COTTER CORPORATION

MASTER DEMOLITION PLAN

Prepared by:
Cotter Corporation

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1. Introduction

Cotter Corporation (Cotter) owns and operates the Cañon City uranium mill facility located in south-central Colorado. This plan will serve as the controlling work document for demolition of the Uranium/Vanadium Plant Buildings. This work plan describes the characterization and decommissioning methodology to be used for this project. This work plan consists of the following major elements:

- Demolition objectives and approach;
- Site preparation activities;
- Health and Safety procedures;
- Pre-demolition activities;
- Demolition of the Mill Buildings
- Post demolition activities

The plan will be submitted to the Colorado Department of Public Health and Environment (CDPHE) for approval prior to conducting the activities described in this work plan.

1.1 Site Location and Description

The Cotter mill site is located at 0502 County Road 68, in Fremont County, Colorado, approximately 3 miles south of Cañon City and approximately 1.5 miles southwest of Lincoln Park in Section 16, Township 19 South, Range 70 West. The mill site lies within the Sand Creek Basin that drains to the north into the Arkansas River. Populations nearby are primarily north and northeast of the site, although residential growth has increased to the west of the site in recent years. Cotter owns approximately 2,500 acres in the area.

1.2 Site History

Uranium processing mill operations began at the site in 1958 with production of uranium oxide or yellowcake. In addition to producing yellowcake, the mill produced both vanadium and molybdenum, among other metals, at different points in time. The original mill used an alkaline leach process from 1958 through 1979. In 1979, mill operations were converted to an acid-leach process, which was used from 1979 through 1998. The mill was converted back to an alkaline leach processing in 1999-2000. Acid leach operations were restored in 2004 and continued through 2006.

Building	**Square Footage**	**Estimated Volume (FT^3)**
CCD	60,044	454,000
#10 CCD & Primary Thickener	7,854	94,700
Reactor Clarifier (RCL)	1,257	2,310
Sulfation	3,704	8638
Demo Plant	13,820	8,558
Boiler House	1,740	3,372
Grind & Leach	20,010	32,052
Secondary Crusher	2,060	5,840
Solvent Extraction	36,490	14,017
Uranium/Vanadium Product	22,556	21,542
Zirconium Product	14,341	14,138
Fine Ore Bins	6,400	40,483
Pipe Racks	1,720 (linear feet)	12,160

1.3 Radioactive Materials Licensing

The site operates under Colorado Radioactive Materials License Number Colo. 369-01, Amendment Number 53. The license expires on December 31, 2012. The work described in this plan will be completed under Cotter Radioactive Materials License. Procedures followed during the completion of this project will be Cotter procedures (Cotter Corporation - Health & Safety Procedures Manual and Radiological Health & Safety Procedures).

2. Demolition Objectives and Approach

Demolition will include the removal of buildings, structures size reduction and disposal of the components in the on-site lined Main Impoundment. Each building and structure will have a specific demolition work plan that is attached as an appendix to this master document. The project goals for demolition are:

- Attain an as low as reasonably achievable (ALARA) dose outcome for (1) workers performing the demolition, (2) other on-site personnel, and (3) off-site individuals.
- Complete the demolition and waste disposal in a safe, cost-effective manner, in full compliance with applicable state and federal requirements.
- Contamination control is essential to achieving ALARA(both personal and environmental) and minimizing the need for additional cleanup
- Spills in excess of 100 gallons of liquid are possible and expected for during this activity. Cleanup of spills will be conducted as soon as practicable.
- Provide adequate environmental protection from contaminated dust and water runoff.

The approach involves use of mechanized equipment configured for demolition work, minimizing manual labor. Heavy-duty equipment will allow largely remote demolition of structures and buildings and loading of debris. A water truck with both fire hose and water cannon capability along with fire hose connected to water hydrants will be utilized to minimize dusting during the project.

