUC) acquired the Tony M Mine claims and State of Utah minerals lease in 2005. In December of 2006, DUSA merged with IUC, and the combined entity currently holds lease and claim rights and permitting responsibility for the Tony M Mine is DUSA.

All permits, notices, claims, and orders associated with the Tony M Mine operation, as identified in the POO and its attachments, will be held by DUSA.

DUSA will notify the United States (US) Department of Interior (DOI) Bureau of Land Management (BLM) of any change in operator in writing within 30 days of such a change.

2.2 LOCATION AND LEGAL DESCRIPTION

As shown on Figure 1, Phase 1 of the Tony M Mine is situated in southeastern Utah near the southern end of the Henry Mountains in Garfield County. The mine is located approximately 50 miles south of Hanksville, Utah and 15 miles north of Bullfrog Marina. Specifically, Phase 1 of the Tony M Mine is located in portions of the E $\frac{1}{2}$ of Section 8; portions of the W $\frac{1}{2}$ NE $\frac{1}{4}$ and the W $\frac{1}{2}$ of Section 9, all of Section 16, portions of the E $\frac{1}{2}$ of Section 17; portions of the W $\frac{1}{2}$ NE $\frac{1}{4}$, portions of the NW $\frac{1}{4}$, portions of the N $\frac{1}{2}$ SW $\frac{1}{4}$, and portions of the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 21; T35S, R11E, Salt Lake Meridian, Garfield County, Utah.

Figure 2 shows the boundaries of the three phases of the Tony M Mine. The portal facilities for the Tony M Mine are located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ and SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 16 and the NE $\frac{1}{4}$ NW $\frac{1}{4}$ and NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 21, Township 35 South, Range 11 East, Salt Lake Meridian, Garfield County, Utah. Minor surface disturbances, associated with vent holes, will be located throughout the permitted project area.

2.3 SURFACE OWNERSHIP WITHIN AREA OF OPERATIONS AND MINING CLAIM INFORMATION

The mine is associated with the following unpatented mining claims: B.F. 145-151; B.F. 153-154; BULL 680-682; TIC #17B-30B, 33B; and Star 1-10, 13-15, 5 Fraction, 7 Fraction, 14 Fraction, 15 Fraction; and the State of Utah mineral lease ML-49703-OBA. The project location is shown on the attached Figure 1. The project facilities and mine workings are located on unpatented claims on approximately 938 acres of BLM administered lands, located in Sections 8, 9, 17, and 21, and 640 acres of State of Utah managed lands in Section 16 Township 35 South, Range 11 East, Salt Lake Meridian, Garfield County, Utah. A table of the unpatented mining claims for Phase 1 of the Tony M Mine is provided in Attachment A.

3.0 DESCRIPTION OF OPERATIONS

This section conforms to CFR 43, Part 3809.401, Section (b)2, Description of Operations. This section presents information on the proposed underground mining plan, proposed surface facilities, and a description of the equipment, and practices DUSA proposes to use during mine operations. Several figures are provided in the back of this POO to help illustrate how the proposed project will function and where activities and impacts are likely to occur. Tables also are included in the back of this POO to provide additional detail and information. These figures and tables are referenced throughout Section 3.0, as appropriate, and include the following:

Figure 1	Project Location Map
Figure 2	Project Area Map
Figure 3	Topographic Base Map
Figure 4A	Surface Facilities Map – Portal Area
Figure 4B	Surface Facilities Map – Evaporation Pond Area
Figure 4C	Surface Facilities Map – North Vent Holes
Figure 5	Portal Area Detail Map
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Table 1	Proposed Surface Disturbance (Acres)
Table 2	Preliminary Mine Equipment List
Table 3	Site Soil Characteristics
Table 4	Site Vegetation Community Types
Table 5	Reclamation Seed Mixes
Table 6	Evaporation Pond Sediment Baseline Data
Table 7	Reclamation Cost Estimate Summary

3.1 UNDERGROUND MINING PLAN

The underground mine will be accessed through existing portals and adits; therefore, no removal of overburden will be required. The primary focus of Phase 1 mine development will be to rehabilitate the existing main declines and extend them further to the north. The main decline system, a series of ramps that form the entrance to the underground deposits, shown on Figure 3, consists of two 8-foot high by 12-foot wide parallel declines spaced 40 feet apart. The declines currently extend approximately 10,000 feet into the ore body at a nominal three percent dip. Laterals also were developed at right angles to the main declines to establish the ventilation system and emergency access routes. The area of existing

development averages about 400 feet below the ground surface with maximum depths of 750 feet below the ground surface in the northern end of the mine. The lower, northern portions of the two declines are flooded (see water boundary on Figure 3) and will likely require extensive rehabilitation in some areas.

In order to rehabilitate the existing main declines and extend them further to the north, the mine dewatering system will need to be reestablished by installing a pumping station at Vent Hole 4 and pumping the water to the reconstructed evaporation pond located on top of the mesa. The water will be pumped through six-inch diameter continuous steel and high-density polyethylene (HDPE) pipe at rates up to 200 gallons per minute (gpm). Exhaust fans, powered by generators with insulated power cables run through the underground mine workings, also will be reinstalled in Vent Holes 1, 3, 4, 5, and 6 to establish positive ventilation. Additional ventilation will be provided by installing Vent Holes 7 and 8, as mine development extends northward.

The mine will be developed to ultimately support an ore production rate of approximately 10,000 tons per month. Eight-foot high by 12-foot wide laterals will be driven to the east and west as the declines are advanced in a northerly direction. The laterals will be driven through known ore-bearing zones to provide access for production mining. The laterals also provide access for geologic mapping, long-hole drilling, rib scanning, and sample collection. This geologic data will be used to develop detailed mine planning and stope development for each lateral.

The ore will be mined using a modified room-and-pillar system. This mining method is a common method for mining in uranium-bearing sandstone and is designed to follow the irregular configuration of the individual ore bodies. The ore seams vary in height with an average seam thickness of approximately 4 to 5 feet. The waste/ore ratio also varies depending on the thickness of splits within the ore seams and the market price for uranium. A typical equipment list for the underground operations is presented in the upper portion of Table 2.

Jumbo drills operating on compressed air will be utilized to drill the blast holes and rock-bolt holes in the declines and laterals. Air-jacklegs will be utilized in production areas. All blasting operations will be conducted in accordance with MSHA regulations (30 CFR Parts 56 and 57). Blast holes will be loaded with an electric blasting cap, chemical booster, and a mixture of ammonium nitrate and fuel oil prills. The blasts will be initiated electronically with the hole pattern, firing sequence, and delays designed to allow for optimum breakage. Explosives and detonators will be stored in underground magazines and transported from the magazines to the working face in accordance with Mine Safety and Health Administration (MSHA) regulations (30 CFR Part 56 and 27 CFR Part 55).

The ore and waste rock will be mucked out using low-profile diesel loaders. Depending on the size of the opening, the loaders will vary in capacity from two to five cubic yards. Ore will be hauled to the surface using low-profile diesel haul trucks with capacities ranging from two to ten tons. During initial decline and lateral development, the waste rock will be hauled to the surface and placed in the waste rock disposal area. Waste produced during subsequent development and production will be disposed of both on the surface and underground in mined out areas. As much waste rock as possible will be disposed of underground in mined out areas.

Roof support will consist of metal roof mats anchored into the roof using five to eight-foot-long mechanical split-set roof bolts. Bolting will be performed as necessary with the spacing varying according to roof conditions and the size of the opening. The size of the mine openings will depend on roof conditions, but will typically be 14-feet or less in width based on the experience of similar mining operations conducted in the same formation. Ten-foot-long mats will be installed diagonally on the ribs when additional rib support is required.

The underground area also will include maintenance and storage areas. Routine maintenance and minor repairs will generally be done underground, with more extensive repairs and maintenance completed in the surface shop. Roof support materials, blasting supplies, lubricants, and the smaller and more commonly used equipment parts will be stored in designated locations underground. These locations are expected to change as the mine workings are advanced.

3.2 PROPOSED SURFACE FACILITIES

The proposed surface facilities are shown on Figures 4A, 4B and 4C. A surface equipment list is presented in the lower portion of Table 2. There will be no processing activities on site as all the ore will be transported to the White Mesa Mill at Blanding, Utah. Figures 4A and 5 depict the portal area where the main support facilities are located. These facilities include the following:

- waste rock area (WRA)
- ore slots and the ore stockpile area (OSA)
- topsoil stockpile areas
- surface drainage control structures
- fuel and oil storage areas
- mine offices and dry
- maintenance shop and warehouse
- designated parking areas and storage yards
- mine access roads and pads
- electrical generators
- air compressor station
- well house

- septic system (including leach field)
- solid waste storage (trash, scrap metal, batteries)
- propane heating system

Figure 6 depicts the evaporation pond area where mine water will be disposed and evaporated. Figures 4B and 4C depict the access roads and ventilation shafts in the surrounding area. The facilities depicted on these figures include:

- evaporation pond
- waterline corridor
- vent holes (existing and proposed)
- pond and vent hole access roads

These facilities are discussed in detail in the text below.

Minor changes may be made to the proposed layouts during construction with BLM concurrence; however, construction activities, unless otherwise noted, will be confined to the previously disturbed and reclaimed areas of the project site and outside of surface drainages. Some of these facilities, such as the reopening of reclaimed secondary roads and vent holes, were approved under a previously submitted exploration notice. Each of the above referenced facilities is described in Sections 3.2.1 through 3.2.19.

Below is a summary of the acreage for the Tony M Mine surface disturbance. Table 1 provides additional details on proposed surface disturbance acreage, including which areas are located on state and BLM land.

Areas of actual mining:	1.4 (portals & vent hole areas)
Overburden/waste dumps:	7.6 (WRA)
Ore and product stockpiles:	1.2 (OSA)
Access/haul roads:	2.2 (excludes existing roads)
Associated on-site processing facilities:	0.0
Tailings disposal:	0.0
Other - Please describe:	35.4 (evaporation pond, buildings, storage yards, leach field)
Total Acreage	47.8

3.2.1 Waste Rock Area

The WRA will be located southwest of the portal entrance in the same position as the former WRA, which has been partially reclaimed. The WRA will be located on top of the previously reclaimed WRA and will encompass approximately 7.6 acres. Figures 5 and 8 depict the location and configuration of the proposed WRA. The waste rock will be placed using top dumping and end dumping methods to create a two-bench structure with maximum bench heights of 35 feet. Waste rock slopes will be at the angle of repose (approximately 1.5 Horizontal:1 Vertical) during active mining operations. The WRA, with a capacity of 280,000 tons of waste rock, has been designed to contain the maximum volume of waste rock

generated during Phase 1 of the operation, which is projected to include approximately 36,000 feet or 7 miles of two-entry decline and lateral development. Assuming that the declines and laterals measure 8-feet by 12-feet, an ore to waste ratio of 1:1, and an in-place density of 160 pounds per cubic foot (lbs/ft³) for the sandstone ore body, approximately 7.68 tons of waste will be generated per foot of two-entry development. The actual amount of waste disposed of in the WRA will depend on the ratio of decline and lateral development to production mining and this ratio could vary considerably on an annual basis depending on market conditions. For example, if production mining is limited during Phase 1, most of the waste material mined would have to be hauled to the WRA. Conversely, if production mining is initiated early in Phase 1, underground areas will be mined out relatively quickly allowing for their use in waste rock disposal. As much waste rock as possible will be disposed of underground in mined out areas.

Existing waste rock piles identified in Figure 4A are under bond by a separate operator and are not the responsibility of DUSA. To the extent possible, waste rock produced by DUSA will be placed in underground mine workings. Sections 3.9 and 4.4 provide information on waste rock characterization and handling, and waste rock reclamation, respectively.

3.2.2 Ore Slots and Ore Stockpile Area

The OSA will be located immediately southeast of the mine portals, as depicted on Figure 5. The OSA encompasses approximately 1.4 acres and can accommodate up to 30,000 tons of stockpiled ore, assuming an average stockpile height of 15 feet, a stockpile density of 90 lbs/ft³, and three to four separate stockpiles. Ore will typically be end dumped directly into the ore slots located in front of the portal entrance. The ore slots will have a concrete foundation and base with steel sides. The ore will then be loaded using a front end loader into 22-ton, over-the-road haul trucks for transportation to the mill. There will be no on-site processing (physical or chemical) of ore; accordingly, there will be no tailings or reject materials (e.g., crusher fines). Waste rock will be disposed of in the WRA and in mined-out areas of the underground workings, as described in Section 3.2.1. Ore transportation will be limited to weekdays with no ore being shipped on weekends or holidays. The truck beds will be covered with tarps to prevent fugitive dust. If the ore cannot be shipped immediately to the mill, the front end loader will place the ore in nearby stockpiles within the OSA (see Figure 5).

3.2.3 Topsoil Stockpile Areas

The mine area was disturbed by historic mining and exploration activities that occurred prior to the implementation of state and federal reclamation laws. As a result, very little topsoil was salvaged prior to initial mine development and the majority of the mine site was later reclaimed using the soils and waste

rock that existed on the disturbed area at the time of reclamation. Figure 7 depicts the measured thickness of topsoil in the portal area. All of the available topsoil will be stripped prior to disturbing an area. The former waste rock disposal area has the lowest percentage of vegetative cover because the waste rock, which was used as the seed bed, is a relatively poor growth medium. The upper six inches of growth medium from the reclaimed waste rock disposal area will be stockpiled separately in Topsoil Stockpiles 2A and 2B (TS-2A and TS-2B) as shown on Figure 5. Additional topsoil stockpiles include TS-1, TS-3, TS-4, and TS-5 in the main facilities area (see Figure 6). Section 3.4 provides additional information on topsoil stripping and stockpiling.

3.2.4 Surface Drainage Control Structures

Disturbances to existing drainage systems were avoided/minimized to the extent possible during the design of the surface facilities layout. Where disturbance of the existing drainage system could not be avoided, both permanent and temporary diversion channels were designed to replace the existing drainages. Permanent diversion channels were designed for the 100-year, 6-hour storm event while temporary channels were designed to handle the flow from the 25-year, 6-hour storm event. These temporary diversion structures will accommodate the runoff generated from over 98 percent of the storms expected during the potential 25-year mine life and will be maintained by the mine operator as needed.

As shown on Figure 5, a permanent catch basin and diversion channel is proposed immediately above the WRA. This channel will divert runoff originating from above the WRA to the southwest and into an existing ephemeral drainage. The channel is designed to minimize the volume of runoff that will flow down the WRA slopes during both active mine operations and the post-reclamation period. A temporary drainage channel also is proposed along the west side of the county maintained road. The channel is designed to capture runoff from the upslope WRA, OSA, and topsoil stockpile areas. Channel flow will discharge into a temporary sediment basin that will, in turn, discharge into an existing ephemeral drainage. The temporary channel and basin will be backfilled during site reclamation and the natural drainage system restored. Earthen berms will be used to divert water from the surface facility area into temporary sediment basins.

As shown on Figure 6, the former dam will be reconstructed across a west to east trending ephemeral drainage located on top of the mesa. The evaporation pond created by the dam will encompass a maximum of 18.23 acres within a hydrologic basin of approximately 50.8 acres. The pond and dam together will encompass a maximum of 22.22 acres. Surface runoff from the surrounding basin will flow into the pond area. The pond is separated from the larger watershed and drainage system located west of the pond by a naturally occurring low ridgeline.

Sediment control measures including undisturbed buffer areas, sedimentation ponds, earthen berms, and certified weed-free straw bale barriers will also be placed downgradient from disturbed areas to minimize the volume of sediment impacting the drainage system or intersecting with stockpiled materials. Attachments G (Surface Drainage Plan) and H (Storm Water Pollution Prevention Plan) provide additional information on drainage control structures and sediment control during active mine operations.

