APPENDIX G

PRELIMINARY MILL DECOMMISSIONING REPORT

WHITE MESA MILL

SEPTEMBER 2011

PREPARED BY

MWH AMERICAS

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Denison Mines (USA) Corp.
WHITE MESA MILL

Preliminary Mill Decommissioning Plan

September 2011

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BUILDING A BETTER WORLD

3665 JFK Parkway
Suite 206
Fort Collins, CO USA

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1.0 SPECIAL PROVISIONS

1.1 Scope of Document

This document outlines the preliminary plans for decommissioning the Denison Mines (USA) Corp. (Denison) White Mesa Uranium Mill (the "Mill") site near Blanding, Utah. These plans are consistent with the previous decommissioning information provided by Denison in their 2009 Reclamation Plan, Version 4.0 (Denison, 2009b). This plan has been prepared by MWH Americas, Inc. (MWH) for Denison for review and approval by the Utah Department of Environmental Quality, Department of Radiation Control (Utah DRC). A final decommissioning plan will be submitted to the Utah DRC for approval within twelve months prior to commencement of decommissioning activities.

1.2 Definitions

Sections referred to in this document are specific sections of the Preliminary Mill Decommissioning Plan, referred to as the Plan. The Drawings referred to in this document are drawings provided in Attachment A to the 2011 Reclamation Plan (Denison, 2011c) that form a necessary component of this Plan.

For this Plan, Denison is referred to as the Owner, with overall responsibility for site reclamation and decommissioning.

The Contractor is defined as the group (or groups) selected by Denison and responsible for conducting the work tasks outlined in Section 1.4 under the direction of and under contract with Denison.

The Reclamation Project manager is defined as the person appointed by Denison responsible for ensuring that preparatory work, demolition, material placement, and reclamation site activities, are conducted according to this Plan.

The Radiation Safety Officer (RSO) is defined as the person appointed by Denison responsible for worker safety and personnel monitoring. The RSO will be responsible for personnel safety training, personnel monitoring, and documentation. These tasks will be conducted in accordance with the Denison Radiation Protection Manual for Reclamation (Denison, 2011b).

1.3 Decommissioning Goals and Implementation Strategy

The project goals for mill decommissioning are outlined below.

1. Attain an as low as reasonably achievable (ALARA) dose outcome for:
   a. workers doing the decommissioning,
   b. other on-site personnel, and
   c. off-site individuals.
2. Optimize the effectiveness of the mill decommissioning plan.
3. Complete decommissioning as soon as practical.

The implementation strategy to achieve the goals for mill decommissioning is listed below.

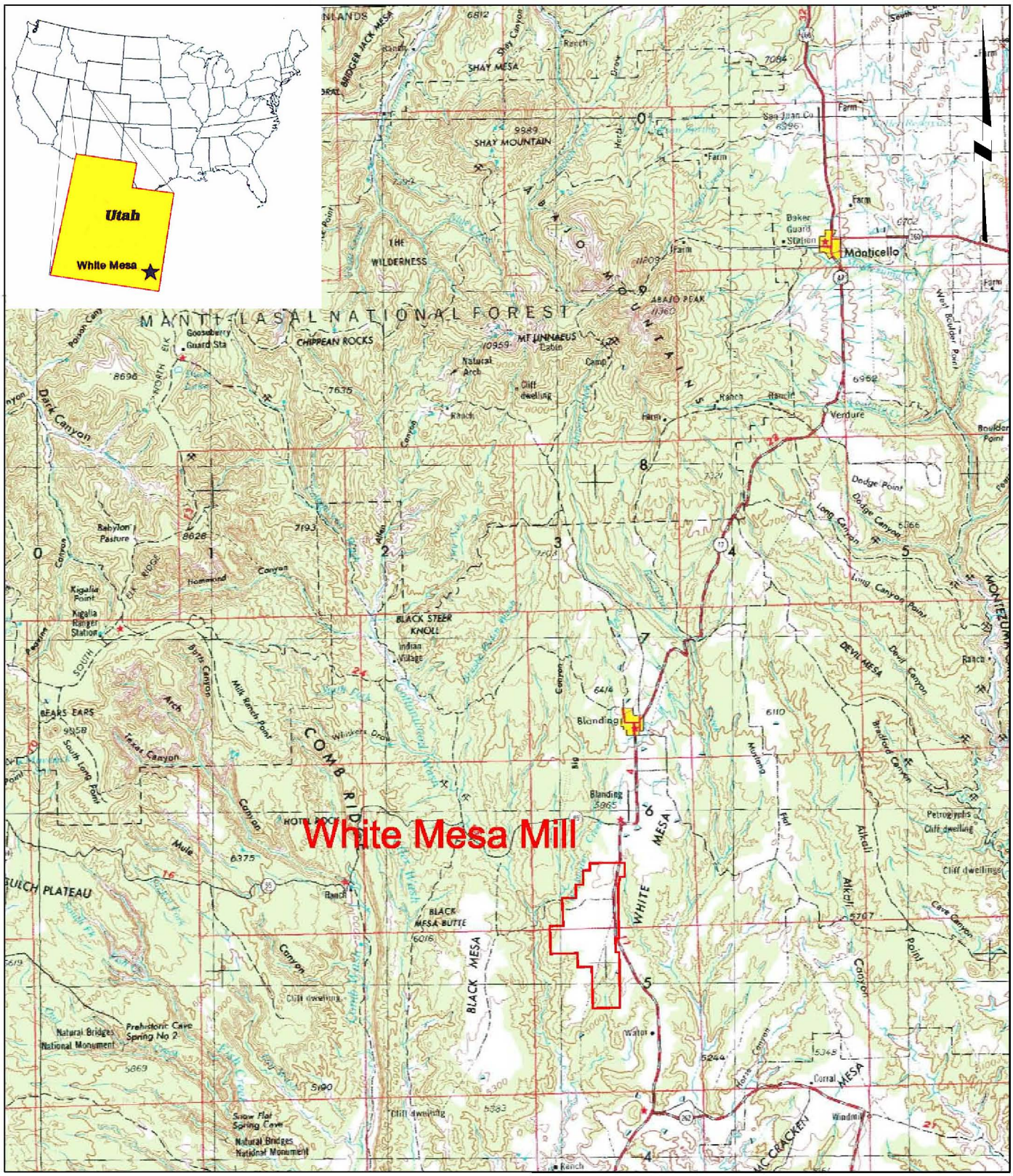
1. Utilize commercially available demolition equipment to minimize exposures by: (i) minimizing time of demolition and (ii) keeping personnel from close proximity to actual demolition activities.
2. Plan the components and establish a work system for these components.
3. Train the work force.
4. Follow the work plan.
5. Evaluate the work plan through project oversight and quality assurance.
6. Modify and continuously improve the work plan.