A pre-demolition characterization (Appendix A and B) of the facilities has been completed and has been used to assess potential contaminants of concern as detailed in Section 5. This characterization has been conducted in accordance with procedure SPA-0012. The SPA-0012 procedure is a safety procedure employing “Task Hazard Analysis” for each project and each phase of the project. Understanding the hazards and the risks they present is an essential foundation for achieving environmental protection, and health, and safety performance. Hazard identification and characterization (Appendix B) will identify those hazards present and determine the appropriate response to the hazards. The following steps will be performed in any task hazard analysis:

1. Identify the non-routine or new task.
2. Identify the hazards and associated accident scenarios.
3. Evaluate the consequences of the possible accidents.
4. Estimate the probabilities of accidents occurring.
5. Assign a risk code to be associated with the process.
6. Take appropriate action based on the risk.
7. Accomplish the task safely.

This information will guide the work practices and/or the implementation of engineering controls to maintain potential exposures ALARA and insure the safety of the workers performing the operation.

During any phase of this operation if circumstances occur that were unanticipated then additional characterization will be conducted in accordance with procedure SPA-0012.

Contemporaneously, a demolition permit and an asbestos abatement permit will be applied for as necessary.

3. Site Preparation Activities

The following list includes site preparation activities to be addressed prior to beginning demolition:

- Beta/Gamma surveys of the building or structure will be conducted and utilized in the development of each specific work plan
- Hire a certified Asbestos Building Inspector to review investigation conducted for Cotter in 2001 by Occupational Health Technologies, Inc. This survey identified buildings and facilities that contained asbestos materials and buildings and areas that did not contain asbestos materials.
- Obtain Demolition Permits (State and County)
- Establish a contamination control plan for demolition site activities.
- Obtain locator service to locate underground lines.
- Disconnect and verify that all necessary utilities have been de-energized or deactivated and remove all salvageable materials from the Mill building(s) and transport to new storage location. (Appendix A "Disconnect Utilities, Chemical and Process Lines") Complete "Utility Disconnect Verification" form. (Attachment 5)
- Install temporary job site barricades, signs, and caution tape as necessary. Control the demolition work area in a manner to limit personnel and vehicle access to only those required for demolition activities.
- Stormwater runoff will be controlled by berms and silt fences erected upgrade and downgrade from the demolition area. Upon completion of the demolition work the silt generated will be removed and transported to the Main Impoundment for disposal.
- Install barricades or other protective devices around monitor wells or other structures that are not scheduled for demolition or abandonment.
- Arrange for dust suppression equipment to be available.
- Disconnect all chemical and process lines. Disconnect or cutting of lines will be conducted over containment if possible. Complete "Utility Disconnect Verification" form. (Attachment 5) (Appendix A "Disconnect Utilities, Chemical and Process Lines")
- Pre and post demolitions surveys will be conducted of all haul roads to establish a protocol for determining the need for post demolition cleanup of the haul roads.

4. Health and Safety

This section describes general requirements and procedures and includes: Safety/hazard communication, personal protection, occupational monitoring, environmental monitoring, administrative action levels, dust control, contamination control, training, emergency response, runoff control, wind. Each worker will be provided with a copy of this plan and appropriate training to work the plan.

At anytime during this activity any employee may stop work if that employee feels that the conditions, safety and environmental, warrant such a stoppage. It is the employee's responsibility and obligation to immediately notify his supervisor of the work stoppage.

4.1 General Safety/Hazard Communication

- Established safety practices and procedures as specified by MSHA(30CFR56&57) and as stated in the Cotter Corporation Safety Manual will be used at all times.
- Procedures pertaining to equipment operation, suspended loads, material handling and fire protection shall be followed.

4.2 Personnel 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) and to insure worker safety.

- The common personnel protection equipment includes hardhat, safety glasses, steel toed boots, work gloves, and respiratory protection as necessary. Contractors are required to change from work clothing prior to exiting the site.
- Alternative personnel protection requirements, either more or less, may be specified by the area evaluation. This equipment may include Tyvek Disposable coveralls, high visibility vests, wet suits, rubber boots, face shields, powered respiratory protection, hearing protection, and torch cutting/welding gear. The standard requirements for personnel protection equipment will be used during utilities disconnect activities and will include Arc Flash equipment as necessary.
- Contamination control PPE will be doffed prior to entering office areas, lunchrooms or exiting the posted restricted area.
- Tobacco products are not allowed on the milling facility. Eating is allowed only in designated lunch areas. Drinking is allowed in designated areas and will be allowed in the vicinity of the work area from closed containers or disposable cups.