3.2.5 Fuel and Oil Storage Areas

Diesel fuel, gasoline, and other petroleum products will be stored on-site in tanks, drums, and smaller containers. The fueling station, depicted on Figure 5, will store approximately 5,000 gallons of diesel fuel and 500 gallons of gasoline. The fueling station containment area will be surrounded with soil berms and covered with a plastic liner or equivalent with a 30-mil minimum thickness to contain any fuel spills or leaks. The plastic liner will be covered with a protective layer of soil and gravel. The fuel and oil storage areas will be inspected visually each month per Federal Regulation Title 40 Part 112.5. The berms will be established at the height necessary to contain the total volume of the largest tank within the containment area plus an additional ten percent. The fueling areas will be sloped so that any spills that occur during equipment fueling or fuel delivery to the site will flow into the containment area.

Diesel fuel for the generators (see Figure 5) will be supplied by 850 or 1,700-gallon tanks built into the skid-mounted installation. A separate tank of approximately 5,000 gallons will provide additional fuel storage and will feed into the skid-mounted tanks. The generator fuel tanks will be located within a bermed and lined area similar to the secondary containment for the fuel station.

Up to 2,000 gallons of antifreeze and oil products (i.e., motor oil, hydraulic oil, gear oil, and used oil) will be stored at the maintenance shop within the shop floor and used-oil storage area. With the exception of the used oil tank, these products will typically be stored in smaller tanks of less than 100 gallons and in drums and small containers. The used oil tank will be located on a concrete pad along the outside wall of the shop. The pad will be equipped with a low wall or curbing that is designed to contain the entire contents of the tank if a leak occurs. Any spills in the shop area will be contained within the shop walls and the sand trap that is between the shop drain and septic system. A vendor will periodically pump the sand trap and used oil tank contents into a tanker truck, which will transport the oil to a recycling facility. Sections 3.9.3, 3.12, and Attachment I provide additional information on the transportation, storage, use, inspection, and spill response for petroleum products.

3.2.6 Mine Offices and Dry

Mobile trailers initially will be used to house the mine offices and change/shower facilities (i.e., dry). If the mine develops as expected, these trailers may be replaced with prefabricated metal buildings constructed on four-inch-thick concrete pads as the labor force expands. Figure 5 depicts the footprint of the mine offices (40 feet by 24 feet) and dry (40 feet by 60 feet) based on the maximum projected Phase 1 work force of 70 personnel. These buildings will be painted a tan or light brown color, as approved by the BLM, to better blend in with the surrounding natural features. Gravel will be placed in the parking area outside the mine office. The gravel parking areas of the mine offices, dry, maintenance shop, and warehouse will occupy a total of approximately 20,000 square feet.

3.2.7 Maintenance Shop and Warehouse

A maintenance shop (30 feet by 50 feet) and warehouse (30 feet by 30 feet) will be constructed as shown on Figure 5. These facilities will consist of prefabricated metal buildings on six-inch concrete pads and will be painted tan or light brown as approved by the BLM. Gravel will be placed in the area outside the maintenance shop as part of a 20,000-square-foot parking area.

3.2.8 Designated Parking and Storage Yards

A gravel parking area (20,000 square feet) will be provided for employees and visitors adjacent to the mine offices as shown on Figure 5. A fenced storage yard (Storage Yard 1) will be located on the west side of the county maintained road. The yard will be used to store underground supplies (e.g., roof bolts, mats, pipe, hoses, power cable), mobile equipment, and large replacement parts. A second storage yard, Storage Yard 2, also has been included in the event that additional area is needed for storage, parking, mobile trailers, or other uses.

3.2.9 Mine Access Roads and Pads

The primary road into the site is a county maintained road that continues on to the northeast past the mine. Secondary roads will access the portals, WRA, and the buildings and storage yards as shown on Figure 5. The portal access road will be 40 feet wide and all other access roads will be 16 feet wide. A metal gate will be installed at the entrance to the portal area. This gate will be locked when the mine is not operating. Two access roads and small pads were previously reopened (under an approved exploration notice) to gain access to adits located in the canyon north of the main portals. These adits, which are shown on Figure 4A, are laterals that connect to the two main declines. They provide additional ventilation and emergency escapeways for the mine. New roads will be constructed for access to Vent

Holes 7 and 8. The remaining roads are existing or existed during former mining operations. Those roads that existed during former mining operations will be reconstructed as shown on figures 4A, 4B, and 4C. No new or reconstructed roads will require side slope cuts exceeding 3 feet with the exception of a portion of the portal access road. This side slope cut will be into waste rock from the former mining operations and will not affect the amount of topsoil required during reclamation.

3.2.10 Electrical Generators

The mine is located in an area of the state where utility-supplied power is unavailable. Power for the mine site will be supplied by four generators (three primary and one backup). The generator sets will be installed in accordance with state and federal requirements including protection from impact, perimeter fencing, and appropriate warning signs. The generators will supply power to the surface buildings, air compressor station, and to the underground workings. Power distribution for surface facilities will be through buried cables located in areas protected from heavy truck and vehicle traffic, and marked to ensure that construction and maintenance activities will not damage the lines. Location of all buried cables will be marked with surface signs and warnings to prevent damage from surface activities. Power will be delivered to electrical transformers underground via insulated power cables hung from roof bolts. The transformers, in turn, will supply power to the pumping system, ventilation system, and electrically-powered equipment.

3.2.11 Air Compressor Station

During the initial phase of operations, compressed air will be supplied to the mine by diesel-powered systems. Once the electrical generators are online, electrically-powered compressors will be installed near the generators. Three units rated at 1,200 cubic feet per minute (cfm) each will be needed for Phase 1.

3.2.12 Well Water System

Water for bathrooms, showers, washing equipment, and other general uses will be supplied from an existing 8-inch diameter water well using a submersible pump and buried waterlines. The water is not potable and the mine will supply bottled water for drinking purposes during the initial stage of mine rehabilitation and development. Water quality has been analyzed and the well water is suitable for irrigation uses. As the work force expands, a water treatment system will be installed within the dry to meet potable water standards. Non-transient, non-community water systems that supply water to 25 or more people are required, under Utah regulations, to meet potable water quality standards. Underground

water needs and water for dust suppression on the ore and waste rock, if necessary, will be supplied from the sump in the underground mine. Dust suppression on roads will be from well water. Information on water rights is provided in Attachment E. DUSA currently is taking steps to transfer the water rights and will provide a copy to the BLM upon completion.

3.2.13 Septic System

The septic system used by the previous operator was abandoned in place at the time of mine closure and reclamation. Due to recent flood conditions in the area, this system cannot be restored to accommodate sanitary wastewater disposal for the proposed buildings. A new septic system currently is being designed. A sand trap will be installed between the shop floor drains and the septic system to capture any grease or oil that might enter the drain from maintenance activities. The septic system will be pumped out, as needed, on a routine basis. It is anticipated that the Tony M mine office/dry and warehouse will discharge more than 5,000 gallons of wastewater per day at full operation. DUSA is in the process of developing and submitting an engineering report and construction plans to the Utah Department of Environmental Quality (UDEQ) for review and approval. The engineering report currently being prepared under the supervision of a registered professional engineer licensed to practice in the State of Utah contains the design criteria and all other information necessary to clearly describe the proposed project and demonstrate project feasibility. Plans will be provided to the BLM once they are completed.

3.2.14 Solid Waste Storage

A roll-off container for solid waste disposal will be located next to the maintenance shop and warehouse. The trash will be picked up on a routine basis by a service company and disposed of at an approved landfill. No landfills will be constructed on site and no waste or organic debris will be buried on site. Scrap metal will be stored in a bin and/or on pallets near the maintenance shop and warehouse until it can be picked up for recycling. Used batteries will be stored on wood pallets on the concrete floor of the maintenance shop and will be picked up and recycled by vendors every two weeks.

3.2.15 Propane Heating System

Propane will be used to heat the buildings. The tank will be located in a fenced area near the buildings.

3.2.16 Evaporation Pond and Dam

A dam and 18.23-acre evaporation pond will be constructed on top of the mesa approximately one mile northwest of the portal area. The dam and evaporation pond together represent a proposed surface

disturbance area of 22.22 acres. The dam and pond will be within the footprint of the previous dam and evaporation pond. Figures 6 and 9 depict the location and configuration of the proposed evaporation pond. The evaporation pond will hold up to 332 acre-feet of water. Geotechnical tests indicate that the clay soils that comprise the ground surface of the pond are suitable for reconstructing the clay liner. After removing vegetation and roots², the top 12-inches of these soils will be ripped, scarified, moisture conditioned, and compacted, as described in Attachment F, to achieve a clay liner with a low coefficient of permeability. An emergency overflow will be constructed in the southwest corner of the pond as depicted on Figure 6; however, the pond has been designed as a zero-discharge facility and no discharge is anticipated at this time. The pond will be fenced as approved by the BLM to preclude livestock and wildlife, as the water is of poor quality and not suitable for drinking. Before construction of the fence DUSA would submit proposed fence specifications to BLM for approval.

The previous dam was breached during reclamation and will have to be reconstructed using the same clay material that was removed from the breach. The majority of the clay soils used to construct the dam and clay liner were imported from a borrow area located approximately one-mile south of the pond (see Figure 2). The clay was removed as part of a mineral material sale agreement with the BLM and the borrow area was later reclaimed. Additional clay material will not be needed for construction of the Phase 1 evaporation pond; however, additional borrow may be needed in the future if the pond is expanded in size during Phase 2.

A stage curve showing the pond elevation versus storage capacity is presented in Attachment G. This curve was developed by planimetrying the surface area at each elevation and then multiplying the average surface area for each one-foot increment by one foot and adding the calculated volume to the cumulative storage volume. A minimum of five feet of freeboard will be maintained at all times at the dam. As described in Attachment G, this freeboard is adequate to contain the precipitation from a 100-year storm event without discharge. A water balance also was developed for the evaporation pond using average net evaporation rates for the region and an estimated steady-state pumping rate of 100 gpm. The water balance indicates that the pond will have adequate storage capacity for 2 years and 7 months. Future Phase 2 and 3 mine development may require that the evaporation pond be expanded in size and capacity to contain the additional water generated from expanded and deeper mining operations.

The discharge point from the waterline to the pond is shown on Figures 4B and 6. Section 3.8.4 provides additional information regarding the evaporation pond and proposed dewatering operations. Section 4.2.3

² DUSA's Weed Management Plan, provided in Attachment N, discusses precautions and measures that will be taken to control the spread of non-native and invasive plant species.

discusses reclamation of the evaporation pond and dam. The Dam Permit Application and the UDEQ approved request for Ground Water Discharge Permit by Rule are included as Attachments E and F, respectively. Information on water rights is included in Attachment E, and Attachment F contains supporting information on geotechnical conditions and the expected water quality of the water discharged into the pond.

3.2.17 Waterline Corridor

Water initially will be pumped from the mine workings via Vent Hole 3. This water will be used to condition the clay soils used to reconstruct the dam and clay liner for the evaporation pond. Once the water level has been lowered sufficiently, a permanent pumping station will be installed at Vent Hole 4. The pump for this station will be located underground and will be rated at 220 gpm. A 6-inch diameter pipe will be installed from the mine workings to the surface within Vent Hole 4 and then from there to the evaporation pond. The pipe will follow the pre-existing waterline corridor which extends approximately one-half mile from the vent hole to the pond (see Figure 6). The waterline corridor is approximately 20 feet wide. An aboveground storage tank of approximately 5,000 gallons will be located near Vent Hole 4 to contain all of the water in the pipe in the event the system has to be shut down for repair or maintenance. The tank will be painted tan or light brown to blend in with the surrounding terrain.

The waterline will consist of HDPE continuous pipe laid on the ground surface and covered with soil within an existing side-hill cut. The previously used waterline, consisting of 8-inch aluminum pipe, is buried under soil sloughage originating from above the side-hill cut. This pipe and soil will be removed as the new pipe is installed. The old pipe will be disposed of at an off-site landfill while a portion of the soil will be pushed down the hill and the remainder will be used to cover the new pipe. The waterline would be constructed of one continuous HDPE pipe with heat-fused joints that should preclude breakage of the pipeline. An all-terrain vehicle (ATV) trail will be maintained along side the pipe to allow for periodic monthly inspections during pumping operations.

3.2.18 Vent Holes

Vent Holes 1, 3, 4, 5, and 6 were reopened as part of previously submitted exploration notices for the site (note: there is no Vent Hole 2). Vent Holes 1, 3, and 4 are on state land. Vent holes 5 and 6 are on public land and were reopened as part of an exploration notice previously submitted to BLM. This notice would be closed once this POO is approved since reclamation of surface disturbance authorized by the notice would be covered by this POO, as would future exploration activities. With the exception of Vent Hole 3, which is only 11-inches in diameter, the vent holes are between 60 and 72 inches in diameter. Two new

vent holes, Vent Holes 7 and 8, will be installed as the declines are advanced further to the north. The two proposed new vent holes will be drilled through the overburden by first drilling a small pilot hole from the surface. A larger diameter head will then be attached at the bottom of the drill string within the mine workings and the vent hole will be reamed from the bottom up with the cuttings falling into the mine. This waste material will be hauled to the WRA or disposed of underground in mined out areas. The surface disturbance associated with the new vent holes will be minimal (approximately 0.65-acre) because the vents will be of similar size to the existing vent holes and in close proximity to existing roads. Metal diffusers will be installed above each of the existing and new openings. The diffusers will be about four to five-feet tall, screened on top to prevent entry, and painted tan or light brown to blend in with the surroundings. The locations of the existing and proposed vent holes are shown on Figures 4B and 4C.

3.2.19 Pond and Vent Hole Access Roads

The existing access road to the evaporation pond area starts at the county maintained road just north of Vent Hole 4 and heads south past Vent Hole 4, Vent Hole 3, the evaporation pond dam, and Vent Hole 1 (see Figures 3 and 4B). This access road is located on both State of Utah and BLM managed land. An existing secondary road also accesses the evaporation pond area from the south. Sections of reclaimed roads were reconstructed as part of an approved exploration notice to access the top of the evaporation pond dam and Vent Holes 1 and 3. All existing, reconstructed, and proposed vent hole access roads will be 16 feet wide and do not require side slope cuts exceeding 3 feet deep. The pad for Vent Hole 4 is located immediately adjacent to the State/BLM road and a separate access road is not required for this vent hole.

After its intersection with the State/BLM road, the county maintained road continues in a northwest direction and ultimately leaves the project area. As part of the approved exploration plan, previously reclaimed roads were reconstructed to access Vent Holes 5 and 6. New roads will be constructed to access proposed Vent Holes 7 and 8. Figures 3 and 4C show the existing, reconstructed, and proposed access roads for these vent holes.

3.3 RESOURCE ESTIMATE

Information on the typical annual amount of the ore and waste rock/overburden to be generated, in cubic yards (yd³), is provided below with a description of the overburden and waste generation.

Thickness of overburden:	100 to 1,000 feet
Thickness of mineral deposit:	Average of 4 to 5 feet
Estimated annual volume of waste rock:	45,000 to 90,000 yd ³

Estimated annual volume of tailings/reject materials: 0 yd³
Estimated annual volume of ore mined: 50,000 to 100,000 yd³

The waste rock originates from the lowest sandstone unit of the Salt Wash Member of the Morrison Formation. The blasted sandstone waste ranges in size from fine-grained sand to about two-feet in diameter. The material on the road surface of the waste rock area tends to be finer grained as the rock readily breaks down under truck traffic. Based on field observations and soil testing of the existing, reclaimed waste rock area, the waste is not acid-generating nor does it contain mineral concentrations that are toxic to vegetation.

The estimated 50,000 to 100,000 yd³ of ore is based on the Phase 1 production rate starting at approximately 60,000 tons per year and increasing to 120,000 tons per year as the mine expands. An ore stockpile density of 90 pounds per cubic foot (lbs/ft³) was used to convert tonnage to cubic yards. The 45,000 to 90,000 cubic yards of waste is based on an average Phase 1 waste to ore ratio of 1/1 for decline and lateral development with a WRA density of 100 lbs/ft³. The waste to ore ratio is expected to decrease significantly during later production (i.e., 0.5 or lower) resulting in the generation of proportionately less waste.