1.4 Scope of Work

The work outlined in this Plan consists of execution of the following major tasks associated with facility decommissioning.

1. Setup of health and safety procedures for safety equipment, personnel protective equipment, personnel monitoring, and personnel exit screening.
2. Execution of pre-decommissioning activities, such as establishing permanent utility shutoff, material haulage routes, and equipment screening areas.
3. Demolition of above-ground facilities in the process area.
4. Demolition of below-ground facilities in the process area (foundations, paved areas, concrete pads, roadways, and underground utilities) and placement of these materials in the last active tailings cell or Cell 1.
5. Excavation of contaminated subsoils from the process area and placement in the last active tailings cell or Cell 1.
6. Clean-up of windblown contamination and placement in the last active tailings cell or Cell 1.
7. Regrading and revegetation.

This Plan describes these elements as well as the requirements prior to demolition and the procedures to be used for specific areas of the process area. The facilities described in this Plan are shown in Figures 1 and 2.



REFERENCE:
ADAPTED FROM FIGURE 1-1 IN DENISON MINES (USA) CORPORATION, 2009. RECLAMATION PLAN WHITE MESA MILL, BLANDING, UTAH. VERSION 4.0. NOVEMBER.

DENISON MINES

Denison Mines (USA) Corp

PROJECT
WHITE MESA MILL TAILINGS RECLAMATION

TITLE
REGIONAL LOCATION MAP

MWH

DATE
SEP 2011

FIGURE 1

FILE NAME
1009740 LOC MAP

L:\Design-Drafting\Clients-A-H\DENISON MINES\013-Sheet Set\2011-08-26 COVR DSGN REP\1009740 LOC MAP

2.0 GENERAL REQUIREMENTS AND PROCEDURES

2.1 General

This section outlines the general requirements and procedures to be used during mill decommissioning.

2.2 Applicable Regulations and Standards

The work shall conform to applicable Federal, State, and County environmental and safety regulations. The work shall conform to applicable conditions in the Radioactive Materials License with the Utah DRC. Safety practices, procedures, and monitoring shall be conducted as specified by the Mine Safety and Health Administration (MSHA) and the current Denison health and safety procedures in place.

2.3 Health and Safety Requirements

Work outlined in this Plan shall be conducted under the Denison Radiation Protection Manual for Reclamation (Denison, 2011b), as directed by the RSO. The RSO (and approved assistants as needed) shall conduct full-time, on-site training, personnel monitoring, and inspection of construction activities while the site decommissioning work is in progress. The responsibilities and duties of the RSO for site reclamation and decommissioning shall be as outlined in the Denison Radiation Protection Manual for Reclamation (Denison, 2011b).

The Contractor shall suspend construction or demolition operations, or implement necessary precautions whenever (in the opinion of the Reclamation Project Manager or RSO), unsatisfactory conditions exist due to rain, snow, wind, cold temperatures, excessive water, or unacceptable traction or bearing capacity conditions. The Reclamation Project Manager and RSO each have the authority to stop Contractor work if unsafe conditions or deviations from the Plan are observed.

Process area demolition work will be conducted in accordance with the Denison Radiation Protection Manual for Reclamation (Denison, 2011b), as directed by the RSO. Due to the different work activities and potential hazards involved with process area demolition, more specific procedures will be utilized for demolition work (documented as special operating procedures or work permits). These procedures will define personal protective equipment and personnel monitoring (as necessary), regular safety meetings, and communication.

Records pertinent to decommissioning procedures for protection of health and safety will be stored on-site at the Safety Office during decommissioning. After decommissioning activities are complete and prior to the site being turned over to the Department of Energy (DOE), pertinent records will be stored on-site in a temporary storage facility or at the Denison office in Denver, Colorado.

2.4 Environmental Requirements

2.4.1 Contractor Activities

The Contractor shall store materials, confine equipment, and maintain construction operations according to applicable law as, ordinances, or permits for the project site. Fuel, lubricating oils, and chemicals shall be stored and dispensed in such a manner as to prevent or contain spills and prevent said liquids from reaching local streams or ground water. If quantities of fuel,

lubricating oils or chemicals exceed the threshold quantities specified in the Utah regulations, the Contractor shall prepare and follow a spill Prevention Control and Countermeasures Plan (SPCCP) as prescribed in applicable Utah regulations. Denison shall approve said plan. Used lubricating oils shall be disposed of or recycled at an appropriate facility.

2.4.2 Environmental Monitoring

Existing environmental monitoring programs will continue during the time period in which reclamation and decommissioning is conducted. The environmental monitoring includes ambient air, external radiation, soil and vegetation, meteorological, stack emissions, and surface water monitoring. In general, no changes to the existing programs are expected and decommissioning activities are not expected to increase exposure potential beyond the current levels. Monitoring procedures are provided in the Denison Environmental Protection Manual (Denison, 2011a). All records for environmental monitoring are kept in the Environmental Office at the Mill site as per the Denison Environmental Protection Manual (Denison, 2011a).

2.5 Medical Emergency Procedures

The following procedures will be used when medical services are required, based on two priority levels.

2.5.1 Level One Priority

For a minor emergency requiring medical treatment (level one priority), the procedures listed below will be followed.

1. The specific work crew will suspend activities.
2. A member of the work crew will assist the victim and perform first aid.
3. If available, other crew members will contact Denison personnel or the Denison Safety Coordinator and emergency services personnel.
4. Denison radiation safety personnel will perform a contamination survey on victim and decontaminate as appropriate.
5. After medical services have been provided, Denison radiation safety personnel will perform a contamination survey on emergency personnel and equipment.
6. Contaminated equipment or clothing will be retained for evaluation and decontamination.