4.3 Occupational Monitoring Requirements

The following monitoring requirements are designed to monitor potential personnel exposure to radionuclides by use of screening techniques, compositing samples, and sample analysis.

- Generally the occupational monitoring will be conducted more frequently during project startup and will continue until monitoring results indicate that a lesser frequency is appropriate.
- The standard personal monitoring involves particulate air sampling (breathing zone and general area), Radon decay product sampling, dosimetry, bioassay, and personnel exit contamination surveys.
- Alternative personnel monitoring requirements, either more or less, will be specified by the area evaluation and/or monitoring results.
- Personnel performing dismantling operations will wear a personal breathing zone sampler as needed, during the project activities. Frequency of collection will be based on the specific work task and percent of the Derived Air Concentration (DAC). The sampler filters will be screened for gross alpha and may be submitted for further analysis such as Natural Uranium, Thorium-230, Thorium-232, and Radium-226 per RH-300 protocol (see administrative action levels).
- A working level determination will be made prior to conducting work activities, at least monthly or more often based on the percent DAC in areas where dismantling activities are being undertaken.
- Bioassay Urine Samples for uranium will be collected for all personnel prior to dismantling operations. Additional specimens will be collected in accordance with approved procedure. Bioassay samples for thorium will be collected when required per approved procedure.
- Thermoluminescent Dosimeters (TLD's) and/or pocket dosimeters shall be issued to all personnel. The TLD will be read out on a quarterly basis.
- Contamination surveys will be performed for project activities as appropriate and includes surveys of salvageable items or equipment.
- Building gamma survey measurements will be performed prior to the beginning of demolition activities and after demolition activities. Additional monitoring will be conducted during the operation if the pre-demolition survey determines that it is warranted.

4.4 Environmental Monitoring Requirements

The four continuous perimeter air monitoring stations currently in operation at the CCMF are used to monitor air emission releases from all mill activities. Additional upwind and downwind project area monitoring will be utilized. The sample filters from these monitoring stations will be screened for gross alpha and may be analyzed for Natural Uranium, Thorium-230, Thorium-232, and Radium-226.

4.5 Administrative Action Levels

The action levels will be set using CDPHE guideline levels and following approved procedures RH-130 *General Air Particulate Survey* and RH-150 *Occupational Breathing Zone Monitoring* and will be undertaken and implemented with the goal of keeping personnel exposures ALARA. These action levels have been developed to provide an early indication of a problem so that corrective measures may be initiated. Other specific procedures and action levels to be utilized for occupational air sampling are as follows:

1. Filter media samples will be collected and transported to the laboratory. The samples will be screened for gross alpha in accordance with the approved procedure. The specific derived air concentration (DAC) to be used will be determined using information and sample results obtained during the area evaluation activity.
2. Corrective Measures
    a. >10 DAC hrs/wk – investigate working conditions
    b. >40 DAC hrs/wk – suspend activities, investigate
3. Derived Air Concentration (DAC)
    - 6E-11 uCi/ml U-nat (gross alpha ore)
    - 2E-11 uCi/ml U-nat Class S (Y)
    - 5E-10 uCi/ml U-nat Class F (D)
    - 6E-12 uCi/ml Th-230 Class S (Y)
    - 1E-12 uCi/ml Th-232 Class S (Y)
    - 3E-10 uCi/ml Ra-226 Class M (W)

4.6 Dust Control

Dust generation will be minimized during all demolition operations. Procedures for control of dust are outlined below.

- During demolition operations, the equipment and structure surfaces that are being affected will be sprayed with water prior to beginning operation and during operations as necessary to minimize dust generation.
- Haul roads, loading, off-loading, and disposal areas will be sprayed with water as needed to control dust generation
- Adherence to posted vehicle speed limits on haulage roads.