3.4 EXISTING SOIL TYPES AND LOCATION OF PLANT GROWTH MATERIAL

A baseline soil resources assessment was conducted of the Phase 1 project area and is included as Attachment B. The scope of work for the assessment was developed in communication with the Utah Division of Oil, Gas, and Mining (DOG M) and BLM personnel. Field data collection was conducted with an approach consistent with a Soil Order III baseline soil survey necessary to meet requirements of Rules R647-4-106.5, 106.6, and 109.3 of the UAC. Sampling design is described in detail in the field methods section of Attachment B. The objectives of the soil resources assessment were to:

- Survey and document soil map units in the project area
- Identify and characterize potential topsoil borrow areas
- Establish soil reference areas

The soil survey was conducted concurrently with vegetation resource surveys (see Attachment C). Vegetation surveys were accomplished with the use of transects situated in distinct vegetative communities (Table 4). When vegetation transects were situated in distinct soil map units, soil physical and chemical parameters were also characterized. Sampling involved digging a soil pit to maximum soil depth, or depth to bedrock. Soil parameters evaluated in the field included determination of soil color and texture by horizon. However, excluding an O horizon within the first one to two inches, all soils

exhibited no distinct soil horizons and were assumed to be A horizons throughout. Depth to bedrock, suitable for salvage was determined when possible. Field pH also was measured; however, the data proved inconclusive and inaccurate and is therefore not presented.

The Phase 1 project area includes five major soil map units, as determined by the U.S. Department of Agriculture, Soil Conservation Service (USDA SCS): Badland-Rock Outcrop Complex, Glenberg Series, Chipeta-Badland Complex, Farb-Rock Outcrop Complex, and Rizno, Warm-Rock Outcrop Complex (See soil map in Attachment B). These broad soil map units are defined as unique natural landscapes and may consist of one or more major and/or minor taxonomic soil classifications. Soil map units are based on landscape-scale similarities observed in parent material, general soil characteristics, elevation, precipitation, position within the landscape, and vegetation, among others. Finer variations in these parameters further define these broad map units into a mosaic of taxonomic classifications.

The project area has been impacted extensively by past mining activities, both historic and more recent. Mining activity has resulted in the creation of soil types that are different in character from the surrounding mapped units. These mining-related soil types include the sandy waste rock dump and low-grade ore stockpiles located in the portal area and the clay material used to construct the dam and evaporation pond liner. The majority of the clay material originated from a borrow area located about 6,300 feet south of the evaporation pond. These sand and clay soils were reclaimed in-place by the previous mine operator without benefit of native topsoil. The WRA and the evaporation pond and dam will be redisturbed by the proposed project. The reclaimed ore stockpiles are not under DUSA control and will be left undisturbed. These piles are shown on Figure 4A.

Two of the five major soil units identified will not be impacted by proposed mining operations. These units include the Farb-Rock Outcrop Complex in the extreme northwest corner of the Phase 1 project area and the Rizno, Warm-Rock Outcrop Complex in the southeast corner of the project area. Impacts to the Chipeta-Badland Complex will be limited to proposed Vent Hole 8 and its access road, which will disturb less than 0.5 acre of land. Detailed information for these three soil units is provided in Attachment B. The portal area is located within the Badland-Rock Outcrop Complex while the evaporation pond area and all the remaining vent holes are located in the Glenberg Series. A summary of these two soil units and the existing mining-related soil types follow.

3.4.1 Badland-Rock Outcrop Complex

Badland-Rock Outcrop Complex is defined as exhibiting a composition of approximately 70 percent badland, 15 percent rock outcrop, and 15 percent soils. The soils in this map unit are recognized as

approximately five percent Chipeta silty clay, five percent Moenkopie fine sandy loam, and five percent Neskahi Series fine sandy loam. These soils are found primarily in drainageways. Badlands are described as steep or very steep, commonly non stony, barren land dissected by many intermittent drainage channels. Badland landforms are most common in semiarid and arid regions where streams are entrenched in soft geologic material. Runoff potential is very high, and geologic erosion is active.

Several soil profiles were observed within this map unit and soil samples were collected at 12 vegetative transect locations. Physical and chemical parameters of this map unit and subunits are summarized in Table 3. Approximately 93,747 acres of the Badland-Rock Outcrop Complex occur in Garfield County, Utah. Including areas impacted by previous mining activity, 302.4 acres of this soil map unit occur within the southern third of the project area.

The Neskahi Family Subunit represents the primary soil resource within the general portal area. The Neskahi Series consists of very deep, well-drained, moderately permeable soils on floodplains. These soils formed in alluvium derived predominantly from sandstone and shale. The Neskahi Series is a coarse-loamy, mixed (calcareous), mesic Typic Torrifluvent. Sample points 9, 12, 14 and 15, and 17-22 all lie within this subunit of the Badland-Rock Outcrop Complex. The Neskahi Series subunit occupies 40.5 acres of the Shootaring Creek canyon bottom within the project area.

The remaining portion of the portal area is dominated by the characteristic Badland-Rock Outcrop Complex soil map unit that constitutes the steep canyon walls, and the benches and mesas associated with those walls. The walls, when topographically capable of holding soils, are composed of a mosaic of Chipeta and Moenkopie soils depending upon the resident parent material (shale vs. sandstone, respectively). The area totals approximately 262 acres within the project area.

3.4.2 Glenberg Series

A total of 1,639 acres of the Glenberg Series occur in Garfield County, Utah. Approximately 979 acres occur within the project area on the mesa west of Shootaring Canyon. The Glenberg Series is associated with the drainages and floodplains of intermittent streams and rivers. Typically these soils are very deep, moderately permeable, well-drained alluvium formed from sandstone and shale. Occurring at elevations ranging from 4,700 to 5,500 feet above sea level, slopes are very gently sloping (level to three percent). Within this soil map unit are areas of Yarts fine sandy loam, Chipeta silty clay, badland, and rock outcrop.

Those areas within the Glenberg Series associated with intermittent stream systems, and therefore fluvial energy, are composed primarily of soils associated with the deep and very deep soils of the Yarts Series.

The Yarts Series consists of deep and very deep, well-drained, moderately permeable soils on benches and alluvial fans and in valleys. Taxonomically, it is defined as a coarse-loamy, mixed (calcareous), mesic Ustic Torriorthent. The Yarts Series, due to its thickness and potential reclamation value, represents the primary soil resource within the evaporation pond and vent hole areas.

The remainder of the soils are of the Chipeta series, which is associated with the slopes, benches, and mesas of the Badlands and outcrops. The Chipeta series consists of shallow, well-drained slowly permeable soils. These soils formed in residuum and colluvium derived from shale. Taxonomically it is classified as a clayey, mixed (calcareous), mesic, shallow Typic Torriorthent. The evaporation pond dam and liner were constructed with Chipeta series material.

Seven sample points were sampled within this map-unit near the evaporation pond. Three additional points were sampled within the dam and evaporation pond footprint (see Mining-Related Soil Units below). The physical and chemical parameters of the Glenberg Series map unit are presented in Table 3. Due to its resource value, the fine sandy loams of the Yarts Series were determined to be deserving of being recognized as a subunit. Four areas across the project area were identified as the Yarts Series subunit. These areas are principally associated with alluvial fans situated at the bottoms of steeper slopes and with intermittent stream drainages. Sample points 1, 2, 3, 4, and 29 were situated within this subunit collectively occupying 278.6 acres within the project area.

3.4.3 Mining-Related Soil Units

A portion of the Badland-Rock Outcrop Complex, located in the immediate vicinity of the mine portals, consists of a white, sandy waste rock. The area is situated within a narrowing floodplain/canyon bottom that was likely, the Neskahi Series subunit prior to previous mining operations. Composite samples (WRF-1, WRF-2 and WRF-3) were taken in this location to evaluate the physical and chemical soil properties of the WRA (see Table 3). The soil material within this area is not consistent with Neskahi Series characteristics and is representative of waste rock and excavated material produced from the former underground operation.

Within the canyon bottom and project area boundary, there are also five reclaimed, low-grade ore stockpiles (i.e., two northeast of the portal area and three south of the portal area). The low-grade ore material is similar in composition to the waste rock, but has a greenish-gray color due to alteration. The reclaimed stockpiles, like the WRA, likely overlay soils of the Neskahi Series subunit. Samples 7-rec and LGO-1 were collected from the stockpile located furthest to the north. Three vegetative transects also were completed in this vicinity.

The evaporation pond and dam are predominantly made up of clay material imported from a borrow area located approximately 1.1 mile south of the pond. These clay soils are from the Chipeta Series subunit of the Glenberg Series. Sample points 5, 6, and RES-SP1 were used to characterize and identify this subunit.

Soil samples were collected for laboratory analysis from the three soil major soil map units that will be impacted by mining operations (i.e., Badland-Rock Outcrop Complex, Glenberg Series, and the Chipeta-Badland Complex). Samples were also collected from the reclaimed WRA, ore stockpiles, and the evaporation pond and dam area. The samples were analyzed by Inter-Mountain Laboratories (IML) of Sheridan, Wyoming. Laboratory parameters analyzed included; pH, electrical conductivity, calcium, magnesium, sodium, potassium, soil adsorption ratio, cation exchange capacity, percent organic matter, total kjeldahl nitrogen, available nitrate, phosphorus, and potassium, composition of sand, silt, and clay, texture, percent coarse fragments, percent total sulfur, neutralization potential and acid/base potential. A complete list of analytical results is presented in Attachment B. Rock characterization and handling is discussed in Section 3.9.

3.5 PLAN FOR PROTECTING AND REDEPOSITING EXISTING SOILS

Approximately 7 to 15 inches of soil material from a total of approximately 11.4 acres will be salvaged and stockpiled. The 11.4-acre area from which topsoil will be salvaged includes the WRA and surface facilities area (as depicted on Figure 7), both of which are areas reclaimed from previous mining operations. Approximately 9,000 yd³ of soil will be stockpiled. The sections below describe proposed plans for salvaging, stripping, and stockpiling soil.

3.5.1 Soils Available for Salvage and Potential Salvageable Quantities

The primary areas that will be disturbed within the project area (i.e., portal and evaporation pond areas) can be broadly defined by two major landforms and their associated soils. The first group consists of Badlands, Rock Outcrops, benches, and mesas and the generally shallow soils associated with those landforms. The second group consists of deep, well-drained alluvial soils that originated from the erosion of the first group over time. The alluvial soils, which are made up of the Neskahi Series subunit of the Badland-Rock Outcrop Complex, and the Yarts fine sandy loam subunit of the Glenberg Series, are good candidates for topsoil salvage and borrow due to their greater thickness.

Figure 7 presents the topsoil-stripping map for the portal area. As shown, the south portion of the proposed disturbed area has between 10 and 15 inches of strippable soil and the central portion has

between 5 and 10 inches of strippable soil. Most of these soils are of the Neskahi Series. If average soil depths of 12.5 inches and 7.5 inches are assumed over the 11.4-acre area of soils, the volume of soil available for stripping and stockpiling would total 16,000 bank cubic yards (bcy). These soils are from previously disturbed areas only. Topsoil will not be stripped from buffer areas next to the drainages, the leach field, or the topsoil stockpile areas. Soil stripping efficiencies also will be relatively low in those areas where the soil is thinner or intermixed with gravel and rock. Given these considerations, a strippable volume of approximately 9,000 bcy is projected for the WRA and surface facilities area. These soils will be placed in Topsoil Stockpiles TS-1, TS-3, TS-4, and TS-5 (see Figure 5). Stockpile heights were driven by land area limitations. TS-1 and TS-2B will have a maximum height of about 10 feet due to land area limitations. TS-2A and TS-3 can be 8 feet, and TS-4 and TS-5 will be 6 feet.

The former waste rock disposal area has the lowest percentage of vegetative cover because the waste rock, which was used as the seed bed, is a relatively poor growth medium. The upper six inches of soil from the previously reclaimed waste rock disposal area will be salvaged and stockpiled separately from the remainder of soils in the WRA and surface facilities area and placed in Topsoil Stockpiles TS-2A and TS-2B (see Figure 5) at a maximum height of 8 and 10 feet, respectively.

The clay liner will be reconstructed by ripping, moisture conditioning, and compacting the underlying clay materials. The clay material, although containing vegetation, was determined to be unsuitable for future topsoil use because Saltcedar (*Tamarix ramosissima*) (a.k.a., tamarisk) is the predominant vegetative species in the evaporation pond area. Tamarisk is an undesirable, non-native species that has invaded large portions of Utah and surrounding states.

The Yarts fine sandy loam subunit of the Glenberg Series will be impacted to only a minor degree along the edge of the evaporation pond. The Yarts subunit is present within an ephemeral drainage system located north, south and west of the pond (see Attachment B). This area may be suitable for borrowing topsoil, although gravel levels are relatively high and creation of borrow areas could environmentally impact the drainage area. The area south of the evaporation pond (sample points 3, 4, and 29) is associated with a south-flowing intermittent drainage and exhibits the deepest soils. The mean depth to bedrock is 12 inches and the area is 22 acres in size. DUSA does not propose to borrow soils from undisturbed areas during Phase 1 of the proposed operations; however, if the evaporation pond is expanded during later phases of the project, these soils would be stripped and stockpiled.

3.5.2 Topsoil Stockpiles

Most soil stripping will be performed using a tracked dozer, although a front-end loader and/or motor grader may also be used. Stockpiles will range from 6 to 10 feet in depth. Equipment will not be allowed to cross over the piles so that compaction is minimized. The topsoil pile locations, depicted on Figures 5 and 6, were placed outside of drainage areas to minimize erosion losses.

Topsoil piles will be contoured, furrowed, and broadcast seeded in late fall with the Greasewood Reclamation Seed Mix (see Table 5). In the event that vegetation is difficult to establish, the stockpiles will be blended to match the surrounding terrain as much as possible. Section 4.7 discusses specific revegetation methods that will be used. To promote soil viability for postmine redistribution, the waste rock salvaged soils in TS-2A and TS-2B will be pretreated with a mycorrhizal fungi inoculum (a soil amendment) to promote seed germination and facilitate the uptake of minerals and nutrients by seedlings. Though proposed as a post-mining treatment (See Section 4.7.5), it may prove beneficial to establish the inoculum during the creation of the TS-2A and TS-2B topsoil storage piles. Based on the required application rates (60 pounds per acre), approximately 45 pounds of mycorrhizal fungi will be applied between each of the waste rock storage piles to allow for propagation of viable soil material for later redistribution for postmine reclamation. Stockpiles TS-2A and TS-2B will be ripped to a depth of 18 inches and the mycorrhizal fungi will be broadcast in a dry form prior to furrowing and broadcast seeding.

Sediment controls (i.e. grass buffer areas, earthen berms, certified weed-free straw bales, etc.) will be installed and maintained, as necessary, to prevent surface run-off from mine operational areas and roads from intersecting the topsoil piles within the surface facilities area. Vegetation success on the stockpiles will be monitored and stockpiles will be reseeded where vegetation is sparse. BLM recommended practices, such as segregation and protections from wind and water erosion, for preserving soil quality and enhancing soil material for later reclamation and post-mine bond release success will be incorporated into interim topsoil management as they become available during the life of the operation.

The water levels in the pond are not anticipated to fluctuate, specifically they will not decrease; it is more likely that the pond level will increase until it is no longer in use. Based on this information, it is not anticipated that the sediments will be exposed to the air until mining activities cease. In the event that the sediments are exposed to the air prior to cessation of mining activities, plans will be developed in coordination with the BLM to ensure sediments do not become airborne. Due to the continued saturation of pond sediments, airborne dust is not considered to pose a risk to the public or the environment. DUSA

recognizes the potential for mine water to contaminate sediments in the pond. Samples of the existing pond liner will be taken prior to the start of operations to establish baseline conditions of the soils within the pond area. DUSA will sample pond sediments following mining activities. These samples will be analyzed for metals and radionuclides, as well as sulfates and selenium. Based on the results of the pond sediment analysis following mining activities and their comparison to baseline conditions at the pond site, DUSA will remove contaminated sediments and place them into the underground mine workings. This commitment will eliminate concerns about remaining contaminated sediments and their potential to become airborne.