2.5.2 Level Two Priority

For a major emergency requiring medical treatment (level two priority), the procedures listed below will be followed.

1. The specific work crew will suspend activities.
2. If injuries are life threatening, emergency services will be performed immediately and the victim transported to the nearest emergency medical facility.
3. Surveys for decontamination will be performed after medical services have been provided. The survey will also be performed on emergency personnel and equipment for alpha contamination.

4. Contaminated equipment or clothing will be retained for evaluation and decontamination.
5. Follow other steps as listed for Level One as appropriate.

2.6 Water and Contaminant Management

Management of water and site contaminants is outlined below.

2.6.1 Runon/Runoff Control

Procedures for control of runon and runoff of meteoric water and containment of other liquids are outlined below. In addition to the procedures listed below, runon and runoff controls will also follow the Stormwater Best Management Practices Plan (Denison, 2008).

1. Water usage for outdoor dust suppression will be controlled to minimize runoff.
2. Runoff generated from decommissioning operations will be contained on concrete or asphalt pads or in building sumps.
3. Runon diversion berms will be installed up slope of the facility, if and as necessary, to minimize storm runon into the decommissioning work area.
4. Runoff retention berms will be installed down slope of the facility, if and as necessary, to minimize runoff of decontamination liquids and sediment. The liquids contained will be pumped to a collection sump for removal and be transferred to appropriate receiving ponds.
5. The control berms will be inspected periodically, and modified or extended during decommissioning operations, as needed.
6. In addition to berms, the existing runoff control devices and others, such as silt fences, may be utilized, if and as necessary.
7. The Contractor shall construct and maintain all temporary diversion and protective works required to divert stormwater from around work areas. The Contractor shall furnish, install, maintain, and operate all equipment required to keep excavations and other work areas free from water in order to construct the facilities as specified.
8. Water required by the Contractor for dust suppression or soil moisture conditioning shall be obtained from wells or surface water storage areas identified by Denison.

2.6.2 Residue Management

Procedures for control of residues are outlined below.

1. Water usage for dust suppression and decontamination washing will be required during decommissioning operations. Water required by the Contractor for dust suppression or soil moisture conditioning shall be obtained from wells or surface water storage areas identified by Denison.
2. Liquids identified during these activities will be contained in the building sumps, area tanks or on concrete or asphalt pads.
3. The liquid, sediment, and solids collected will either be reused or transported to the last active tailings cell or Cell 1, or treated for permitted discharge.

2.6.3 Contamination Control

Every effort will be made to prevent or minimize the spread of contamination during the decommissioning operations. Procedures for control of contaminants are outlined below.

1. Personnel, vehicles, and testing equipment shall be surveyed for contamination prior to leaving the restricted area of the facility.
2. All workers involved in decommissioning operations shall be surveyed for contamination at the exit screening station and will shower if necessary prior to leaving the facility. As far as practical, the specific limits will be stated in each section of this Plan, as determined during the area evaluation.
3. Work area access will be restricted to only authorized personnel during demolition operations. Access will be restricted during active operations and at the disposal cell. Signs and /or barrier tape will be used to post areas where access is restricted.