4.7 Contamination Control

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

- Work area and haulage road access will be restricted to authorized personnel during demolition operations. Signs and/or barrier tape will be used to post work areas where access is restricted.
- Personnel and equipment shall be surveyed for contamination prior to leaving the restricted area.
- Demolition personnel may be required to be decontaminated prior to leaving the mill facility based on results of the exit scan. This requirement also applies to all personnel on site. (RH-200, “Personnel Release Surveys”) Equipment must be surveyed prior to being released from the site. (RH-070, “Equipment Release Surveys”)
- Spills in excess of 100 gallons of liquid are possible and expected for during this activity. Cleanup of spills will be conducted as soon as practicable. Refer to Radiological Health and

Safety Procedure, ER-10, "Emergency Response" for the handling of spills. The reporting of spills will be conducted in accordance with LC 9.4.2.2.

- Establish a contamination control plan for demolition site activities.
- To minimize tracking of material from the demolition area to the disposal during haulage, vehicles will be cleaned in the demolition area or in the Main Impoundment disposal area to remove residues from outside of vehicle as necessary.
- Care must taken to avoid backing into contaminated dump piles.
- Haul roads will be re-graded periodically to remove contaminated material.
- If end dump trucks are used to transport residues then the tailgates will be inspected to insure proper closure and verify they are sealed.

4.8 Training

All workers will receive training in accordance with the approved MSHA training plan. Prior to beginning this demolition operation all workers involved in the operation will be trained on this plan. Training will be documented using the *Radiation Safety/Industrial Safety Meeting/Training Form* (Attachment 2)

If during the operation it is determined that changes have occurred that would require additional training then training will be conducted prior to continuing the demolition activities and document as noted above.

4.9 Emergency Response

Emergencies at CCMF are handled using approved procedure ER-10 (Emergency Response). Prior to beginning demolition operations workers will receive emergency response training specific to the demolition activities per section 4.8.

4.10 Runoff Control

Runoff will be controlled by berms and silt fences erected upgrade and downgrade from the demolition area. Upon completion of the demolition work the silt generated will be removed and transported to the Main Impoundment for disposal.

4.11 Wind

Strong winds may be present at the site during demolition. Wind speeds can be unpredictable and enhanced due to the geography and the contour of the surrounding area. Elevated winds can generate flying debris and dust. Demolition and disposal activities will be stopped if sustained winds are in excess of 25 mph or if dusting conditions are such that current methods of dust control are ineffective. Winds will be evaluated on a daily basis at the start of the workday and periodically throughout the day for dust control and safety.

The use of man lifts during windy conditions will be restricted based on wind conditions. If sustained winds and/or gust are such that it makes use of this equipment a safety concern then work with man lifts will be suspended until such time as conditions have improved. The use of manlifts will not be allowed if wind gusts exceed 30 mph.

4.12 Project Management, Modification, and Improvement

The project management process is outlined below:

1. A specific Project Management Team will be developed to oversee project operations. The team will consist of the Mill Manager or designee, Quality Assurance Coordinator, Health and Safety Supervisor and Environmental Coordinator/Radiation Safety Officer or designee. (Attachment 6)
2. A Project Advisory Team consisting of the ALARA Review Committee will be consulted and be kept informed of project progress.
3. The crew supervisors will oversee the day-to-day decommissioning activities.

4. The Assistant Radiation Safety Officer, Radiation Safety Technicians, Environmental Technician and Health and Safety Technicians and will oversee radiation safety, safety and environmental aspects of decommissioning activities.
5. The Project Management Team will meet weekly or as needed to review project progress.

Meetings will be used to evaluate the project process, review monitoring results and reports, and make changes to the plan as needed. All personnel involved are encouraged to provide ideas and concerns for plan modification and continuous improvement. Meetings with members of the Project Advisory Team will meet monthly or as needed during the project.

5. Pre-Demolition Activities

The intent of the pre-demolition activities is to prepare the building or structure for demolition. The following items must be completed prior to beginning the demolition of each building or structure.

5.1 Radiation Survey

Prior to beginning work in the tank and building areas a radiation survey must be conducted to determine the radiation levels in the demolition area. The purpose of this survey is to determine those areas needing additional precautions during demolition.