3.6 EXISTING VEGETATIVE COMMUNITIES TO ESTABLISH REVEGETATION SUCCESS

Vegetation community mapping was conducted in accordance with UAC Rule 647-4-106.7. The BLM Richfield Field Office Resource Management Plan (RMP) Management Situation Analysis (2004) identifies ten general vegetation communities and fourteen vegetation cover types that occur within the field office boundaries. Utah Gap Analysis Program (GAP) data indicates that the project area is populated entirely by desert scrub and grassland vegetation communities. Aerial photography was used and field surveys were conducted to map the vegetation cover types within the Phase 1 project area. Cover types in the project area were labeled and described to be consistent with BLM literature.

To obtain parameters of vegetative composition, 25-foot linear transects were randomly laid out in each major vegetation type (Table 4). The line-intercept method was used to measure vegetative density, cover, and richness and the extent of interstitial space and disturbance. When a cover type was encountered along the transect, the length of its interception was recorded. When there was species overlap, both species were noted, however the canopy species was used for data analysis. Non-vascular vegetation, such as lichens and bryophytes, also were measured. Non-vegetative cover types, such as litter, coarse woody debris, and rocks greater than 10 centimeters were recorded. Disturbances such as domestic trampling (i.e., hoofprints) and off-highway vehicle tire tracks were also measured and recorded.

Sixty-four systematically placed and randomly oriented transects were established within the project area in June 2006. The line intercept method was utilized to sample vegetation and surface cover at each of the 64 sites. Three distinct vegetation cover types/communities were determined, including a greasewood vegetation cover type, the predominant blackbrush vegetation cover type, and salt desert shrub vegetation cover type (Table 4). Two general areas of mine disturbance and reclamation were also delineated. They include the reclaimed cover type (assumed to naturally have been a greasewood vegetation cover type)

over the former WRA and low-grade stockpiles and the ground cover associated with the evaporation pond area.

Four permanent transects were also established in locations outside of the project area. The locations were intended to be characteristic of vegetative cover types occurring within undisturbed areas in the project area. Two of these reference areas were established within the blackbrush cover type associated with the Glenberg soil unit and two were established just south of the project area along the Shooting Creek floodplain in the greasewood vegetation cover type. The Baseline Vegetation Report, included as Attachment C, provides additional information and details regarding the 4 permanent transects, the 64 temporary transects, and the vegetation communities within the Phase 1 project area. The report also includes photographs of all vegetation survey areas.

3.7 DEPTH TO GROUNDWATER, OVERBURDEN MATERIAL AND GEOLOGIC SETTING

The depth to groundwater at Vent Hole 4 (see Figures 4B and 6) was measured at 367 feet on August 11, 2006. Vent Hole 4 is located on top of the mesa near the evaporation pond at an approximate surface elevation of 4,800 feet. This unconfined aquifer is located in the Salt Wash Member of the Morrison Formation, which is the formation being mined. As shown on Figure 3, this vent hole is located very close to the “Underground Water Boundary” that divides the flooded northern portion of the mine from the dry southern portion of the mine. Based on the August 2006 measurement, the water elevation at Vent Hole 4 is approximately 4,433 feet.

The mine water well is reported to be 500 feet deep and completed in the Entrada Sandstone Formation, which underlies the Morrison and Summerville Formations. The water well is located near the gate to the mine portal area (see well house on Figure 6) at an approximate surface elevation of 4,500 feet. An attempt was made to measure the water elevation in the well on August 11, 2006; however, the probe bottomed out at 150 feet without recording a water elevation. The probe may have hung up on the submersible pump. The 500-foot depth of the well corresponds to a bottom elevation of 4,000 feet. Information reviewed in Attachment D indicates that the well is completed in a confined aquifer and that a static water level of 120 feet below the ground surface was previously recorded.

The project area is characterized by gently dipping sedimentary strata that are cut by a series of canyons containing ephemeral streams. Starting at the topographically highest surface point within the project area, these formations include the Dakota Sandstone, Brushy Basin and Salt Wash Members of the Morrison Formation, Summerville Formation, Entrada Sandstone, and Navajo Sandstone. Of these

formations, only the Entrada and Navajo Sandstones yield groundwater to wells and springs in sufficient quantity and quality to be useful. Groundwater present in other units including the Morrison Formation is generally of limited quantity and/or poor quality. Attachment D provides additional information on geology and hydrogeology for both the region and project area.

DUSA submitted a request on September 6, 2006, to UDEQ for a groundwater discharge permit by rule for the evaporation pond. This request is based on the Administrative Rules for Ground Water Quality Protection R317-6, UAC Section R317-6-6.2(A)6 dated August 20, 2004. This permit-by-rule section of the regulation states that natural ground water seeping or flowing into conventional mine workings which re-enters the ground by natural gravity flow prior to pumping or transporting out of the mine without being used in any mining or metallurgical process is considered to be permitted by rule, and is not required to obtain a discharge permit under R317-6-6.1. A response was received from UDEQ on September 28, 2006 with a request for additional geologic and hydrogeologic information. DUSA provided this additional information to UDEQ on November 17, 2006 and all correspondence has been included in Attachment F. UDEQ provided a second response on December 21, 2006, again requesting additional information and justification for the permit-by-rule request. A response to this second request included modeling performance of the pond liner and providing additional justification that pond contents will not affect underlying water bearing units. The permit-by-rule request was approved by UDEQ on March 22, 2007. This response is included in Attachment F.

3.8 WATER MANAGEMENT PLANS

The water management plan for the Tony M Mine consists of measures to be taken to avoid disturbance of existing natural drainage channels, minimize sedimentation and erosion, protect the environment from deleterious materials, minimize erosion, and protect surface water and groundwater systems.

3.8.1 Natural Drainage Channels

The natural drainages that are located within or adjacent to the project area are all ephemeral drainages. The primary surface drainage, which is a north-south drainage located along the east side of the main surface facilities area (see Figure 5), and the majority of its tributaries will not be directly impacted by mining operations. Work within these drainage areas will be limited to maintenance of the existing culverts that cross under the county maintained and secondary roads. A small drainage tributary that flows through the proposed WRA will be diverted into a new, permanent channel to be constructed along the west perimeter of the WRA. This new channel will discharge into an existing drainage located further to the south. Earthen berms and diversion channels will be used to route any water flowing from the

surface mine facilities into temporary sedimentation basins. No water from the mine surface facilities area will flow directly into an existing drainage way without first being routed through a sedimentation basin. These measures are discussed and illustrated in Attachment G.

Reconstruction of the evaporation pond will block the drainage through the dam area. Surface runoff into the evaporation pond is limited to approximately 20 acres consisting of the pond area and the surrounding hillsides. A low ridge separates the pond from the ephemeral drainage located west of the pond (see Figure 6). An emergency overflow will be installed in the existing southwest dike that connects the west ridgeline with the hillside southeast of the pond. In the event of an emergency, water would be discharged from the overflow into the natural drainage west of the pond. Upon completion of mining, the evaporation pond and the southwest dike will be breached and the natural drainage system will be restored. No soil stockpiles will be stored within the drainage basin of the pond.

Additional details regarding the drainage plan, both during mining operations and post-reclamation, are presented in Attachment G.

3.8.2 Sedimentation and Erosion

Areas with high potential erosion include the downstream dam slope, the waterline corridor, topsoil stockpiles, the WRA slope and the ore stockpiles. The remaining areas are relatively flat with low potential for erosion. The dam embankment and the downslope portions of the waterline corridor will be stabilized by broadcast seeding the disturbed areas after reconstruction is complete. Topsoil stockpiles will be seeded during the first fall planting season after the soil is stockpiled. Some erosion will occur on the WRA slopes and the sides of the ore stockpiles as they will be in a state of continual change and disturbance during operations.

During the initial stage of mine operations, the crews will be relatively small and surface impacts will also be correspondingly small. To reduce erosion, the WRA and building areas will be expanded in an incremental manner. Topsoil and vegetation will be removed only from those areas needed to support the mine's immediate needs. The topsoil piles created during clearing operations will be seeded, and if erosion is excessive, earthen berms will be constructed below the piles.

The portal area, WRA, OSA, and associated topsoil stockpiles represent the greatest area of surface disturbance (and the greatest potential for erosion) within the main surface facilities area. Sediment will be controlled by constructing a temporary ditch along the west side of the county maintained road from the portal access road to the south end of the topsoil stockpiles. The runoff collected in this ditch will

feed into a sediment basin before overflowing into a culvert that crosses under the county maintained road into the primary drainage (see Figure 5). Undisturbed buffer zones of 20 feet will be left between the remaining areas of proposed disturbance (i.e., mine buildings, storage yards, and parking areas).

Earthen berms, certified weed-free straw bale barriers, and vegetation buffers will be used to control sediment in other areas of potential impact within the main surface facilities area. The existing drainage controls for the road system (culverts, waterbars, and ditches) will be maintained as needed. A temporary sediment basin will be used to capture water from the surface facilities area. The downstream slope of the evaporation pond will also be seeded after reconstruction to minimize surface erosion. Additional details regarding erosion and sediment control are provided in Attachments G and H.

3.8.3 Deleterious Materials Stored On Site

Diesel fuel, gasoline, oil products (i.e., motor oil, hydraulic oil, gear oil, and used oil), starting fluid, and antifreeze will be stored and used on site in accordance with the provisions of the SPCC Plan (see Attachment I). Batteries will be stored on the concrete floor of the maintenance shop on wooden pallets and will be picked up every two weeks for disposal.

Small volumes of solvents used to degrease and clean parts will be used in the maintenance shop. These chemicals will be stored and used at a solvent wash basin. The waste solvent will be collected in a small drum, which will be picked up on a periodic basis by the vendor and recycled/disposed of in accordance with Resource Conservation and Recovery Act (RCRA) regulations.

Magnesium chloride and/or calcium chloride will be sprayed on the haul roads within the mine workings, WRA, and portal area to reduce fugitive dust. These chemicals will be stored in liquid form in tanks located near the portals (see Figure 5). Soil berms constructed around the tank area will provide secondary containment in the event of a spill or leak.

The ore will be hauled to an off-site mill in covered trucks for processing; accordingly, no processing chemicals will be stored or used on site.

3.8.4 Surface and Groundwater Systems

Groundwater will be pumped from the underground workings to an 18.23-acre evaporation pond located on top of the mesa. The groundwater is of poor quality with elevated concentrations of dissolved solids and sulfate and elevated radionuclide activity levels. Dewatering operations will cause a temporary cone of depression to form in the mine area. The aquifer is not used as a water source; therefore, there will be

no impact on water well users. Groundwater levels are expected to return to their premining levels after dewatering operations are discontinued.

Groundwater from the Saltwash Sandstone in the vicinity of the mine workings does not meet drinking water standards. Potable water is available from a water well completed in the underlying Entrada Sandstone in the project area. Groundwater in the Entrada Formation will not be affected by the mining operation.

The evaporation pond has been designed as a zero-discharge facility. The pond, which will have a clay liner of low hydraulic conductivity (1×10^{-8} cm/s), will be situated on top of alternating layers of claystone and sandstone. Seepage is expected to be minimal and no impacts to groundwater are projected. The formation being dewatered is approximately 400 feet below the pond and is the closest aquifer to the pond. The Request for Ground Water Discharge Permit by Rule is provided in Attachment F. This request also includes groundwater quality data, geotechnical analysis, and a review of the local geology and groundwater.

Surface water within the project area is limited to ephemeral drainages. These drainages will be protected as described in Section 3.8.1 and in Attachments G (Surface Drainage Plan) and H (Storm Water Pollution Prevention Plan).

The state has identified potential contamination sources located in the well management area. UDEQ has provided fact sheets to DUSA regarding proper use and operation of pesticides, fertilizers, household hazardous waste, industrial waste, and septic tank/leach field systems within a well management area. These fact sheets are included in the SPCC plan (See Attachment I) so that potential contamination sources will be monitored. In addition, a well source protection plan (SPP) currently is being prepared, and a copy will be provided to BLM when the SPP is complete.

3.9 ROCK CHARACTERIZATION AND HANDLING PLANS

The rock hosting the ore body is the Salt Wash Member, which is relatively inert, bleached, or oxidized sandstone and not likely to produce acid rock drainage (ARD). This has been evidenced by observation of existing waste rock storage areas at Tony M Mine. In addition, field observations indicate that very little water runs off the WRA. Diversion channels will be located upgradient of the waste rock and surface facilities area to prevent upgradient precipitation from running onto waste rock piles. A series of earthen berms and two temporary sedimentation basins will divert and prevent water from leaving the surface facilities without first being detained to allow settling of any fines that may have come off of the

waste rock piles. Ore storage piles will be small and will be transported to the mill frequently and will not be stored on site for long periods. In addition, the ore stockpiles are within the boundaries of the earthen berms and temporary sediment ponds to ensure that any run off that encounters the ore will be detained on site and settled to remove any potential solids that could be carried off site.

Soil samples were collected for laboratory analysis from the three major soil map units that will potentially be impacted by mining operations (i.e., Badland-Rock Outcrop Complex, Glenberg Series, and the Chipeta-Badland Complex). Samples were also collected from the reclaimed WRA, ore stockpiles, and the evaporation pond and dam area. The samples were analyzed by Inter-Mountain Laboratories (IML) in Sheridan, Wyoming. Laboratory parameters analyzed included: pH, electrical conductivity, calcium, magnesium, sodium, potassium, soil adsorption ratio, cation exchange capacity, percent organic matter, total kjeldahl nitrogen, available nitrate, phosphorus, and potassium, composition of sand, silt, and clay, texture, percent coarse fragments, percent total sulfur, neutralization potential and acid/base potential. A complete list of analytical results is presented in Attachment B.

Comparison of soil chemistry mean parameters from the background areas at the existing mine site (Yarts and Neskahi) and the waste rock material presented many differences. All three soils exhibit a narrow range of neutral to basic soil pH (7.4 - 8.2) with the Yarts being the most basic followed by the Neskahi and the waste rock material, respectively. The waste rock material exhibited the highest measures of electrical conductivity at 2.18 dS/m and the lowest percentage of organic matter at 0.93 (as compared to 2.59 and 3.77 percent for the Neskahi and Yarts, respectively). The waste rock material also exhibited a higher percentage of sand in its texture. The Neskahi soil was most limited by its nitrogen content (0.96 ppm) and the Yarts by its phosphorus content (0.87 ppm), while the reclaimed soils demonstrated a well-balanced nitrogen:phosphorus signature. The waste rock material is more limited in available potassium (54.23 ppm) than the native soils while exhibiting higher concentrations of calcium and magnesium (18.04 and 5.48 meq/L, respectively). In all other parameters considered, each soil exhibited results similar in value and nature. The functional value of the waste rock material is most limited by its low percentage of organic matter and its higher sand composition. The Neskahi may be possibly limited by its low nitrogen content and the Yarts by its low phosphorus content and potassium concentration (0.04 meq/L).

3.9.1 Ore and Waste Rock

Waste rock and ore material are relatively inert and are not expected to produce either a radiological or chemical impact to groundwater in the area, as discussed below.

3.9.2 Ore, Waste Rock, and Acid Drainage

The host rock is the Salt Wash Member of the Morrison Formation. Neither sulfide ore forms nor other sulfide minerals have been reported in the Salt Wash Member. As described earlier, ore containing uranium mineralization will be transported to the White Mesa Mill for processing as frequently as daily to weekly, and no ore will be left on the surface after the cessation of mining. The only rock that will remain permanently on site as waste rock consists of clean, bleached, or oxidized sandstone, with no reported sulfide mineralization and little or no reductant. As described above, waste rock exhibits a narrow range from neutral to basic pH, relatively high sand content, higher concentrations of calcium and magnesium than native soils, and relatively high water absorption capacity. Based on these properties, conditions for re-mineralization or formation of acid drainage from waste rock or its sediments will not be present.