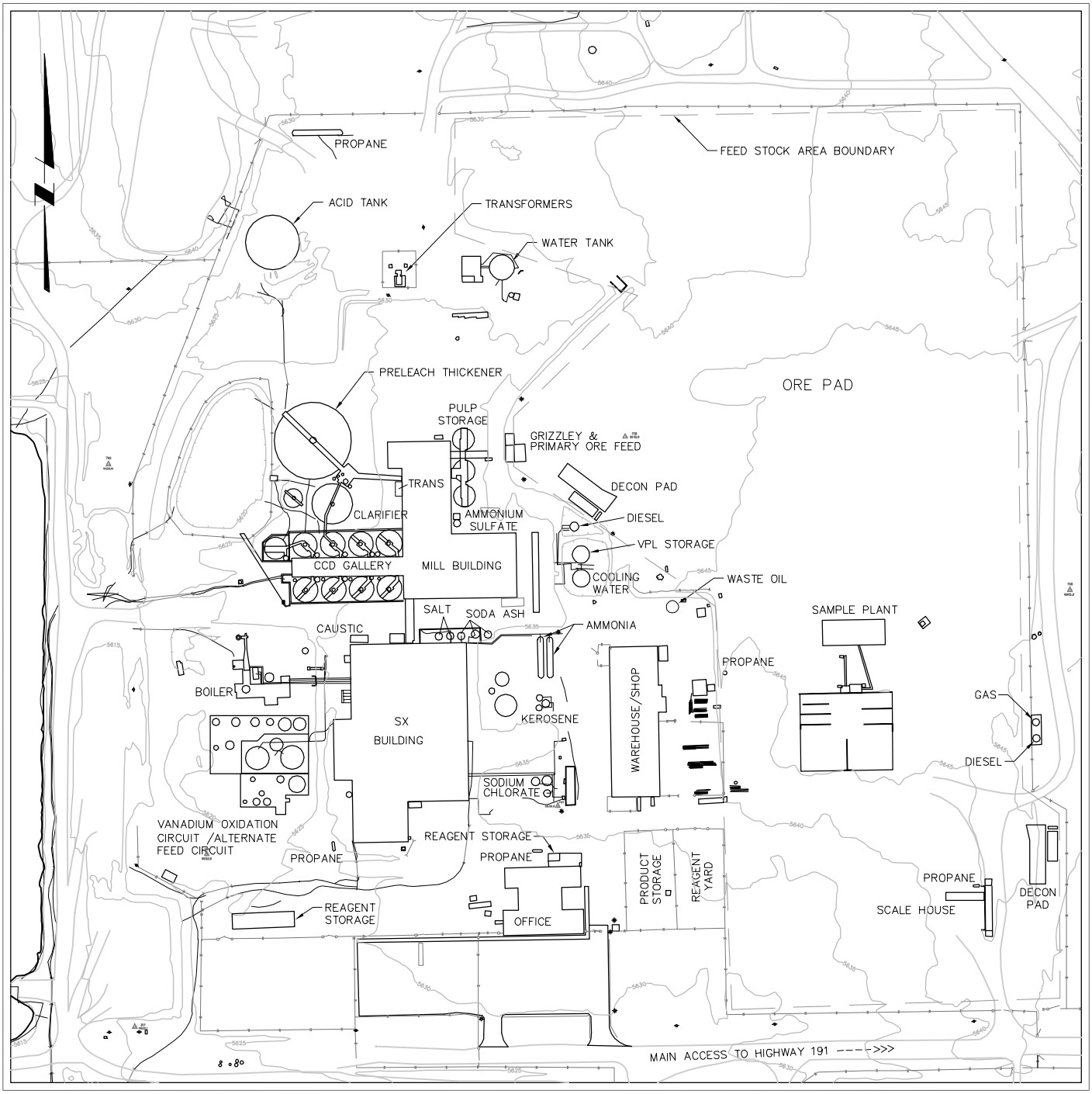
2.6.4 Dust Control

Dust generation will be minimized during all preparation, salvage and demolition activities. Procedures for control of dust are outlined below.

1. During demolition and removal operations, the equipment and structure surfaces will be sprayed with water to prevent dust generation.
2. A chemical fixant may be applied to surfaces prone to dust generation.
3. The use of HEPA vacuuming equipment may be utilized.
4. Equipment shall be used in an efficient manner to avoid dust generation.
5. Haul roads, loading, off-loading, material evaluation and disposal areas will be sprayed with water periodically to control dust generation.
6. Water required by the Contractor for dust suppression or soil moisture conditioning shall be obtained from wells or surface water storage areas identified by Denison.

2.6.5 Historical and Archaeological Considerations

The Contractor shall immediately notify Denison if materials are discovered or uncovered that are of potential historical or archeological significance. Denison may stop work in a specific area until the materials can be evaluated for historical, cultural, or archeological significance. All materials determined to be of significances shall be protected as determined by appropriate regulatory agencies, including removal or adjustment of work areas.



REFERENCE:
ADAPTED FROM FIGURE 3.2.3-1 IN DENISON MINES (USA) CORPORATION, 2009. RECLAMATION PLAN WHITE MESA MILL, BLANDING, UTAH. VERSION 4.0. NOVEMBER.

SCALE
20 0 20 FT

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DENISON MINES
Denison Mines (USA) Corp

PROJECT
WHITE MESA MILL RECLAMATION

TITLE
SITE MAP OF MILL AREA

MWH

DATE SEP 2011
FIGURE 2
FILE NAME 1009740 SITE MAP

3.0 SITE REQUIREMENTS AND PROCEDURES

3.1 General

This section outlines the site-specific requirements and procedures to be used during decommissioning.

3.2 Site Location

The Denison Mill site is located six miles south of Blanding, Utah on U.S. Highway 191 on a parcel of land encompassing all or part of Sections 21, 22, 27, 28, 29, 32, and 33 of T37S, R22E, and Sections 4, 5, 6, 8, 9, and 16 of T38S, R22E, Salt Lake Base and Meridian. The location description is provided in more detail in Section 3.1 of the Reclamation Plan (Denison, 2011c). The site encompasses approximately 5,415 acres. The Denison facilities are primarily located within the approximately 686-acre restricted area.

3.3 Climate and Soil Conditions

The climate in the vicinity of the Mill can be considered as semi-arid. Average annual precipitation is 13.32 inches. Average annual evaporation is approximately 68 inches for Class A Pan data (Denison, 2009b).

The Mill is located within the Blanding Basin of the Colorado Plateau physiographic province. The site is underlain by unconsolidated alluvium and indurated sedimentary rocks consisting primarily of sandstone and shale. The alluvial materials consist mostly of aeolian silts and fin-grained aeolian sands with thicknesses ranging from a few feet up to 30 feet. The alluvium is underlain by Mancos Shale (thickness of less than 5 feet), Dakota Sandstone (thickness of approximately 60 feet) and the Burro Canyon Formation (sandstone with thickness of approximately 100 feet).

3.4 Site Layout and Facilities

A general layout of the Mill area is shown in Figure 2.

3.4.1 Operation History

The Mill was developed in the 1970s by Energy Fuels Nuclear, Inc. (EFN) and started operations on May 6, 1980. The Mill processed conventional ores for approximately two and one-half years before ceasing operations in February 1983. Union Carbide Corporation's (UCC) Metals Division obtained a majority ownership interest in 1984. UCC's Metals Division later became Umetco Minerals Corporation (Umetco), a wholly owned subsidiary of UCC. Umetco became the Mill operator starting in 1984. The Mill did not operate in 1984. The Mill processed conventional ores for part of each year from October 1985 through December 1987 and from July 1988 through November 1990. Mill operations ceased again from 1991 through 1994. EFN reacquired sole ownership on May 26, 1994 and processed conventional ores from August 1995 through January 1996. EFN processed alternate feed material (calcium fluoride) from May 1996 through September 1996. Denison (then named International Uranium (USA) Corporation) and its affiliates acquired the Mill in May 1997 and processed alternate feed from various sources from 1997 through early 1999, and processed conventional ore from the middle of 1999 through early 2000. Denison processed alternate feed materials from government cleanup projects in 2002 and 2003, and processed other alternate feed materials in 2007. Denison processed uranium and vanadium ores from April 2008 through May 2009. Mill

operations for conventional ore processing were suspended in May 2009 and resumed in March 2010. Conventional ore processing was again suspended in July 2011. Alternate feed materials were still processed during this time period.

From the early 1990s through 2009, the Mill processed alternate feed materials when the Mill was not processing conventional ores. An alternate feed circuit was added to the Mill in June 2009 to allow for processing alternate feed materials at the same time as conventional ores.

3.4.2 Access and Security

The access and security at the Mill site during decommissioning will follow the existing Security Program (Denison, 2007). Access control will be maintained at the Restricted Area boundary to ensure employees and equipment are released from the site in accordance with the current License conditions. The Restricted Area is enclosed by a combination of barbed wire and chain link fencing. The access gates are padlocked and controlled by Denison personnel. Denison personnel are on-site 24-hours a day, regardless if the mill is in operation. Contractors must have required training before entering the restricted area.