1. Contact the Radiation Safety Department and request a radiation survey of the building and outside areas (Demolition area).
2. Radiation Safety Department will conduct the survey in accordance with procedure RH-110 “Beta and/or Gamma Exposure Rate Survey”. Based on these surveys it will be determined, by the Radiation Safety Department, if additional surveys are necessary.

5.2 Asbestos Survey

An investigation of the presence of asbestos in building materials in the milling facility was conducted for Cotter in 2001 by Occupational Health Technologies, Inc. (OHTI, 2001). This survey identified buildings and facilities that contained asbestos materials and buildings and areas that did not contain asbestos materials These buildings included the primary crusher, secondary crusher, fine ore storage bins, Quonset warehouse, main warehouse, lime building, salvage shop, instrument shop, rubber shop, Sand Creek storage area, main office, change house, labor lunch trailer, and remaining alkaline mill buildings.

Buildings that tested positive for asbestos-containing materials (based on U.S. Environmental Protection Agency [EPA] criteria and testing methods) were the maintenance lunchroom, CCD pump house (CCD building), maintenance building, boiler plant, product building, demonstration plant, laboratory, old metallurgical laboratory, environmental office, compound area, grind/leach building, solvent extraction building, north and south cooling towers, and several storage tanks.

The identified asbestos-containing materials consist of floor tile, exterior insulation, and transite (found in siding, pipe, duct lining, and counter tops).

5.3 Obtain Demolition Permit

Demolition permits must be obtained prior to beginning demolition. The permits will require certification from a Certified Asbestos Building Inspector. These permits are applied for using the “Demolition Notification Application Form” and filing it with the Permit Coordinator, Colorado Department of Public Health and Environment, Air Pollution Control Division. Demolition permits must also be obtained from the Fremont County Building Department.

1. Contact Certified Asbestos Inspector for inspection and certification of tanks and building that are scheduled for demolition.
2. Complete notification forms and submit to CDPHE, APCD.

3. Complete and submit demolition application form(s) to the Fremont County Building Department.

5.4 Salvage Items

Equipment salvage is a planned part of mill decommissioning, based on salvage value and effort required for decontamination. Part of this evaluation includes accessibility of areas for surveys and decontamination and where the salvaged items will be used or sent. A license to license transfer is evaluated differently than an unconditional release. This process could occur either during the pre-decommissioning phase or in concert with decommissioning itself.

All salvageable items must be removed and placed in alternate storage. Each building may have items that are to be salvaged. A determination will be made in advance of demolition as to which items are to be salvaged and where they are to be stored. There are light fixtures in the buildings. Prior to disposing of the fixtures the bulbs must be removed and a determination made as to whether these bulbs are mercury vapor bulbs or mercury containing bulbs. If the bulbs are mercury vapor or mercury containing then they must be disposed of in accordance with disposal regulations. Cotter currently has a mercury bulb disposal process and this will be utilized.

The salvage of items will be conducted in the following manner:

1. Identify those items that are scheduled for salvage or special disposal. Mark those items that are to be salvaged with paint, survey tape, or other marker that has a distinguishing color. All items unmarked are assumed to be disposed of in accordance with Section 7 “Material Disposal in the Main Impoundment”.
2. Wash all items that are to be salvaged prior to removing the items. Notify the radiation safety department so that a survey can be conducted on those items marked for salvage prior to removing to storage. Items that cannot be washed such as circuit breakers or other electrical components should be vacuumed prior to being surveyed. Based on survey results conduct additional decontamination as necessary or as determined by the Radiation Safety Department.
3. Place salvaged items in storage. Electrical equipment may be placed in the electrical storage building or other suitable storage location. Pumps and other items will be placed in a suitable storage location.
4. Items marked for special disposal will be surveyed prior to removal and decontaminated as necessary. Special disposal items will be handled as described above.