3.9.3 Radiological Properties of Ore and Waste Rock

Prior to milling, the ore is relatively inert chemically and radiologically. The ore may have higher concentrations of uranium isotopes and may emit more gamma radiation than the general background. However, the geologic background is a uranium-producing region and contains outcrops of uraniferous sandstones and other uranium-bearing strata. Some natural outcrops of uraniferous materials in this region may have comparable uranium levels as some of the ores. In any case, the ores will be transferred to the White Mesa Mill as frequently as daily to weekly. Only rock with uranium levels too low to be processed economically will be left on site. In fact, due to the current high uranium market values, material with low uranium levels, which was considered waste rock under former operating and market conditions, is being shipped to the White Mesa Mill for processing. At the current uranium market values, the portion expected to be left on site as residual waste rock will contain extremely low levels of uranium.

3.9.4 Protection of Groundwater from Ore and Waste Rock

Groundwater within the mine area and surroundings is generally 400 feet or more below ground surface. The potential for chemical or radiological constituents of surface ore piles or waste rock piles to migrate to groundwater at those depths is insignificantly small. Based on the chemical and radiological properties described above, and the substantial depth to the uppermost groundwater-bearing member, no specific measures are necessary to protect groundwater resources from short-term presence of ore piles and long-term presence of waste rock at the mine surface.

3.10 QUALITY ASSURANCE PLANS

Quality Assurance will be conducted by an engineer during construction of the facilities at the Tony M Mine. Plans and specifications for the clay liner and dam are included in Attachment O. These plans detail the quality assurance steps that will be taken during clay liner construction, such as compaction and density testing, and sealed ring infiltrometer tests. DUSA is currently working on the design of the surface facilities, septic system, building mechanical and electrical plans, and final drainage report for the Tony M Mine. These designs and specifications will be completed using standard engineering practices and constructed using standard construction techniques as approved by Garfield County, the State of Utah, and the BLM. Plans and specifications will be provided to the BLM for inclusion into the POO when completed.

3.11 SPILL CONTINGENCY PLANS

In accordance with Title 40 U.S. CFR Part 112 (40 CFR 112), a SPCC plan (Attachment I) has been prepared for the Tony M Mine site to prevent discharges of oil to navigable waters and the environment. The plan is intended to provide a tool to maintain the highest standards for spill prevention, control, and countermeasures through regular review, updating, and implementation of this SPCC plan for the Tony M Mine. A Storm Water Pollution Prevention Plan (SWPPP) (Attachment H) has been prepared in conformance with the US. EPA Region 8 requirements under the Clean Water Act (CWA) National Pollution Discharge Elimination System (NPDES) as established by 40 CFR Chapter 1, Part 122. The SWPPP establishes best management practices such as sediment and erosion controls, inspections, and maintenance schedules to protect surface water runoff from potential pollutants. In addition, a drainage plan (Attachment G) has been designed using standard engineering practices and will be implemented at the Tony M Mine site. The drainage plan incorporates earthen berms, diversion channels and temporary sedimentation basins to ensure that no deleterious materials or other potential contamination leave the mine surface facilities.

The measures and housekeeping practices identified in the SPCC and SWPP Plans cited above for protection of surface water will also serve to protect groundwater. For example, the shop floor where cleaners or other chemical fluids will be used will be concrete. Any spills onto this surface will be promptly collected and reused or disposed. Storage tank areas will have secondary containment appropriately sized for spill containment and collection. These measures will minimize the quantity of deleterious or hazardous material that may reach the ground surface. In addition, groundwater within the area is generally 400 feet or more below ground surface. The potential for surface spills to migrate to those depths is insignificantly small.

3.12 PORTALS, SOLID WASTE, SURFACE EXPLORATION, SIGNS AND HIGHWALLS

Portals will be equipped with screened metal gates and double locks. Each vent hole will be covered with a metal diffuser head that extends about four feet above the ground surface. The opening on top will be covered with metal mesh to preclude access.

Solid waste including paper, cardboard, wooden pallets, office and lunch room wastes, tires, broken pipe, scrap metal, and other materials will be collected in suitable containers and hauled offsite for recycling and/or disposal in an appropriate landfill. Old batteries will be stored on a wooden pallet on the concrete floor of the maintenance shop and will be picked up every two weeks for recycling. No burying of waste or organic debris will occur.

Demolition debris from the former mine operation could be encountered during construction activities. Inorganic debris such as concrete, bricks, and tile would be reburied in a nearby area. Any organic debris encountered would be hauled to an off-site landfill.

No surface exploration drilling is planned for the foreseeable future. Locations of potential future surface exploration drilling are unknown. Surface exploration drilling within the claim block will be conducted under a Plan of Operation Amendment. Drill holes will be abandoned in accordance with Rule 647-4-108 of the UAC and BLM requirements. Underground exploratory holes, driven laterally over a short distance, will not require plugging.

Signs will be posted along the county maintained road on both sides of the main surface facilities. The signs will list the mine name and safety information. Employees and visitors will be required to park in a designated parking area near the mine office. A lockable metal gate will be located near the portal area as shown on Figure 5.

No highwalls or other excavations are planned. A game fence will be constructed to BLM specifications around the evaporation pond to exclude livestock and wildlife. A fence also will be constructed around the leach field to exclude parking and surface activity from the area.

3.13 CONCURRENT RECLAMATION

The Tony M Mine is an underground operation with relatively limited surface disturbance. All surface facilities will be needed throughout the life of the mine.

3.14 MEASURES TAKEN TO SALVAGE AND STORE SOILS USED IN RECLAMATION

Prior to disturbing an area, the existing topsoil and any subsoils determined to be suitable as growth media will be stripped using a small dozer and/or front-end loader in accordance with the provisions outlined in Section 3.5. The salvaged soil will be placed in designated topsoil stockpiles that are outside of the drainage and road systems (see Figures 5 and 6).

The stockpiles will be seeded in the fall to stabilize the soil using the appropriate seed mix from Table 5. Earthen berms will be installed downslope of the stockpiles if the piles are prone to erosion.

3.15 MEASURES TAKEN TO PROTECT EXISTING SOIL AND PLANT RESOURCES

Incremental impacts to soil and plant resources will be minimal, as 97 percent of the areas to be disturbed were disturbed by previous mining activity and have been reclaimed (see Table 1). DOGM still retains a revegetation bond for much of the reclaimed area. No wetlands or threatened, endangered, and sensitive plant species were identified as being within or adjacent to the project. Impacts to ephemeral drainages and associated riparian areas will be limited to permanently diverting the small drainage located just west of the main portals around the perimeter of the WRA, reconstructing the dam within the small drainage on top of the mesa, and maintaining the existing road culverts that are installed within drainages.

Soil and plant mitigation measures will include salvaging the available topsoil and any suitable subsoil material prior to disturbing an area. Erosion and sediment control measures will be implemented, as described in Attachment H, to minimize loss of soil resources. Vegetation resources will be mitigated by seeding topsoil stockpiles and any reclaimed areas during the fall planting season. Upon mine closure, the disturbed areas will be revegetated as described in Section 4.7.

3.16 SLOPE STABILITY

Surface excavations with attendant highwalls are not proposed, as all mining will be done using underground methods. Natural highwalls exist in the portal area. If areas of loose rock on the highwalls present a safety concern, the loose rock will be pried down or stabilized in place with rock bolts and metal mesh. Constructed slopes include the evaporation pond dam and the WRA. Calculated safety factors ranged from 1.3 for pseudo-static analysis of the downstream slope using a 0.2 seismic coefficient to 3.02 for static analysis of the steady-state, long term condition on the downstream slope. The calculated safety factor for a rapid drawdown condition on the upstream slope was 2.80. Details are provided in Attachment E. The WRA will have two benches and a maximum bench height of 35 feet, which is about the same height as the previous WRA that was constructed and reclaimed in the same location. Given the

relatively small vertical height of the proposed benches and the apparent stability of the previous WRA, the WRA is expected to be stable during mine operations. During reclamation, the dam will be breached and left in a non-impounding condition with maximum slopes of 2.H:1V in the breach area and slope angles of 3.5H:1V and 4H:1V on the upstream and downstream slopes. The WRA will be regraded to achieve final slopes of 3H:1V or less.

3.17 AIR QUALITY

Air quality will be protected in accordance with the provisions of the project's Air Quality Operating Permit. The Notice of Intent that was submitted to the Utah Division of Air Quality is provided as Attachment J. The site's two diesel generators are the principal source of project emissions. These generators will be equipped with engines and air filters that meet state emission standards. Fugitive dust on mine roads will be controlled through enforcement of speed limits and treatment of the roads with magnesium chloride or a similar compound. A water truck also will be used to spray the mine roads within the permit area, as needed. Fugitive emissions from waste rock storage piles will be mitigated by dust suppression, which includes use of approved wetting agents. Fugitive emissions from the topsoil storage piles will be mitigated by seeding the piles with both a temporary fast-growing seed mix to stabilize the soil and the reclamation seed mix. Particulate emissions from truck and other vehicle traffic will be mitigated by use of good engineering practices, including enforcement of speed limits and application of approved dust suppressants.

Airborne emissions at the Tony M Mine will be controlled and monitored under the requirements of two regulatory programs.

Work practices and emission standards for sources of fugitive dust emissions are established in UAC R307-205. Fugitive dust emissions at the Tony M Mine will be regulated by air quality permits issued by the UDEQ's Division of Air Quality, under the authority of UAC R307-205. DUSA received an Intent to Approve notice from UDEQ's Division of Air Quality on June 8, 2007. DUSA is finalizing the air quality permit for the Tony M Mine, which limits fugitive dust emissions from truck haulage and loading operations to 20 percent opacity.

Radon emissions from the mine's exhaust vents will be monitored and controlled in accordance with standards implemented in the CFR. The 40 CFR 61 Subpart B establishes the Radioactive National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for radon emissions from an underground uranium mine. The air volume of the mine exhausts and the measured radon concentrations within the exhausts will be utilized by DUSA to derive an annual radon emission rate estimate. These annualized

emission rate data, the physical parameters of the mine exhaust, and the location of the nearest resident are then entered into EPA's computer model (COMPLY-R). The model output is then compared against the 10 mrem/yr standard to determine compliance or the need for further radon control.

3.18 PUBLIC HEALTH AND SAFETY

The mine site is located in a remote area that is occasionally used for recreation and rangeland purposes. Based on the limited and infrequent use of the area, public health and safety are not considered a concern. Worker health and safety is covered under two regulatory programs related to air quality, UDEQ's air quality emissions notice and MSHA regulations for underground uranium mines, which call for the development of a safety program.

For radon, the safety program at the mine calls for keeping all working areas ventilated to a concentration at or below 0.33 working levels (WL). This level is used as a precaution to ensure that a person working in the area would not receive greater than 4 Working Level Months (WLM) in a year, in accordance with regulatory standards. If radon levels rise above this level, additional ventilation would normally be enacted. If radon levels rise above 1.0 WL, respiratory protection is required in the area. The only work performed in the area would be to provide additional ventilation to be used to reduce the radon level to 0.33 or below. Work in areas exhibiting radon at more than 10 WL requires the use of Self-Contained Breathing Apparatus (SCBA).

Breathing zone samples would also be taken in accordance with approved protocols to assess potential exposures to both radon and dust. In addition to these environmental controls, the equipment issued to miners includes a half-face respirator with a 99 percent efficiency rating for protection against radon and particulates. Miners are encouraged to wear their respirators at all times and in all work areas.

Employees contracted to come on site to load and transport ore are covered under their own company's health and safety programs. White Mesa Mill personnel however, do take measurements at 1 meter from the truck to ensure compliance with US Department of Transportation over-the-road standards. It should be noted that the ore being delivered to the mill has averaged 4.5 percent moisture content. The moisture reduces the tendency for dust generation.

3.19 MEASURES TAKEN TO PROTECT WILDLIFE HABITAT AND ENDANGERED SPECIES

The surface disturbance associated with the project combined with the noise, moving equipment, and the increased presence of humans is likely to result in the temporary displacement of some of the small

mammals and birds that inhabit the area. No riparian areas and no threatened, endangered, or sensitive plant or wildlife species, with the possible exception of bats, have been identified within or near the project area. Bats are prolific due to the large number of nesting sites available in the historic underground mine openings that are located throughout and adjacent to the project area. Bats were observed in the survey area, however, individual bat species were not identified. Six bat species in Utah are listed as sensitive species. The observed bats may have included individuals from the sensitive species. The reconstruction of the evaporation pond would likely benefit the bat population, as the water would draw insects that the bats feed on. DUSA recognizes the use of underground mines for bats and supports BLM's efforts to conserve and manage key bat roosts within the mine workings at the Tony M Mine. When DUSA personnel or contractors enter the mine following breeding season (spring and summer), a visual observation for bats will be made. In the event that bats are observed in the mine workings, DUSA personnel will cease all activities in the area and report the finding to BLM. Recommendations made by BLM personnel will be agreed upon and followed by DUSA. These recommendations may include, among others, relocation of a bat or cessation of activities in the nesting area until the breeding season is over.

Big game species were not observed at the site; however mule deer may be present in low numbers and bison may use the area for winter grazing. Impacts to big game species are not anticipated because the site is relatively small compared to the available habitat for these species. Although raptor species were observed during field surveys in April and June 2006, no raptor nesting activity was observed within 0.5 mile of any proposed mining or construction activity within the project area. Raptor surveys were conducted by setting up monitoring sites along the roadway, approximately every three tenths of mile based upon terrain. Monitoring sites were chosen to allow thorough observation of all cliff faces (i.e., potentially suitable raptor nesting habitat) within the project site. At each observation point, the surrounding cliff faces were scanned for sign of roosting activity and raptor nests. Nests were confirmed using binoculars and/or spotting scope, and photographed with a digital camera. In addition to the canyon-bottom drive, the mesa top above the portals was walked, and surrounding cliff faces were scanned. One raptor species, a red tailed hawk, was observed within the survey area. No active raptor nests were observed within 0.5 mile of the proposed surface disturbance, although three old/inactive raptor nests were identified. Common raptor prey appeared to be in low abundance.

Historic and more recent water quality data for the mine water indicate that total dissolved solids (TDS) range from 1,820 to 5,810 milligrams per liter (mg/L) and gross alpha from 49.7 to 222 picoCuries per liter (pCi/L), as compared to the Utah water quality standards for stock watering of 2,000 mg/L TDS and 15 pCi/L gross alpha. The gross alpha levels also exceed the Utah aquatic wildlife standard of 15 pCi/L.

Other measured water quality parameters are generally within the regulatory standards for both livestock and wildlife. The elevated TDS concentrations and associated sulfate levels of 1,150 to 4,050 mg/L are lower than the levels observed in the Great Salt Lake, and the water can be consumed by livestock and wildlife on a limited basis without harm. However, the water may have an objectionable taste and consumption of the water may cause diarrhea, especially in younger animals. The elevated radioactivity levels could also result in chronic impacts to livestock or wildlife if consumed over a long time period.

Mitigation measures will consist of fencing the pond to preclude access by livestock. Waterfowl are expected to be limited to flyovers, as the site is located within 15 miles of Lake Powell, which provides many square miles of fresh-water habitat.

DUSA will construct fencing around the evaporation pond in an effort to eliminate potential livestock and wildlife intrusion. Fencing will be constructed in accordance with BLM-approved specifications. Due to the close proximity of the pond to Lake Powell, it is considered unlikely that wildlife will use the pond versus the lake. Similar techniques that have been used effectively to deter wildlife at DUSA's White Mesa Mill include the use of wildlife diversion ponds and propane cannons. An evaluation of the use of the pond by migratory birds, including waterfowl, will be completed and a propane cannon or other measures will be used, as necessary, to deter wildlife from using the pond.