3.4.3 Utilities

Utilities on site will be maintained by Denison outside of work areas (areas to be decommissioned or reclaimed). Utilities inside work areas will be provided and maintained by the Contractor.

3.4.4 Sanitation Facilities

Sanitation facilities will be provided and maintained by the Contractor inside work areas.

3.4.5 Fire Protection

Fire protection will be provided by fire water supply facilities on-site, which include: 1) a 400,000 gallon Storage Tank, of which 250,000 gallons are reserved for fire emergencies; and 2) a centrifugal diesel driven pump rated at 2,000 gpm at 100 psi. This pump starts automatically when the pressure in the fire main drops below 100 psi. These fire protection facilities will decommissioned at the end of the decommissioning schedule. In addition, a fire watchman and fire extinguisher will be required during demolition-related cutting with a torch or welding operations.

3.5 Personal Protection Requirements

The protection requirements and procedures to be followed have been developed to assure that occupational exposures are maintained within the regulatory requirements and As Low as Reasonably Achievable (ALARA).

1. The standard personnel protection equipment includes full-face respiratory unit (includes eye protection), hard hat, coveralls, rubber boots or shoe covers, and work gloves.
2. Alternative personnel protection requirements (either more or less) may be specified by the area evaluation. If such is the case, each worker will receive a checklist identifying the specific personnel protection equipment required.
3. Long sleeved coveralls and work gloves will be laundered onsite. New clothing and gloves will be issued to replace damaged and non-repairable items.

4. In accordance with the existing tobacco policy at the mill facility, tobacco use is not allowed. Eating or drinking anything, including chewing gum, is only allowed in designated areas.

3.6 Occupational Monitoring Requirements

Programs currently in place for monitoring of exposures to employees will remain in effect throughout the time period during which mill decommissioning and clean up of windblown contamination are conducted. This will include personal monitoring and the ongoing bioassay program. In general, no changes to the existing programs are expected and reclamation and decommissioning activities are not expected to increase exposure potential beyond the current levels. The current requirements to monitor potential personnel exposure to radionuclides are specified in the Denison Radiation Protection Manual for Reclamation (Denison, 2011b).

3.7 Operational Issues

The Plan presumes that virtually all structures on the site can be demolished using heavy equipment as described below. As a result, little or no manual labor is anticipated. This approach should accelerate the demolition process, as well as reduce occupational exposures.

The following describes the typical work routine to be followed during demolition.

1. The demolition crew supervisor shall review the Plan requirements and confer with the Reclamation Project Manager for changes made to the Plan. The crew supervisor will inform the work crew of the requirements and any changes to the Plan. The RSO will assist when requested.
2. A staging area will be established near the work area and used as a personnel screening, PPE changing and storage area.
3. Personnel involved in the demolition will don the required PPE and required monitoring equipment.
4. Demolition personnel will be surveyed for contamination, decontaminated if over the specific limits and resurveyed prior to leaving the Restricted Area.
5. All personnel performing demolition work shall be scanned for contamination and may shower before release from the Restricted Area.
6. PPE equipment will be inspected, decontaminated, and maintained in good working order and replaced when damaged.
7. Personnel involved in demolition operations must report problems encountered or changes that need to be made to the Plan to the Reclamation Project Manager. Problems encountered and changes made will be documented in daily progress reports.

3.8 Training

Formal worker training will be required for all decommissioning activities and will be appropriate for the activity to be performed. The training will be given by the RSO or designee, and will include the following information.

1. Goals, strategies and specific tasks encompassed by this Plan.

2. Radiation protection training will be conducted for all contractor employees as specified in the Denison Radiation Safety Training Program (Denison, 2009a). The general training will include radiological safety procedures, ALARA philosophy and emergency procedures. The personnel will receive instruction pertaining to the risks of radiation exposure, monitoring procedures and personal protective equipment.
3. MSHA training will be required for all contractor employees. This training will be site and job specific, and will include information on industrial safety, building safety, chemical hazards, fire safety, emergency procedures, protective equipment, and an overview of planned activities.
4. Training will be documented as required by MSHA, and the appropriate procedures in the Denison Radiation Safety Training Program (Denison, 2009a).

4.0 EQUIPMENT SALVAGE

4.1 General

Equipment and structural materials (if of sufficient value for salvage) may be removed from the facility, decontaminated and surveyed for release from the site for unrestricted use. All salvageable equipment will be decontaminated as outlined below and surveyed for release in accordance with the terms of License Condition 9.10. Equipment and structural materials that are not of sufficient value or salvage or cannot be feasibly decontaminated will be placed in the in the last active tailings cell or Cell 1.

4.2 Decontamination

Decontamination of potentially salvageable equipment will be conducted based on the nature of contamination, the surfaces to be decontaminated, and worker health and safety. Decontamination methods will include low-pressure washing, followed by surveying of washed surfaces. If contamination remains, decontamination methods will include scraping, steam cleaning, sand blasting, or grinding. Surveying of cleaned surfaces will be conducted on dried surfaces, with release based on criteria specified in the Denison Radiation Protection Manual for Reclamation (Denison, 2011b). Equipment and structural materials shall not be release from the site without approval by the RSO.

4.3 Decontamination Procedures

Efforts will be made to minimize the spread of contamination on salvageable equipment. Decontamination liquids or chemicals may be used to aid in equipment contamination removal. General procedures for decontamination are listed below.

1. Wet down areas and equipment surfaces with water spray followed by water washing. Steam cleaning may be required to augment washing.
2. Wash equipment and structures and remove loose residue.
3. Wash insides of equipment and dispose of residues.
4. Collect liquids generated during decontamination activities for disposal.

Material and equipment slated for disposal will be transported to the last active tailings cell or Cell 1. Salvageable items meeting unrestricted release criteria will be transported to a designated clean area for storage. Salvageable items meeting restricted release criteria will be transported to a designated restricted release are for storage.

4.4 Decontamination Areas

A decontamination area will be established so that equipment to be offered for salvage may be decontaminated, as necessary. This area is planned to be an existing concrete pad with a water collection area or sump.