5.5 Utilities

All utilities must be disconnected is accordance with procedure SP-0001, “Control of Hazardous Energy (Lock Out/Tag Out)”. Electrical connections must be disconnected and air gapped. Additional clearance requirements from energized lines will be determined utilizing NFPA 70, “National Electric Code”. Complete “Utility Disconnect Verification” form. (Attachment 5)

5.6 Monitoring Wells

Monitoring wells located within the demolition area must be identified, marked to easily identify, i.e. orange fencing and protected from damage.

6. Demolition

This section describes how the demolition will be conducted. Demolition will be evaluated on a daily basis and modifications to the plan will be made as necessary based on situations that arise.

- Daily meetings will be conducted and documented to evaluate the progress of the demolition activities and evaluate any problems i.e. safety encountered during the operations. (Attachment 3 & 8)

- Weekly meetings will be conducted with the Project Management Team to evaluate the progress made and plan for the next weeks activities. (Attachment 7)
- Daily tailgate meetings will be conducted and documented to evaluate the progress of the demolition activities and evaluate any problems i.e. elevated air samples, haulage routes, safety issues. (Attachment 4)
- Staff will evaluate buildings to determine which equipment will be best suited for the demolition activity.
- Necessary equipment will be available at the start of operations.
- Prior to beginning demolition silt fences and/or berms will be installed along the perimeter of the demolition area.

6.1 Equipment

Equipment used in the demolition activities may include a front end loader, excavator, hydraulic shear, backhoe, water truck, boom truck, 25 ton crane, heavy lift crane, dozer and dump truck(s). Demolition of the buildings or structures may be accomplished using the hydraulic shear, excavator, and dozer or other equipment as deemed appropriate. Rubble removal may be conducted using the excavator, front end loader and dump truck(s). Removal of soils may be conducted using the excavator, backhoe, or loader and dump truck(s). Specific building demolition methodology is detailed in each individual building work plan.

6.2 Soils Assessment and Removal or Stabilization

An interim soils assessment and removal or stabilization will be conducted. The area included in the soils assessment and removal or stabilization will be limited to the immediate footprint of the building or structure and the periphery of the footprint. Initially radiation surveys will be conducted to determine which soils will need to be removed for ALARA purposes. A level of 60 micro-R per hour will be used as the screening criteria. The level was utilized on the Mill Entrance Road cleanup. Soils that are removed will be disposed of in the Main Impoundment disposal area. Note: Based on the field locator survey for underground lines. Care must be taken during excavation to insure that lines are not damaged or removed until they are physically identified. Although electrical lines will be de-energized it is not the intent to remove these lines. Electrical lines are encased in concrete which will provide an added protective barrier.

1. Prior to beginning soil removal or stabilization, silt fences and/or berms will be installed on the perimeter of the demolition area.
2. Obtain breathing zone sample pump prior to beginning operations.
3. Set barricades or caution tape, as necessary, on roadway to minimize access to demolition area.
4. Notify all personnel that excavation and/or stabilization has begun and the haul routes that are being utilized.
5. If it is determined that the soils will be stabilized then a soil binder will be sprayed on the area to stabilize the soil. If it is determined that excavation of soils is necessary, then proceed to Step 6.
6. Prior to starting excavation of the identified soils wet down area using water truck or fire hose.
7. Based upon Beta/Gamma survey results soils will be excavated using an excavator, backhoe, or other excavating equipment as necessary. Once ALARA goals are achieved then additional assessment will be conducted.
8. Soils will be stockpiled, as necessary, and loaded using a front end loader into dump trucks for transport to the Main Impoundment disposal area.
9. Water haul roads and stock piles as necessary.

7. Material Disposal in the Main Impoundment

Materials will be disposed in the Main Impoundment in accordance with the Tailings Reclamation Plan. Demolition materials will be placed in the Main Impoundment according to the procedures outlined below:

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 in the disposal area.
2. A dozer or front-end loader may be used to crush or compact compressible materials.
3. Pipe, conduit, or other items with an opening or diameter larger than 18 inches that cannot be crushed will be filled with earthen materials or a foaming agent prior to disposal.
4. Debris placement will be a minimum distance of 10 feet above the Main Impoundment liner.
5. Debris will be placed on the perimeter of the working platform adjacent to the tailings.
6. A dozer will push the staged debris into the tailings.
7. An excavator will push the debris away from the edge of the platform and then press the debris down into the tailings insuring total immersion of the debris thereby eliminating any void spaces.
8. Soil will be staged at the perimeter of the working platform. A dozer will push soil over the debris area burying debris and tailings.
9. Soils will be placed in the Main Impoundment.