An analysis of the 100-year rainfall event was conducted for the evaporation pond drainage basin. It was determined that a 100-year event would increase the water level in the pond by 0.1 inches with a conservative runoff coefficient of 1.0. A 5-foot free board is provided at the dam for the evaporation pond. Based on this information, it is unlikely that even an extreme runoff event would overtop the pond and allow for surface water discharge of pond water or sediments. This analysis is included in Attachment G.

During mining activities, the water level in the pond is not expected to decrease; therefore, it is not likely that the pond sediments will be unsaturated during the mining activity, and they will not become airborne. In the event that the sediments are exposed to the air prior to cessation of mining activities, plans will be developed in coordination with the BLM to ensure sediments do not become airborne. DUSA recognized the potential for mine water to contaminate sediments in the pond and will sample pond sediments following mining activities. Based on the results of the pond sediment analysis following mining activities and their comparison to baseline conditions at the pond site, DUSA will remove contaminated sediments and place them into the underground mine workings. This commitment will minimize the

opportunity for remaining contaminated sediments to impact wildlife or become airborne after the cessation of mine operations.

Wildlife resources within the project area have been described and summarized in more detail in the Wildlife Resources Baseline Technical Report, which is included as Attachment M. This report and scope of analysis were developed based upon coordination with DOGM personnel and the BLM Hanksville Field Station biological staff in the spring of 2006. No designated critical habitat for threatened or endangered species is found in the project area.

3.20 SCHEDULE OF OPERATIONS

Depending on market conditions and production rates, Phase 1 is expected to start in the third quarter of 2007 and extend over a two to three-year period. It is likely that the mine will be run on day and night shifts that operate the mine 7 days a week, 24 hours a day. Phases 2 and 3 have the potential to employ up to 300 miners and extend the mine life to 25 years or more.

4.0 RECLAMATION PLAN

The following sections describe proposed plans DUSA will implement to reclaim mined areas and surface facilities. This section conforms with 43 CFR Part 3809.420.

4.1 DRILL HOLE PLUGGING

Exploration and geotechnical drill holes are not included in this POO, but would be addressed in Plan of Operation Amendments. Locations of potential future surface exploration drilling is unknown. Unless approved otherwise, drill holes will be abandoned in accordance with UAC Rule R647-4-108 and BLM requirements. Drill hole abandonment will include setting a nonmetallic permaplug at a minimum of five feet below the surface and filling the hole above with concrete. Holes that encounter non-artesian water will be plugged by placing a 50-foot cement plug immediately above and below the aquifer(s) or filling the hole from the bottom up with a high-grade bentonite/slurry mixture.

Vent holes will be plugged using methods similar to those previously used for site closure and reclamation. A steel plate will be welded over the vent hole casing and then a collar, consisting of a minimum of 6-inches of reinforced concrete, will be constructed around the top of the hole. Concrete reinforcement will consist of small I-beams and rebar. Three to four feet of backfill will be placed over the concrete collar.

No artesian water sources have been identified within the project area.

Pad areas will be reclaimed by replacing salvaged topsoil, regrading and ripping the disturbed area, and broadcast seeding with the approved seed mix.

The project's water well will be permanently abandoned by a licensed driller in accordance with UAC Rule R655-4-12. This rule states that "Any well that is to be permanently abandoned shall be completely filled in a manner to prevent vertical movement of water within the borehole as well as preventing the annular space surrounding the well casing from becoming a conduit for possible contamination of the groundwater supply." After grouting, the well will be capped with concrete to a minimum of five feet below the ground surface, the well house will be demolished and removed, and the surrounding area will be regraded, ripped, seeded, and covered with soil.

4.2 REGRADING AND RESHAPING

The following subsections present DUSA's proposed plans for regarding and reshaping of disturbed areas.

4.2.1 Road Reclamation

Roads to be reclaimed are identified on Figures 10A, 10B, and 10C and include roads previously reclaimed by the former mine operator that will be reopened by DUSA to gain access to adits, vent holes, and the evaporation pond area. They also include two new roads to proposed vent holes and an existing road that provides access to the south side of the evaporation pond. Most of these roads are on relatively flat areas that do not have significant cuts or fills. The roads will be reclaimed by:

1. Regrading any cuts and fills to reestablish the original ground contours and drainages.
2. Ripping the roads to a depth of 18 to 24 inches.
3. Placing six inches of loose topsoil in locations where topsoil was removed.
4. Seeding the soil with the approved reclamation seed mix.
5. Covering seeded areas with soil.

4.2.2 Slope Stability and Reclamation

A minor amount of additional cliff face will be exposed during the reopening of the existing portals and adits. Reclamation will include pushing backfill material into each opening for a distance of approximately 30 feet and then pushing backfill over the top of the portal opening so as to create a natural appearing talus slope of approximately 2H:1V. Salvaged topsoil will be placed over the slope and the soil will be pocked using a backhoe or hydraulic excavator and seeded. Pocking is the term used for the creation of microbasins with the shovel of a backhoe or hydraulic excavator and is discussed in more detail in Section 4.6.

With three exceptions, all of the slopes created by mining activity will be regraded to achieve reclaimed slopes of 3H:1V or less. Topsoil will be placed over the regraded slopes to the depths specified on Figures 10A, 10B, and 10C. The slopes will then be ripped on contour and seeded with the approved seed mix. Seeded slope areas will be covered soil.

The three areas where final slopes will be steeper than 3H:1V are the waterline corridor, the breached portion of the dam, and the sealed portals. The corridor, which is a pre-existing cut on a steep natural hill that has an average slope of 2H:1V, averages about 20 feet in width. The cut will be filled in to the extent practicable and will then be broadcast seeded. The reconstructed dam will be breached in a similar manner to the current breach with average slopes of 2H:1V. The corners of the breached area will be

more rounded than the current configuration to more closely approximate natural clay hillsides in the area. The upstream and downstream faces of the dam will have final slopes of 3.5H:1V and 4H:1V, respectively. The portals will be sealed by pushing waste rock or soil 30 feet into each opening and then backfilling additional material against the opening to create a 2H:1V slope. Native topsoil will be placed over the final slope and seeded so that the sloped area resembles naturally occurring talus slopes in the area. Seeded slope areas will be covered soil.

4.2.3 Impoundments and Sediment Basins

All impoundments and sediment basins will be reclaimed to be free draining and to reestablish the natural drainage pattern. The project does not include any open pits. The dam for the evaporation pond will be regraded as shown on Figure 9 to be free draining with breached slopes of 2.H:1V or less. The 2H:1V slopes will be pocked and broadcast seeded by hand. Large rock salvaged from the upstream dam face during breaching will be placed in the bottom of the breach in a similar manner to the current configuration for erosion control purposes. The dam currently impounds one to two feet of water on a seasonal basis. When the dam is breached again, the breach will be graded to achieve a one to two percent positive slope throughout so that water will not be impounded after reclamation is completed. With the exception of the breach area discussed above, all regraded slopes will be ripped/scarified on contour and seeded with the approved seed mix. Seeded slope areas will then be covered with soil.

The sediment in the bottom of the pond will contain low levels of uranium, vanadium, and radionuclides similar to the levels observed in the reclaimed pond area. Analytical data for these sediments is presented in the first part of Attachment K. Samples of pond sediments will be collected and analyzed both prior to and following the cessation of mining activities for the analytes discussed in Section 4.2.3, above. Based on the results of the pond sediment analysis and a comparison to baseline conditions at the pond site, contaminated sediments will be removed and placed into the underground mine workings.

The temporary sediment basin in the surface facility area (see Figure 5) will be backfilled and graded to be free draining. Topsoil will then be placed over the top and the area will be scarified and seeded.

4.2.4 Drainages

The temporary diversion channel located below the WRA and OSA along the west side of the county maintained road will be backfilled to the approximate original contours with salvaged topsoil placed on top. The area will then be scarified, seeded with the approved seed mix, and covered with soil. The

permanent diversion channel around the west perimeter of the WRA will be left in place to minimize the amount of runoff flowing down the slopes of the reclaimed WRA.

The cross-sections, profiles, and design calculations for the permanent diversion channel around the west perimeter of the WRA are presented in Attachment G.

4.3 MINE RECLAMATION

The portals of the declines and adits will be reclaimed by placing waste rock backfill from 30 feet inside each portal to the portal entrance. Backfilling will also occur around and against each backfilled opening to create a natural appearing talus slope of approximately 2H:1V. A minimum of six inches of native topsoil (i.e., Badland-Rock Outcrop Complex or Glenberg Family) will be placed over the backfilled surface, which will then be pocked with a backhoe or hydraulic excavator. The reclaimed “talus” slope will be broadcast seeded by hand with the Greasewood Reclamation Seed Mix (see Table 5) in late fall.

Vent holes (Figures 10B and 10C) will be reclaimed by welding a steel plate over the vent hole casing and then constructing a reinforced concrete cap over the steel plate. The concrete cap will include small I-beams, angle iron, and rebar for structural support and a minimum thickness of six inches of concrete. The concrete cap will be covered by three to four feet of soil collected from within the area of disturbance associated with the vent hole. No topsoil salvage or storage will be required at each vent hole. All disturbed areas will be ripped, seeded, and covered with soil, in the late fall. Vent Holes 1, 3 and 4 will be seeded with the Blackbrush Reclamation Seed Mix and Vent Holes 5 through 8 will be seeded with the Salt Desert Shrub Seed Mix (see Table 5).

4.4 WASTE ROCK PILES

Figure 8 provides cross sections of the existing, proposed, and post-reclamation surface of the WRA. Reclamation of the new WRA, which is located on top of the previously reclaimed WRA, will include placing as much stockpiled waste rock as possible into underground mined out areas and grading the top of the WRA back towards the natural highwall and the permanent diversion channel. Drainage swales also will be incorporated into the top of both the upper and lower benches of the southern end of the WRA so that precipitation from large storm events is directed into the ephemeral drainages to the south. The top of the dump will be recontoured to create a natural appearing, undulating surface that readily retains moisture from smaller storm events. The angle of repose slopes will be graded to achieve slopes of 3H:1V to 5H:1V with an average slope of approximately 4H:1V. Prior to topsoil placement, the WRA will be ripped and inoculated with mycorrhizal fungi (a soil amendment, see Section 4.7) to encourage

seed germination and plant growth. Topsoil from Topsoil Stockpiles TS-2A and 2B will then be placed loosely over the regraded surface and seeded with the Blackbrush Reclamation Seed Mix (see Table 5). Seeded areas will be covered soil.

4.5 FINAL DEPOSITION OF STOCKPILED MATERIALS

Stockpiled topsoil will be placed loosely over the top of regraded areas. Any remaining ore stockpiles will be shipped to the mill for processing if market conditions are favorable. If the ore stockpiles cannot be shipped to the mill, remaining ore will be placed within the mined out areas. The ore stockpiles will contain low levels of uranium, vanadium, and radionuclides similar to the existing reclaimed ore stockpiles that are located in the vicinity of the Tony M Mine. Analytical data for samples collected from these stockpiles is presented in the latter portion of Attachment K. After regrading and redistribution of salvaged topsoils, the stockpile areas will be ripped and seeded in conformance with the specifications of the Reclamation Treatment Maps (Figures 10A, 10B, and 10C).

4.6 RIPARIAN MITIGATION

Riparian areas do not occur in the proposed project area; therefore, the proposed mining operations will not disturb or impact riparian areas.

4.7 WILDLIFE HABITAT REHABILITATION

Land uses prior to historical and proposed mine disturbance included wildlife habitat and livestock grazing. The post-mining land use will be returned to a grazing and wildlife land use on a natural landscape. Therefore, the seeding mix has been designed to reflect the species composition observed within the project area and surrounding landscape, as well as those not observed, but typically associated with the landscape, soil type, elevation, and precipitation of the project area. Four seeding prescriptions have been developed for revegetation of the project area and are described in Section 4.7.

4.8 TOPSOIL HANDLING

The topsoil stored in Topsoil Stockpiles TS-2A and TS-2B will be placed loosely over the regraded WRA to an average depth of six inches or more. This will be accomplished using a dozer, front-end loader, and either scrapers or trucks. As discussed in 4.4 of this section, the waste rock surface will be ripped and inoculated with mycorrhizal fungi prior to topsoil placement. Mycorrhizal fungi encourage seed germination and plant growth by helping plants to absorb mineral nutrients from the soil. Mycorrhizal fungi do not need to be adapted to the area and it is assumed that mycorrhizal inoculum is available and

viable. The regraded WRA will encroach upon the footprint of the southern end of Topsoil Stockpile TS-2B; accordingly, the regrading and topsoil placement activities in this area will be conducted concurrently in a staged manner to avoid double handling or covering of the soil.

The topsoil stored in Topsoil Stockpiles TS-1, TS-3, TS-4, and TS-5 will be redistributed over the remaining disturbed areas in the portal area including the sealed portals. Based on projected topsoil salvage volumes, the entire disturbed area will receive an average of six inches or more of loose soil. The majority of the soil will be distributed using a dozer and/or front-end loader. Native soils will be placed on the 2H:1V reclaimed surface of the sealed portals (main portals, secondary portal, and the North and South Adits) because they are of higher quality than the waste rock soil and their brown to red color will blend in better with the surrounding cliffs.

The access roads to the North and South Adits and the vent hole pads and access roads will not receive topsoil. These areas are lightly used and the native topsoil remains on the road and pad surface. After regrading to the approximate original contour, these areas will be ripped and seeded as specified in the Reclamation Treatment Maps (Figures 10A, 10B and 10C). Prior to disturbance, available soil will be stockpiled from the access roads, adits, and pads for the new vent holes as far as possible given the limited soil availability at the site. Windrows to the sides of the adits, pads, and roads will be provided as available given the soil conditions at the site. The waterline corridor is situated in a cut on a steep, clayey hillside. Based on previous experience, soil material will slough into the cut over time. During reclamation, a hydraulic excavator will be used to push additional soil material from the immediate vicinity into the cut and scarify the surface. The existing clay soils that form the dam and pond surface will be ripped and seeded with the exception of the 2H:1V slopes within the breach area, which will be pocked and seeded as specified in Figure 10B.

Following replacement of soil, the surface of the soil will be roughened by either "ripping" the soil and/or "pocking" the soil. A roughened soil surface exhibits lower soil loss potential, increased moisture retention, cooler surface soil temperatures, and greater seed germination.

Slopes of 3H:1V or less will be ripped on the contour of the reestablished post-mine topography to a depth of 18 to 24 inches using a tracked dozer. All low-grade and flat terrain will be ripped to aid in water infiltration and retention of natural precipitation (rain and snow accumulation), and to deter soil loss due to wind erosion. The regraded WRA, with the exception of the portal face, will be ripped, as will the recontoured and graded surface facilities, yards, parking areas, and roads (Figure 10A). All vent hole pads and access roads (Vent Holes-1 and 3 – 8) will be ripped (Figures 10B and 10C). The recontoured

south and east access roads to the evaporation pond, the evaporation pond surface, and the dam (with the exception of the breach area) will be ripped as well (Figure 10B).

On slopes greater than 3H:1V, pocking of soil will be implemented prior to seeding across the entire slope. Pocking is the creation of microbasins with the shovel of a backhoe, hydraulic excavator, or equally able equipment. Basins should exhibit a minimum depth of 18 inches and the width of the shovel (two to four feet). The most common method for implementation is to dig a bucket load of soil at an 18 inch depth, and deposit the soil two to three feet above the newly created basin. The process is repeated in a random and overlapping pattern ensuring no downhill conduit for water flow. Areas that will be pocked include the backfilled grade along the cliff face associated with the sealed portals, the North and South Adits (Figure 10A), the waterline corridor, and the regraded evaporation pond breach (Figure 10B).