A laydown area will be established outside of the facility Restricted Area so that decontaminated, salvageable equipment that has been surveyed and approved for unrestricted release can be stored prior to release from Denison custody. A separate laydown area will be established within the restricted area for equipment decontaminated for restricted release, if any.

5.0 PRE-DEMOLITION ACTIVITIES

5.1 General

This section describes the preparation of the site areas for reclamation and decommissioning. This work will be conducted according to applicable sections of the Denison Radiation Protection Manual for Reclamation (Denison, 2011b). The Contractor shall conduct these activities using written procedures that have been approved by Denison.

5.2 Area Evaluation Process

For each structure in the process area, a pre-demolition survey and inventory will be conducted. This work (area evaluation process) will include the items listed below.

1. Review health protection requirements (if different from the standard).
2. Review monitoring requirements (if different from the standard).
3. Review utilities to confirm that electrical power lines, high pressure pipelines and other potential hazards to demolition are identified.
4. Perform radiation surveys to identify areas of above-background exposure to ionizing radiation. Denison's historical survey data may be used for this purpose.
5. Sample air to identify the need for respiratory protection from dust, gases, and airborne radioactivity. This would include radon daughter surveys to identify potential areas of exposure to radon-222 gas.
6. Survey hazardous materials to identify and quantify potentially hazardous materials such as strong acids or bases, oxidizing agents, corrosive materials, flammable materials or pressurized gases.
7. Review asbestos inspection report (see Section 5.3.4) to determine the presence of asbestos-containing materials and procedures for handling and disposal.
8. Survey residual liquid to identify residual liquids in tanks, vessels, pipelines, and other storage areas that would require liquid management for treatment and disposal.
9. Conduct structural engineering surveys to assess the physical condition of the structure and its supporting members.
10. Identify equipment that will be reused, salvaged, or disposed.
11. Determine what structural members or equipment needs to be cut into manageable sections for transport.
12. Decide if supplemental runoff control berms need to be constructed or modified.
13. Obtain area and equipment contamination measurements.
14. Mark salvageable equipment, if necessary.
15. Plan haulage routes.

5.3 General Preparation Work

5.3.1 Circuit Cleanup

Circuits will be flushed and resultant fluids and solids will be pumped to the appropriate receiving pond. All products will be removed from product storage buildings, prior to demolition of those buildings. Reagents used in the processing will be removed from the site or disposed of as described below.

Process inorganic compounds. Acids, bases or other inorganics that have become contaminated with radioactive materials will be pH-adjusted or otherwise neutralized, if and as necessary, and will be disposed of in the last active tailings cell or Cell 1. Inorganics that are unaffected by the process (because they were unused) will be sold or returned to the original vendor, if possible. Otherwise, the pH will be adjusted or otherwise neutralized, if and as necessary, and disposed of in the last active tailings cell or Cell 1.

Process organic compounds. Organics used in processing will be stripped with sulfuric acid or other reagents to remove radionuclides and metals and disposed as appropriate. Uncontaminated organics will be returned to the original vendor or sold, if possible.

5.3.2 Laboratory Reagents

Laboratory reagents will be returned to the original vendor, sold, donated to appropriate users or neutralized and placed in the appropriate disposal location.

5.3.3 Oils and Lubricants

New oils will be returned to the original vendor, sold to another party, or disposed as necessary. Used oils will be disposed locally, if not contaminated. If contaminated, the used oils will be disposed of at a mixed waste disposal facility.

5.3.4 Asbestos

An initial site survey to determine the amount of sampling and characterization required for a facility-wide asbestos inspection is scheduled to be completed by September 30, 2011. The facility-wide inspection to determine the presence of asbestos in building materials in the milling facility will be conducted for Denison in the spring of 2012. The investigation will identify buildings and facilities where no suspect materials are identified, or sampled materials did not test positive for asbestos-containing materials. A detailed asbestos survey will be conducted, if and as necessary, on a building-by-building basis to confirm identification of building materials and outline methods of asbestos containment, handling, and disposal. An inspection report will be prepared after the facility-wide inspection. The report will be submitted to the DRC as a standalone document. Asbestos-containing materials will be removed according to pertinent asbestos regulations and procedures presented in the inspection report and will be placed in the last active tailings cell or Cell 1.

5.4 Process Area Preparation

Work in the process area includes the water management tasks outlined below.

1. Removal and/or evaporation of water in existing ponds.
2. Diversion of clean area stormwater runoff from work areas (where facilities demolition and material excavation will take place).

3. Collection of stormwater runoff from within the work areas to be used for disposed material compaction or dust suppression and/or retained in a temporary evaporation pond.

5.5 Staging and Storage Areas

Areas on site used for equipment or material staging or temporary storage will be in approved areas of the site. These areas will be prepared in a manner consistent with Denison plans for stormwater management. These areas will be prepared in conjunction with facilities demolition and site reclamation work.

6.0 PROCESS AREA DEMOLITION

6.1 General Description

This section outlines the demolition of facilities and structures in the process area. The major structures are shown on Figure 2 and are outlined in this section.

6.2 Mill Area

The uranium and vanadium processing areas of the Mill, including all equipment, structures and support facilities, will be decommissioned and disposed of in tailings or buried on site as appropriate. All equipment, including tankage and piping, agitation equipment, process control instrumentation and switchgear, and contaminated structures will be cut up, removed and buried in tailings prior to final cover placement. Concrete structures and foundations will be broken up and removed. Concrete foundations may be left in place and covered with soil as appropriate.

These decommissioned areas would include, but not be limited to the following:

- Coarse ore bin and associated equipment, conveyors and structures.
- Grind circuit including semi-autogeneous grind (SAG) Mill, screens, pumps and cyclones.
- The three pulp storage tanks to the east of the Mill building, including all tankage, agitation equipment, pumps and piping.
- The seven leach tanks inside the main Mill building, including all agitation equipment, pumps and piping.
- The counter-current decantation (CCD) circuit including all thickeners and equipment, pumps and piping.
- Uranium precipitation circuit, including all thickeners, pumps and piping.
- The two yellow cake dryers and all mechanical and electrical support equipment, including uranium packaging equipment.
- The clarifiers to the west of the Mill building including the preleach thickener (PLT), clarifier and claricone.
- The boiler and all ancillary equipment and buildings.
- The entire vanadium precipitation, drying and fusion circuit.
- All external tankage not included in the previous list including reagent tanks for the storage of acid, ammonia, kerosene, water, dry chemicals, etc. and the vanadium oxidation circuit.
- The uranium and vanadium solvent extraction (SX) circuit including all SX and reagent tankage, mixers and settlers, pumps and piping.
- The SX building.
- The Mill building.
- The Alternate Feed processing circuit
- Decontamination pads

- The office building.
- The shop and warehouse building.
- The sample plant building.
- The Reagent storage building.