8. Post Demolition Activities

Upon completion of soils assessment and removal restore area to grade for proper drainage. Additional soils assessment and removal will be conducted in accordance with the Mill Reclamation Plan. The purpose of soil removal is strictly for ALARA and not for final reclamation. Remove silt fences and any residual material at the silt fence. Remove barricades and re-establish traffic roadway.

Attachment 1 Mill Site Map

Attachment 2 Training Form (Modified)

DATE: _____

TO

TIME:_____ _____

TO: John Hamrick
MILL MANAGER

SECT. _____

[ ] COTTER EMPLOYEES
[ ] CONTRACTORS: _____

FROM: _____

I HELD A RADIATION SAFETY [ ] MEETING [ ] TRAINING TODAY. _____
I HELD A INDUSTRIAL SAFETY [ ] MEETING [ ] TRAINING TODAY.
I HELD A MISCELLANEOUS [ ] MEETING [ ] TRAINING TODAY. _____
(CHECK THE APPROPIATE TYPE MEETING/TRAINING ABOVE)

EMPLOYEE NAME	EMPLOYEE SIGNATURE	EMPLOYEE NUMBER	DATE	COMPANY	TEST

THE FOLLOWING RADIATION SAFETY SUBJECTS WERE DISCUSSED:

RADIATION SAFETY
HOURS:_____ SIGNED:_____

THE FOLLOWING INDUSTRIAL SAFETY SUBJECTS WERE DISCUSSED:

INDUSTRIAL SAFETY
HOURS:_____ SIGNED:_____

THE FOLLOWING MISCELLANEOUS SUBJECTS WERE DISCUSSED:

MISCELLANEOUS
HOURS:_____ SIGNED:_____

Attachment 3 (Page 1)

Cotter Corporation
Canon City Milling Facility

MEETING LOG

Date: _____

Time: _____

Conducted by: _____

Meeting Type: ☐ ROUTINE ☐ SPECIAL

REASON FOR MEETING:

EMPLOYEE NAME	EMPLOYEE SIGNATURE	EMPLOYEE NUMBER	COMPANY

THE FOLLOWING SUBJECTS WERE DISCUSSED:

_____

_____

_____

_____

_____

Attachment 3 (Page 2)

DAILY MEETING

Safety Share -

Check List

Authorized user presence and availability

Any unplanned spillage of solutions containing radioactive material exceeding 500 gallons.

Security Systems Report - perimeter fence checks, security systems

Shift Inspections of active mill areas

RWP's in progress

Safety Task Analysis review

Area reports by department (operations, maintenance, utility)