4.9 REVEGETATION

The post-mining land use will be returned to a grazing and wildlife land use on a natural landscape. Therefore, the seeding mix has been designed to reflect the species composition observed within the project area and surrounding landscape, as well as those not observed, but typically associated with the landscape, soil type, elevation, and precipitation of the project area. Four seeding prescriptions have been developed for revegetation of the project area. These prescriptions are specific to existing vegetative communities identified in the vegetation baseline report: greasewood, blackbrush, evaporation pond and salt desert shrub, included as Attachment C.

4.9.1 Seed Mixes

Seeding prescriptions were developed in accordance with the *Federal Native Plant Conservation Memorandum of Understanding* (www.nps.gov/plants). The project area landscape naturally exhibits a high degree of bare ground cover (58.7-78.4 percent) and the use of non-native species for the purpose of establishing vegetative cover is not necessary. Furthermore, the risk of establishment, proliferation, and displacement of native species by non-native species is not justified. The native species utilized in the seeding mixes below are generally available from commercial suppliers, although it may be necessary to substitute for specific species if they are not available at the time of reclamation.

The greasewood community is associated with the deep alluvial drainages associated with intermittent stream systems. Based upon site assessments associated with vegetation surveys and evaluation of past history at the former mine facility area, it is assumed that a greasewood community was dominant within the lower canyon area including the waste rock and proposed surface facilities areas prior to previous

mining and reclamation activities. A greasewood seed mix (see Table 5) will be broadcast seeded at a rate of 15 pounds of pure live seed (PLS) per acre, upon surface treatment (predominantly ripping, with pocking on slopes greater than 3H:1V) of the reclaimed portal area (see Figure 10A). Approximately 20.5 acres will be reseeded with the greasewood seed mix.

The blackbrush community is the predominant vegetation community within the mine project area and is associated with the shallow soils across the top of mesas and benches, as well as some of the deeper soils in the upper portions of the canyons. The blackbrush seed mix developed for this vegetation community (see Table 5) will be broadcast seeded at a rate of 15 pounds of PLS per acre, upon surface treatment, of the North and South Adits and associated access roads (Figure 10A), pads and access roads for Vent Holes 1, 3 and 4, and the south access road to the evaporation pond (see Figure 10B). Approximately 2.5 acres will be reseeded with the blackbrush seed mix.

The evaporation pond area consists of a clay soil liner and currently collects one to two feet of water on a seasonal basis below the elevation of its outlet. The evaporation seed mix developed for this previously disturbed area consists of species observed within and adjacent to the area. This mix will be broadcast seeded at 15 pounds of PLS per acre, upon pocking of the breach slopes and ripping of the dam, pond area and east access road (see Figure 10B). Approximately 22.5 acres will be reseeded with the proposed evaporation pond seed mix. In addition, salt grass plugs will be planted on a limited basis in the area of the evaporation pond. If the salt grass plugs are effective, they will be planted throughout the evaporation pond area.

The salt desert shrub community present within the northern portion of the permit area is associated with the deep alluvial drainages and intermittent stream systems. A salt desert shrub seed mix developed for this vegetation community will be broadcast seeded at a rate of 15 pounds of PLS per acre, upon surface treatment (ripping) of the pads and access roads at Vent Holes 5, 6, 7, and 8 (Figure 10C). Approximately 1 acre will be reseeded with the salt desert shrub seed mix.

No reseeded of the waterline corridor is proposed due to heavy natural clay soil and extreme soil chemistry in these native soils. After regrading, the waterline corridor will be scarified or pocked with sediment controls (e.g., berms or waterbars) installed in high runoff areas to minimize the potential for rills and gullies to form along the corridor.

4.9.2 Seeding Method

Seeding of all species will be achieved with a broadcast applicator in late fall (after November 1). This will allow for the advantage of a natural cold scarification of the seeds as well as sufficient moisture at the onset of germination. A broadcast application will prevent unnecessary soil disturbance associated with a drill seeder, or equipment weight (as it relates to compaction) associated with a hydroseeder. Summer seeding will be attempted on a limited scale on areas that will receive interim revegetation treatments, such as the topsoil stockpiles.

To minimize surface compaction and timeliness of the initial re-seeding efforts in late fall, broadcast seeding will be conducted concurrent with surface ripping/pocking. Ripping and/or pocking of the surface provides a roughened and irregular surface that minimizes surface erosion and helps trap rain and snow melt, improving available precipitation, and thus promoting better germination of distributed seeds. Where the regraded surface allows and post-mine topography is determined to not be too steep, a tracked-dozer with ripper and broadcast seeder (or equivalent method) will be used to seed along (parallel to) the re-contoured surface. Loosened soil resulting from the ripper on the back of the tracked-dozer should allow for adequate cover over concurrent broadcasted seed. On steep slopes that preclude parallelripping on the regraded contour (slopes of 2H:1V), a hand-broadcast seeder will be used to distribute the approved seed mix. Hand raking of the surface to cover seed will be implemented in pocked areas. Where topsoil is available, seeded areas will be covered with approximately 0.25 to 0.50 inch of soil to facilitate germination. Seed will be hand broadcast and covered with soil by hand raking or by small agricultural equipment.

4.9.3 Fertilization

No fertilizers will be applied to revegetated areas. In areas where soils historically have exhibited nutrient limitations, and reclaimed soils continue to be low in plant-available nutrient content; the use of fertilizers has resulted in the proliferation of invasive species populations.

4.9.4 Irrigation

To simulate wet conditions in the area, DUSA will irrigate reseeded areas twice from the onsite well to encourage growth of vegetation in the reseeded areas. The irrigation methods used to accomplish this will be suitable for the terrain and should prevent erosion from occurring. Growth of new vegetation will be monitored and additional actions including reseeded or weed control will be taken as necessary. Water quality of water from the onsite well was analyzed in April 2007 and meets the Class 4 water

standards, required for irrigation, found in Utah State Rule R317-2, Standards of Quality for Waters of the State (<http://www.rules.utah.gov/publicat/code/r317/r317-002.htm#T15>).

4.9.5 Other Revegetation Procedures

Soil material from the WRA will be inoculated with mycorrhizal fungi upon completion of recontouring and surface grading and prior to topsoil placement and seeding. The sparse natural moisture, combined with the low nutrient content of the waste rock material is expected to result in a low germination rate, relative to other productive native soils in the region. The addition of the inoculum may increase the ability of the soil to retain moisture and convert organic elements into plant-available inorganic nutrients thus promoting vegetative germination, establishment, and proliferation.

An application rate of 60 pounds per acre of mycorrhizal fungi will be broadcast across approximately 11 acres associated with the redistributed waste rock material prior to placement of the topsoil and ripping. Surface ripping is expected to provide sufficient soil mixing to incorporate the inoculum throughout the root zone.

Areas where spotted knapweed is found on the waste rock dump or low grade ore piles will be marked and growth medium from this area will be handled so seed or plant parts do not contaminate any other soil. In addition, the Garfield County Weed Control Department will be contacted and advised of the location of the population. If spotted knapweed or any other noxious weed is found on public land, the BLM will be notified. DUSA's Weed Management Plan is presented in Appendix N.

4.10 ISOLATION AND CONTROL OF ACID-FORMING, TOXIC, OR DELETERIOUS MATERIALS

Potentially deleterious materials on-site were previously identified in Section 3.8.3 and include petroleum products, solvents, road stabilizing chemicals, and acid-containing batteries. At the time of mine closure, the remaining petroleum products on site will be used for their intended purpose, transported to another facility, or returned to the vendor. The used oil will be removed and transported to a recycling facility by the vendor. After removal of their contents, the tanks will be shipped to another facility, sold, or properly decommissioned and sold as scrap. The liner underneath the fuel station will be exposed, cut into sections, and hauled to an off-site landfill for disposal. At the time of mine closure, any remaining new batteries will be returned to the vendor, and any remaining used batteries will be removed by the removal contractor. Any soil found to have petroleum/oil/acid contamination would be characterized and remediated by ripping the soil to allow volatilization of the petroleum/oil/acid. The solvent station and

any remaining solvent would be returned to the vendor. The road stabilizing products would be used to control dust during reclamation and the tanks would then be removed and shipped off site.

4.11 REMOVAL OR STABILIZATION OF BUILDINGS, STRUCTURES, AND SUPPORT FACILITIES

Trailers will be hauled to another facility, sold, or hauled to a landfill for disposal. Prefabricated buildings will be disassembled and reassembled at another facility, sold, or disposed of at an off-site landfill. The metal portions of the ore chutes will be cut into pieces using a torch and either hauled off-site for recycling or used to seal the vent holes. Solid waste meeting the definition of “inert waste” under UAC Rule R315-301-2 (e.g., concrete, blocks, brick, incidental rebar, and glass) will be broken up and buried on site. All concrete foundations and pads, including underground utilities, will be broken, using a hydraulic excavator with a concrete breaker (or equivalent) to dimensions of five feet or less. The broken concrete will be buried/covered with a minimum of three feet of soil, or alternately, it may be hauled to and disposed of within the mine prior to closing the portals. In addition, the septic system components will be removed and properly disposed of in the underground mine workings or in an off-site landfill.

4.11.1 Surface Facilities to be Left

The existing county maintained road that extends from south to north through the main facilities area and the State/BLM road that provides access to the top of the mesa will not be reclaimed. These roads, which are identified on Figures 10A, 10B, and 10C, will continue to provide access to the area for livestock grazing and recreation. The existing secondary road that provides access to the area south of Storage Yard 2 will not be reclaimed. This road provides access to a reclaimed ore stockpile and unpatented claims held by other entities.

The permanent catch basin and the diversion channel that will be constructed around the west side of the WRA (see Figure 5) are designed to accommodate the 100-year storm event and will be left in place to facilitate post-reclamation surface drainage.

The water well, which is located on State of Utah land in Section 16, may be transferred to the School Institutional Trust Lands Administration if the agency desires to keep the well for grazing or other uses. The decision whether to maintain or abandon the well will be made prior to mine closure and reclamation. If the well is not transferred, it will be abandoned properly in accordance with state regulations. The cost to abandon the well is included in the reclamation cost estimate.

All other surface facilities will be removed or reclaimed.

4.12 POST-CLOSURE MANAGEMENT

Following mining activities, the mine will be reclaimed as discussed in Section 4.0. Reclamation is anticipated to take three to six years; however, reclamation may take longer depending on drought or heavy precipitation conditions. Limited irrigation of seeded areas (two times) will be conducted to expedite the reclamation process. DUSA will maintain a surety bond for reclamation until the BLM and DOGM concur that reclamation is complete. Bi-annual assessments of reclamation progress and annual reporting will be conducted to inform DOGM and the BLM of reclamation progress.

5.0 MONITORING PLAN

The following sections discuss DUSA's proposed plan for monitoring the effect of proposed operations at the Tony M Mine. This section conforms 43 CFR Part 3809.401, Section (b)4.

5.1 GROUNDWATER MONITORING

DUSA was granted a permit by rule groundwater discharge determination for the evaporation pond by UDEQ and no groundwater monitoring will be required. Per the permit by rule, the clay liner is acceptable to protect groundwater. A copy of the permit by rule is provided in Attachment F.

5.2 SURFACE WATER AND SEDIMENT MONITORING

Surface water runoff in the area is intermittent and can not be monitored. Prior to the start of reclamation, evaporation pond and temporary sediment pond sediments will be sampled for metals, radon, and uranium and compared to background levels. If contamination is found in these sediments at levels higher than background, they will be placed within the mine workings and confirmation sampling will be conducted to ensure that no contaminated sediments remain at the mine site. No other monitoring of surface water or sediment will take place at the Tony M Mine.

5.3 WILDLIFE MONITORING

DUSA plans to construct a BLM-approved fence around the evaporation pond to preclude livestock and wildlife, as the water is of poor quality and not suitable for drinking. Before construction of the fence DUSA would submit proposed fence specifications to BLM for approval. DUSA does not plan to place netting over the pond as airborne or ground wildlife may become entrapped in the netting with no mechanism for escape. During the first year following pond construction, DUSA will also perform a visual survey of the frequency of pond use by migratory birds and other wildlife. Based on this survey, DUSA may also implement use of propane cannons as a wildlife deterrent. Frequency of cannon use would be based on results collected during the first year of visual monitoring.

5.4 AIR QUALITY MONITORING

DUSA has received an Air Approval Order (AO) from the UDEQ Division of Air Quality permitting the operation of four diesel-fired electric generators, associated pickup trucks, motor grader, water truck, tanker truck, and other motorized equipment. DUSA will perform monitoring and reporting to comply with AO conditions as follows.

UAC R307-205 requires that visible fugitive dust emissions from sources constructed after April 25, 1971 may not exceed 20 percent opacity. The AO requires that DUSA meet this requirement for haul roads, mobile equipment, storage pile operations, material handling operations, and generators. UAC R307-206 requires that emissions from abrasive blasting shall not exceed 40 percent opacity. UAC R307 further requires that mines meet these standards during site preparation, and through operations and reclamation. DUSA will conduct opacity estimates consistent with EPA Method 9 and will apply fugitive dust control measures consistent with UAC R307. The AO does not require any monitoring or reporting for fugitive emissions. The AO does require that records of the application of water or chemical treatment for opacity control be kept for haul roads, storage piles, and material handling locations.

The AO requires that the sulfur content of fuels used in the new generators and internal combustion engines not exceed 0.05 percent by weight. Sulfur content will be tested and reported by the fuel marketer. The AO does not require any monitoring or reporting for fuel sulfur content. UAC R307-203 and the AO require that for the backup generator, sulfur emissions may not exceed 0.85 pounds of sulfur per million BTU heat input. The AO does not require monitoring of sulfur per BTU input.

UAC R307-107 and the AO require that DUSA report any unavoidable breakdown of equipment lasting over 2 hours, within 3 to 18 hours of the event, and a written notice within 7 calendar days. UAC R307-107 requires fugitive dust management measures during breakdowns, but does not require monitoring.

UAC R307-107 and the AO require that DUSA submit an emission inventory for all emission units including fugitive emissions, addressing PM_{10} , PM_{25} , oxides of sulfur, oxides of nitrogen, carbon monoxide, volatile organic compounds, ammonia, and hazardous air pollutants not exempted in R307-150-8. The inventory must be submitted every third year and any year in which the total PM_{10} , oxides of sulfur, oxides of nitrogen, carbon monoxide, or volatile organic compounds increases or decreases more than 40 percent from the most recently submitted inventory.

UAC R307-165 and the AO require emission testing of the generators once every five years.

5.5 RADIATION MONITORING

The following subsections present DUSA's proposed plans to monitor radiation at the project site.

5.5.1 Underground Mine Areas

DUSA will monitor mine vents as part of the air emissions monitoring described above. In addition, and as required by NESHAP's regulation, vent hole monitoring includes the use of Track Etch film detectors

which are exposed to the mine vent exhaust continuously while deployed, changed out on a monthly basis and shipped to an independent laboratory for radon daughter analysis.

Within the mine, DUSA will perform annual gamma exposure measurements consistent with MSHA requirements. DUSA will use a Geiger counter or a gamma scintillometer to measure exposure levels in mRem/hr, once per year as required by MSHA.

Radon daughter measurements will also be performed in working areas of the mine. The samples are collected for 5 minute durations using a 2-liter/min air pump. If radon daughter activity is lower than 0.3 Working Levels (WL) in air, measurements will be maintained at a frequency of once every two weeks. If radon daughter activity is greater than 0.3 WL and less than 1.0 WL in air, measurements frequency will be increased to once per week until 5 consecutive weekly samplings are less than 0.3 WL. If activity exceeds 1 WL, mining will be temporarily halted and the only access into the mine will be for ventilation improvement work. Mining will resume when ventilation improvements are completed and air monitoring indicates levels lower than 1.0 WL.

5.5.2 Ore and Waste Rock

A key activity in mine operations will be the identification of uranium values within mined rock brought to the surface, or ore grading and sorting. Operators will use a Geiger counter or a scintillometer to sort material with gamma content (and therefore uranium grade) economically suitable for milling, from low level material (waste rock). The uranium level suitable for milling varies with market factors. At current uranium market values, DUSA has been able to process uranium values less than 0.05 percent U_3O_8 at the White Mesa Mill. Therefore, for the foreseeable future, only waste rock with very low uranium levels, and very low gamma radiation levels, will be left onsite.