6.3 Demolition Strategy

As described above, a number of pre-demolition activities will be completed prior to actual demolition of the structures and buildings. This approach assumes that the facility equipment, buildings, and structures will have any product, reagents, residues and other fluids removed. Utilities for individual buildings will be disconnected on a building-by-building basis.

6.3.1 Staging of Decommissioning

Although different types of decommissioning equipment will be used to demolish each different type of structure or equipment, demolition will proceed according to the general staging process described below while allowing for maximum use of the support areas of the facility such as the office and shop areas. The first stage consists of demolition of above-ground structures such as piping and tanks, then building and enclosed structures. The second stage consists of concrete removal (structure floor slabs, below-ground walls, and footings). The third stage consists of removal of underground utilities (most likely conducted at the same time as concrete removal). The fourth stage is excavation and removal of contaminated soils.

6.3.2 Remote Demolition

The strategy for demolition is based on current equipment and procedures used for structural demolition and used successfully at uranium mill sites in the western United States. This strategy consists of use of mechanized equipment specially designed for equipped for demolition work, minimizing manual labor. Heavier duty equipment will allow remote-controlled water sprays to be directed as necessary, will require fewer staff, and will lower occupational exposures.

6.3.3 Demolition Equipment

The anticipated demolition equipment is described below. All heavy equipment to be used for demolition should have an enclosed operator's cabin that is equipped with a HEPA filter and an air conditioning system. This enclosure will reduce potential internal exposures from airborne materials.

Hydraulic shear. This is a hydraulically operated attachment on the end of the arm of a track-mounted excavator or crane. This shear will be used to cut piping, I-beams, tanks and other steel into pieces that will fit onto trucks for transport to the last active tailings cell or Cell 1.

Grapple. This is a hydraulically operated attachment on the end of the arm of the track-mounted excavator or crane. The grapple is either an excavator bucket with a thumb, or a grasping attachment with several "fingers." The grapple will be used to load dismantled pieces of piping, tanks, and concrete onto trucks for transport to the last active tailings cell or Cell 1.

Hydraulic excavator. A large hydraulic excavator will be used to load dismantled pieces of piping, tanks, and concrete onto trucks for transport to the last active tailings cell or Cell 1. Also,

excavator buckets with different widths may be used to excavate solids from tanks or cemented soils from around deeper foundations or pilings.

Front-end loader. In areas with smooth ground conditions and free from debris that may damage rubber tires, a front-end loader will be used to load soil, dismantled pieces of piping, tanks, or concrete onto trucks for transport to the last active tailings cell or Cell 1.

Concrete shear. This is a hydraulically operated attachment on the end of the arm of a track-mounted excavator or crane. The concrete shear is similar to the steel shear, used to break concrete walls, slabs, and other facilities that will fit into the jaws of the shear. The shear breaks the concrete into pieces that can be loaded for transport to the last active tailings cell or Cell 1.

Concrete impactor. For concrete foundations that are of dimensions that cannot be broken with the concrete shear, a concrete impactor will be used. This is another attachment on the end of the arm of a track-mounted excavator or crane. The impactor use a vibratory tip (similar to a jack-hammer) to break concrete into pieces that can be loaded into trucks for transport to the last active tailings cell or Cell 1.

Trucks. Dump trucks as large as are practical and available will be used to transport dismantled equipment, concrete, and soils to the last active tailings cell or Cell 1 with minimal handling. The size of the truck beds will dictate the size of the facility debris to be broken or cut.

Scraper. For soils excavated during the later phase of contaminated soil excavation, scrapers may be used in place of trucks and loaders. Push-loading scrapers would most likely be used for soil excavation, transport, and placement.

Soil ripper. To expedite contaminated soil excavation, a dozer or grader-mounted soil ripper or ripping bar will be used to break up cemented soil or sedimentary rock to enable scrapers or loaders to load contaminated soils.

Water truck. A water truck or similar rubber-tired watering equipment will be routinely used for dust suppression to wet haul roads from the specific demolition site to the area of the last active tailings cell and Cell 1.

Grader. A road grader or blade will be used to smooth haul roads and other work surfaces on a routine basis. Debris, rock, or wet materials generated by the blade work will be transported to the last active tailings cell or Cell 1.

6.4 Utilities Management

All utilities to the facility will be disconnected prior to starting demolition operations for a given building, structure or area. The specific procedures and precautionary measures for each utility to be followed are listed below.

6.4.1 Liquefied Natural Gas and Propane Systems Disconnect

1. Shut off main valve at meter.
2. Light heating equipment to burn off residual fuel.
3. Blow out all lines with compressed air.
4. Verify with combustible gas meter that lines are free of fuel.

6.4.2 Electrical System Disconnect

1. Shut down service at electrical substations.
2. Verify with metering equipment that the power is off.
3. Disconnect power feeders to the milling facility.
4. Verify with metering equipment that all systems are disconnected.

6.4.3 Water System Disconnect

1. Disconnect the piping system to the milling facility (if not already disconnected).
2. Check main valve to verify system is off and disconnected.

6.4.4 Phone System

Denison will also have telephone services maintained in the office build for use during decommissioning and eventually disconnected by the provider.

6.5 Surface Structure Removal

As described in the strategy above, the order in which structures will be demolished and removed is generally determined by the types of tools that are best suited to those types of structures. Therefore, all surface structures will be demolished prior to concrete and contaminated soil removal. All materials will be disposed in last active tailings cell or Cell 1.

Depending on the type of building, it may be demolished with equipment and structures remaining inside or the equipment may be removed prior to the building's structure being demolished. Buildings and their associated equipment will be the first major category of demolition that is performed, except for support areas of the facilities such as the office and shop areas. It is anticipated that the type of demolition equipment used to take down buildings will be the same required for outdoor piping and tanks.

6.6 Concrete Removal

Once surface structures, including all buildings, tanks, piping, and pipe racks, have been demolished and disposed, then specialized concrete removal operations may begin.

It is anticipated that the major equipment used will be a concrete shear, a concrete impactor, a large backhoe, and haulage trucks. Each of these will be operated from within an enclosed cab, thus reducing exposure to radioactive materials. Concrete floors and walls of normal size and thickness (up to 1 foot) will be removed using the heavy equipment described above. Concrete shears will be used to cut slabs into pieces that are transportable to the disposal cell.

Concrete below grade and thicker than 1 foot will likely be broken using a combination of the impactor, the shear, and a backhoe that will dig access trenches. Removal of structure foundations, interior floor slabs, and exterior slabs and parking areas will follow the general sequence listed below.

1. Cutting (with a concrete saw) or breaking up (with a hydraulic shear, remote jack hammer or similar vibratory tool) the slab or foundation material into pieces that can be loaded and hauled by construction equipment.

2. Excavation of contaminated soils from under floor areas and around footings.
3. Transport of the concrete pieces and excavated soils to last active tailings cell, Cell 1 or approved temporary storage location.
4. Placement of the pieces in the disposal cell by dumping and (where possible) working with a dozer or trackhoe to minimize void spaces.
5. Covering the pieces with contaminated soil or similar material, with vibratory compaction to minimize void spaces.

6.7 Utility Removal

Equipment to be used to utilities (both above-ground and below-ground) depend on the location of the structure. It is anticipated that the major equipment used will be a hydraulic shear, a grapple, a large backhoe, and haulage trucks. Each of these will be operated from within an enclosed cab, thus reducing exposure to radioactive materials.

Once the concrete structures are removed, the underground utilities will be located and exposed with a metal detector or conductivity meter in conjunction with existing utility maps will be used to locate pipes and lines. A combination of the backhoe and the grapple will be used to expose the lines, which will be severed using the hydraulic shear.

6.8 Miscellaneous Site-Wide Facilities

An outside contractor will be retained to empty the septic tanks prior to demolition. The septic tanks and the drain fields will be excavated and transported to last active tailings cell or Cell 1. Sewer system piping will be excavated and disposed of after flushing.

Miscellaneous facilities to be decommissioned include the boneyard, tailings lines, and mill runoff controls. The boneyard is located to the south of the Mill area and consists of a collection of used and potentially contaminated equipment and equipment parts that have been removed from the Mill or various other buildings over a period of time. The surface tailings lines will be removed one all liquid effluent from the demolition is completed and not more liquid effluent is expected. Mill runoff control systems including underground culverts and miscellaneous concrete structures will be decommissioned.

6.9 Contaminated Soils

Contaminated areas on the Mill site will be primarily superficial and include the ore storage area and surface contamination of some roads. All ore and alternate feed materials will have been previously removed from the ore stockpile area or will be transported and disposed of as contaminated material. The depth of excavation will vary depending on the extent of contamination and will be governed by the criteria outlined in Attachment A (Plans and Specifications) of the Reclamation Plan (Denison, 2011c).

Contaminated soils will be disposed of in last active tailings cell or Cell 1. Contaminated soils will be placed in the last active cell or Cell 1 as random fill material (material used to fill voids within mill material, achieve desired cover system slopes, and provide a firm base for construction of the cover system). Only uncontaminated soils meeting criteria for cover materials will be used in the cover system over the tailings cells.

6.10 Windblown Contamination

Windblown contamination is defined as Mill derived contaminants dispersed by the wind to surrounding areas. The potential areas affected by windblown contamination will be surveyed using scintillometers taking into account historical operational data from the Semi-annual Effluent Reports and other guidance such as prevailing wind direction and historical background data. Areas covered by the existing Mill facilities and ore storage pad, the tailings cells and adjacent stockpiles of random fill, clay and topsoil, will be excluded from the survey. Materials from these areas will be removed in conjunction with final reclamation and decommissioning of the Mill and tailings cells. Windblown contaminated material will be detected by a gamma survey using the criteria in Attachment A (Plans and Specifications) of the Reclamation Plan (Denison, 2011c) and will be excavated and disposed of in the last active tailings cell or Cell 1.

6.11 Preparation of Demolition Debris for Disposal

Because of the wide variety in shape and size of equipment and structural materials, the following guidelines will be used in sizing, handling and disposing of debris. Additional detail on material placement is provided in Attachment A (Plans and Specifications) of the Reclamation Plan (Denison, 2011c).

1. Material will be cut or dismantled into pieces that can be safely lifted or carried with the equipment being used. Material will also be cut or dismantled to minimize void spaces after disposal.

2. A front-end loader, crawler, hydraulic excavator, or equivalent equipment will be utilized to crush or compact compressible materials. These materials will be laid out in a staging area or other approved area to facilitate crushing or compacting with equipment.

3. Pipe or conduit with an opening or diameter large than 12 inches that cannot be crushed will be filled with random fill prior to disposal.

4. Tanks and vats will be handled according to the wall material and wall thickness. Tanks will be crushed or compacted if possible. Tanks that cannot be crushed will be dismantled, if feasible. Tanks that cannot be crushed or dismantled will be transported to the last active tailings cell or Cell 1, filled with random fill and buried.

7.0 REGRADING AND REVEGETATION

7.1 Regrading

Regrading will be conducted after completion of contaminated soil excavation. The excavated surface of the mill facility will be regraded to remove depressions and direct storm water runoff in directions and toward areas desired for final site drainage. The completed regraded surfaces will be covered with a layer of topsoil or suitable plant growth media soil at a minimum thickness of six inches.

7.2 Revegetation

Revegetation will consist of establishing a self-sustaining cover of selected vegetation of the completed regraded and covered surfaces of the milling facility. The vegetation species mix, planting methods, weed control procedures, and revegetation success monitoring will be selected and approved prior to start of revegetation work.

8.0 REFERENCES

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