5.5.3 Other Areas

Radon measurements also would be performed periodically at various locations throughout the property, such as near the evaporation pond and ore stockpiles and surface facility area.

6.0 INTERIM MANAGEMENT PLAN

This section conforms 43 CFR Part 3809.401, Section (b)5.

All mineral commodity markets tend to be cyclical, that is, prices rise and fall substantially over periods of years. In the uranium market for example, high prices in the late 1970s gave way to very low prices in the early 1990s, with spot prices falling below the cost of production for most mines. In 1996 spot prices recovered to the point that many mines could produce profitably, though prices soon declined again and only started to recover strongly late in 2003.

Given current market conditions, DUSA does not anticipate mine closure in the future; however, temporary mine cessation may occur, as it has in the past, due to the unpredictable market. In the past, these market fluctuations have led to temporary cessation and the re-opening of uranium mines in the U.S. In some instances uranium mines were reclaimed prior to the exhaustion of recoverable resources. Re-opening previously reclaimed mines does not protect BLM lands from undue degradation. The re-opening of these mines during improved market conditions destroys past reclamation work and can create greater and more constant degradation to BLM lands. Interim management of the mines will better protect BLM lands from undue degradation during periods of non-operation.

In the event that market conditions or other circumstances require a temporary cessation of mine operations, DUSA will provide notice to the BLM in accordance with the requirements of Part 3802.4.7, Title 43 of the CFR. During non-operating periods, DUSA will maintain the buildings, drainage structures, evaporation pond, roads, and other surface facilities in a safe and environmentally acceptable condition. Underground openings, gates, and buildings will be locked to discourage unauthorized access when mine personnel are not present.

In the event of temporary cessation of operations, in order to prevent unnecessary or undue degradation, the following Interim Management Plan will be followed by DUSA.

6.1 MEASURES TO STABILIZE EXCAVATION AND WORKINGS

The following measures will be used to stabilize excavations and workings.

6.1.1 Mine Portals, Adits and Ventholes

Mine portals and adits will be gated and locked during periods of non-operation. Vent holes will have metal diffusers and metal grates to prevent access to them. These diffusers and grates will remain in

place during periods of non-operation. The Tony M Mine is an underground mine; therefore, no trenches or pits will be excavated during mining operations, and stabilization is not required.

6.1.2 Fencing and Signage

The fencing around the evaporation pond will remain in place and will be monitored by DUSA on a bi-annual basis to ensure that it is functioning properly. In other areas, such as the leach field, fuel storage area, and generator area, fencing and signage would be removed. Signage related to public health and safety will remain in place.

6.1.3 Exploration Drill Holes

Exploration drill holes are typically closed following exploration drilling and it is unlikely that drill holes would remain open for longer than 30 days. In the event that exploration drilling holes are open during a period of non-operation, the holes will be abandoned in accordance with Rule 647-4-108 of the UAC and BLM best management practices.

6.2 MEASURES TO ISOLATE OR CONTROL TOXIC OR DELETERIOUS MATERIALS

During routine operations, diesel fuel, gasoline, oil products (i.e., motor oil, hydraulic oil, gear oil, and used oil), starting fluid, and antifreeze will be stored and used on site in accordance with the provisions of the SPCC Plan (see Attachment I). Batteries will be stored in the maintenance shop and warehouse on wooden pallets on the concrete floor and will be picked up every two weeks as needed for disposal. In the event of temporary cessation of mining activities, all deleterious materials at the mine site will be removed from the site and disposed of in accordance with state and federal regulations.

6.3 PROVISIONS FOR THE STORAGE OR REMOVAL OF EQUIPMENT, SUPPLIES, AND STRUCTURES

Equipment and supplies at the mine will be placed into locked storage boxes and within the locked and gated mine workings. No equipment and supplies will remain outside of mine buildings or outside of the workings. The locks and buildings will be monitored on a bi-annual basis to ensure that vandalism has not occurred.

6.4 MEASURES TO MAINTAIN THE PROJECT AREA IN A SAFE AND CLEAN CONDITION

Signage for speed limits and access limitations will remain in place at the mine site and will be monitored on a bi-annual basis to ensure that no vandalism has occurred. When temporary cessation occurs at the

mine, all equipment and materials will either be removed from the site or placed and locked inside buildings and monitored on a bi-annual basis. All ore will be removed from the surface and placed back into the mine, or transported to the White Mesa Mill in Blanding, Utah. Stockpiles will be temporarily seeded and measures will be taken to ensure that the waste rock stockpile will be bermed and graded if necessary to ensure that it is stable. In addition, temporary sediment ponds and earthen berms will be repaired prior to cessation and maintained as needed during the cessation period. The fencing around the evaporation pond will also be monitored and maintained on a bi-annual basis. The fuel and oil storage areas will be locked and small amounts of oil and batteries in the maintenance shop will be removed. The mine offices and dry will also be locked and monitored and maintained on a bi-annual basis.

6.5 PLANS FOR MONITORING SITE CONDITIONS DURING PERIODS OF NON-OPERATION

This section meets the requirements of 43 CFR 3809.401(b) (4) to establish a proposed plan for monitoring the Tony M Mine during periods of non-operation. The mine facilities area, buildings, portals, adits, vent holes, roads, sediment controls, evaporation pond and surrounding fencing will be monitored on a bi-annual basis during periods of temporary cessation. Maintenance of facilities and stabilization structures and controls will occur at the mine site following monitoring activities and will be reported to BLM in annual reports. In addition, all permits will be maintained during closure and permit conditions will be adhered to. No groundwater or surface water monitoring will occur at the Tony M Mine during mining or during temporary cessation. In the event of temporary cessation of operations, DUSA plans to continue dewatering of the mine workings and pumping of mine water to the evaporation pond. As a result, DUSA anticipates that the evaporation pond will contain some water level even during temporary cessation of mining. DUSA does not anticipate that the pond will evaporate to dryness or produce conditions in which sediments could undergo wind-borne dispersal, hence, no additional measures to maintain water content in the pond are required. During temporary cessations, DUSA will not sample evaporation pond sediments because doing so could breach the integrity of the pond liner. DUSA will maintain the liner integrity through the duration of mine life. DUSA will sample pond sediments only after permanent completion of mining operations.

6.6 SCHEDULE OF TEMPORARY CLOSURE

At this time there is no schedule for anticipated periods of temporary closure; however, market conditions may dictate temporary cessation in the future. In the event of mine closure, the Interim Management Plan will be followed, and the BLM will be notified in accordance with the requirements of Part 3802.4.7, Title 43 of the CFR. During non-operating periods, DUSA will maintain the buildings, drainage

structures, evaporation pond, roads, and other surface facilities in a safe and environmentally acceptable condition. Underground openings, gates, and buildings will be locked to discourage unauthorized access when mine personnel are not present.

7.0 RECLAMATION COST ESTIMATE

This section conforms 43 CFR Part 3809.401, Section (c)2.

A Reclamation Surety was provided to the DOGM and the BLM in November 2006 and revised on April 18, 2007. The following major tasks were included in the surety estimate.

- 1) Cleanup and removal of structures.
- 2) Backfilling, grading and contouring.
- 3) Soil material redistribution and stabilization.
- 4) Removal of potentially contaminated evaporation pond sediment.
- 5) Revegetation (preparation, seeding, mulching).
- 6) Safety gates, berms, barriers, signs, etc.
- 7) Demolition, removal or burial of facilities/structures, regrading/ripping of facilities areas.
- 8) Regrading, ripping of waste dump tops and slopes.
- 9) Regrading/ripping stockpiles, pads and other compacted areas.
- 10) Ripping pit floors and access roads.
- 11) Drainage reconstruction.
- 12) Mulching, fertilizing and seeding the affected areas.
- 13) General site clean up and removal of trash and debris.
- 14) Removal/disposal of hazardous materials.
- 15) Equipment mobilization.
- 16) Supervision during reclamation.

Table 7 presents a summary of the reclamation cost estimate that was prepared in accordance with DOGM guidelines. The estimate is presented in its entirety in Attachment L.

8.0 PROPOSED OCCUPANCY

Activities at the site, including the proposed occupancy, involve prospecting and mining operations and therefore are reasonably incident and constitute substantially regular work as defined in 43 CFR Subpart 3715.05. According to 43 CFR Subpart 3715.0-5, “Reasonably Incident” means the statutory standard “prospecting, mining, or processing operations and uses reasonably incident thereto.”

The mining activities outlined in the POO that require the proposed occupancy are calculated to lead to the extraction and beneficiation of minerals, will involve observable on-the-ground activity that the BLM may verify, and will involve appropriate equipment that will be operable, subject to the need for reasonable assembly, maintenance, repair, or fabrication of replacement parts.

During Phase 1, the mine is expected to initially employ 10 to 20 miners and support personnel and then expand to 60 to 70 employees to produce an estimated 50,000 to 100,000 yd³ per year of ore. It is anticipated that mining operations will be conducted 24 hours a day, 7 days a week, year-round, over the course of mine operations and will include activity observable by BLM as detailed in Part 3715.7, Title 43 of the CFR. Depending on market conditions and production rates, Phase 1 is expected to start in the third quarter of 2007 and extend over a 2- to 3-year period. Phases 2 and 3 have the potential to employ up to 300 miners and extend the mine life to 25 years or more. Following mining activities, the mine will be reclaimed as discussed in Section 4.0.

Surface facilities at the site are planned in the immediate vicinity of the underground ore, mine portals, and adits and constitute reasonably incident occupancy as defined in Part 3715.0-5, Title 43 of the CFR. Section 3.2 describes surface activities that will occur at the site and Figures 4A and 5 depict the portal area where the main support facilities are located. Structures at the site will include:

- a maintenance shop and warehouse,
- fuel and petroleum storage tanks,
- a fueling station,
- offices and change/shower facilities,
- a fenced storage yard (A second storage yard, Storage Yard 2, also has been included in the event that additional area is needed for storage, parking, mobile trailers, or other uses.), and
- an fenced evaporation pond

- Septic system including a leach field

Maintenance shop and warehouse – The maintenance shop at the Tony M mine will provide a location for mine employees to service and maintain the necessary equipment for ore extraction activities. Based on the nature of the mining equipment, the closest maintenance shop that could potentially service this equipment would likely be in Grand Junction, Colorado or Price, Utah. Service of mining equipment at these off-site locations would be impractical or infeasible; therefore, the location of a maintenance shop at the Tony M Mine is reasonably incident. The warehouse at the Tony M Mine will be used to store parts and supplies for maintenance of equipment and mining activities. No existing buildings are present at the mine site, equipment could be stored in buildings in Ticaboo; however, this would increase traffic to and from the mine site and would likely impact the feasibility of the mining operations. Based on this information, the warehouse at the Mine site is reasonably incident.

Fuel and Petroleum storage tanks and fueling station – Fuel and petroleum storage tanks will be located at the portal of the Tony M Mine. The fuel will be used for underground mine vehicles (diesel) and the smaller ancillary vehicles used for surface inspection and operations (unleaded). Vehicle maintenance as described above will require motor oil and other petroleum based lubricants for vehicle and equipment maintenance. As previously discussed, the nearest vehicle maintenance shop that would be capable of maintaining this equipment is located in Grand Junction, Colorado or Price, Utah. Refueling of mine equipment and vehicles will occur daily and travel to Ticaboo to refuel equipment and mine vehicles will increase traffic to and from the mine site, and make mine operations at the Tony M infeasible. Based on this information, the fuel and petroleum storage tanks at the Tony M Mine are considered to be reasonably incident to mining activities.

Offices and Change/Shower Facilities – During full operations, the mine is expected to employ 300 people on rotating shifts 24 hours per day, 7 days per week, year round. This type of mining operation will require mine superintendents, shift operators, as well as mapping and record-keeping to support mine activities and employees. In addition, the nearest town to the mine is Ticaboo, which is not considered to have sufficient facilities to support the mining operations at the Tony M. Showers are required in general for worker health and safety. MSHA requires that workers have access to a shower and change facility for post shift decontamination. In addition, if shower and other ancillary facilities were located in Ticaboo, travel to and from the mine would be increased. Based on this information, the offices and change/shower facilities are considered to be reasonably incident.

Fenced Storage Yard– The Tony M Mine operation will require the storage of minor amounts of equipment, mobile trailers, parking, and other facilities for mine operations. The nearest town is Ticaboo, Utah, approximately 15 miles from the mine site. Travel to and from Ticaboo would not ensure that mining operations at the Tony M ran smoothly and storage of equipment in Ticaboo would increase the traffic to and from the mine. A history of vandalism and theft of equipment at the Tony M Mine shows that fencing is required to protect the equipment used for mining operations and protect the public from access to mining operations and equipment. Based on this information, the fenced storage yard at the Tony M Mine is reasonably incident.

Fenced Evaporation Pond – The fencing around the evaporation pond will be provided to protect cattle and wildlife, and to prevent the public from accessing the pond’s water or affecting the protective clay liner. Although the water in the evaporation pond is not expected to be harmful to the public, it is desirable that public access and potential damage to the clay liner be prevented, as it is in place to protect the groundwater from potential contamination. Based on this information, the fencing around the evaporation pond is considered to be reasonably incident.

Septic System including Leach Field – The septic system and leach field are currently being designed by a registered professional engineer. All applicable local and state permits will be obtained for the septic system and provided to BLM. Sanitary facilities are necessary to support the work force of 300 people. For this size of work force, portable sanitary systems would not be practical or functional; therefore, the sanitary system and leach field is reasonably incident.

Table 2 lists equipment that is appropriate and will be used during underground mining operations.

The primary road into the site is a county maintained road that continues on to the northeast past the mine; this will allow the public a passage or access route to adjacent public lands. Public access will be limited to the evaporation pond, portals, vent holes, underground mine workings, and the fenced storage yard and buildings at the mine site. Access through the mine site and to other lands surrounding the mine will not be limited by gates or fencing. Signage will be provided to protect the public near mine facilities; however, this will not limit access to public lands. Secondary roads will access the portals, WRA, and the buildings and storage yards as shown on Figure 5. Signs, listing the mine name and safety information, will be posted along the county maintained road on both sides of the main surface facilities as described in Section 3.12. A metal gate with double locks will be installed at the entrance to the portal area, and will be closed during non-operating hours, as described in Section 3.12. The gates and signs are intended

to protect the public from coming into contact with the mine, mining equipment and operations, as well as protect minerals and equipment located at the site from theft or damage. In addition, the public will be protected from non-operating equipment on the site and vice versa through the use of a fenced storage yard. The leach field and evaporation pond will also be fenced to protect the public.

The proposed activities at the Tony M Mine are considered to be expenditures of labor and resources by DUSA to prospect, explore, define, develop, mine, and beneficiate a valuable mineral deposit (uranium), using methods, structures and equipment (as described in this POO) appropriate to the geological terrain, mineral deposit, and stage of development of the Tony M Mine and other reasonably related activities. The proposed activities are intended to minimize surface disturbance, protect the general public from safety hazards, mitigate potential impacts to the environment, and extract a valuable mineral resource (uranium). Based on this information, the Tony M Mine activities are considered to be reasonably incident per 43 CFR Subpart 3715.0-5.

8.1 PERIOD OF USE/OCCUPANCY FOR SURFACE FACILITIES

Depending on market conditions and production rates, Phase 1 is expected to start in the third quarter of 2007 and extend over a 2- to 3-year period. The fences, enclosures, structures, gates, and signage will be constructed or installed in the third quarter of 2007 and will remain in place for the duration of mine life. Phases 2 and 3 have the potential to extend the mine life to 25 years or more. Following mining activities, the mine will be reclaimed as discussed in Section 4.0. The surface equipment identified above will be removed near the beginning of the reclamation activities.