Planned activities for today

Discussion

Attachment 4

Cotter Corporation
Canon City Milling Facility

Tailgate Meeting Log

Date: _____

Time: _____

Conducted By: _____

Employee Name	Employee Signature	Employee Number	Company

Lessons Learned _____
_____

Near Misses _____
Accidents _____
Incidents _____

SPA-0012 additions or changes _____

Attachment 5

Utility Disconnect Verification

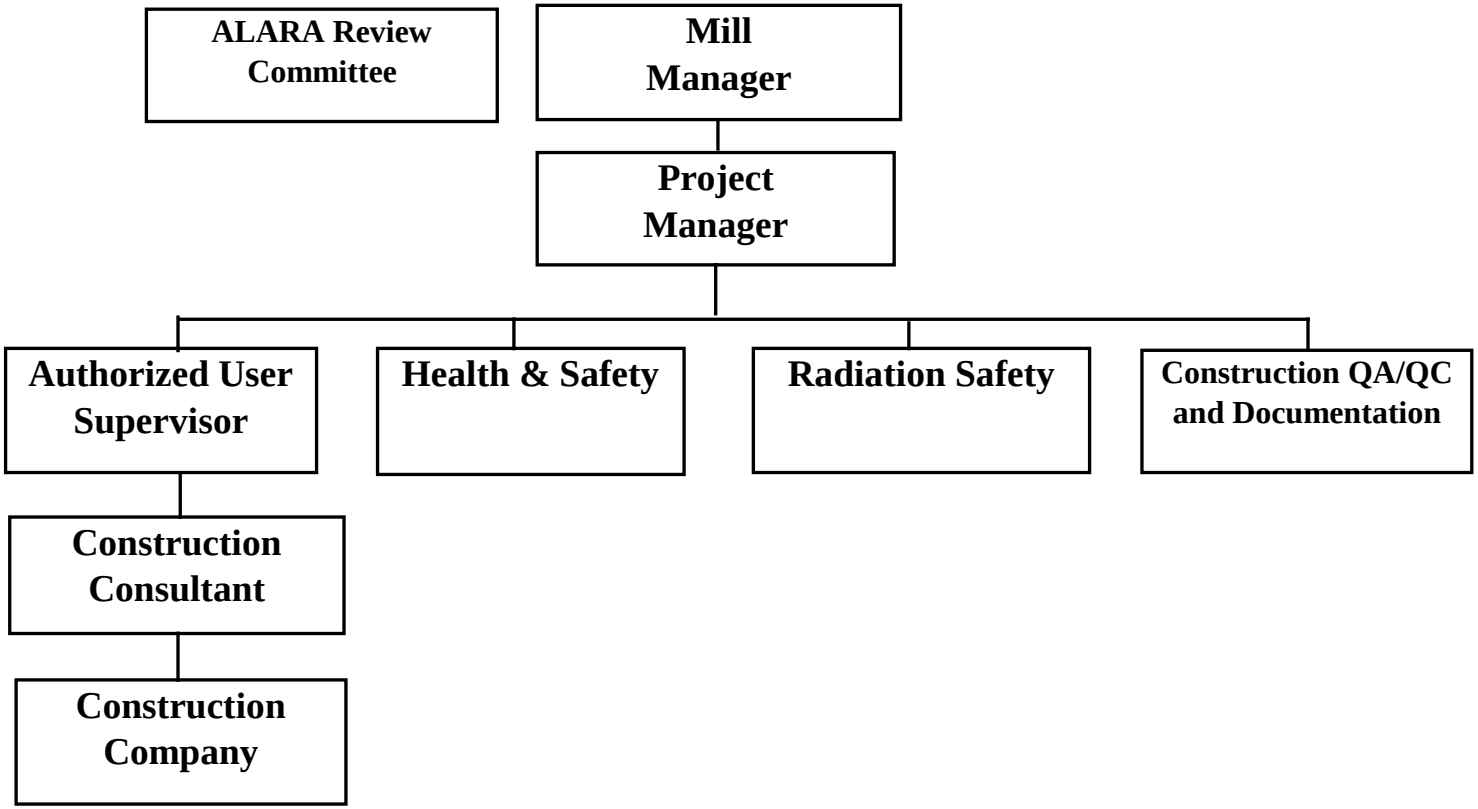
AREA:*

UTILITY	DATE	SIGNATURE	
Electric			**Maintenance**
			Safety
			Rad Safety
			Contractor
Gas			**Maintenance**
			Safety
			Rad Safety
			Contractor
Water			**Maintenance**
			Safety
			Rad Safety
			Contractor
Sanitation			**Maintenance**
			Safety
			Rad Safety
			Contractor
Chemical			**Maintenance**
			Safety
			Rad Safety
			Contractor
Data			**Maintenance**
			Safety
			Rad Safety
			Contractor

* See Attached Diagram

Note: Please sign the appropriate spaces above signifying that the utility service has been disconnected, air gapped, or capped off. Each responsible party must sign prior to any demolition beginning.

Attachment 6 Project Management Team



Attachment 7 Project Management Team Weekly Meeting Form

DATE: **MINUTES FOR MEETING:** **Cotter Demolition Project** **Recorder**

PRESENT:

ABSENT:

Topic:	Conclusions/Recommendations/Actions:	Action Assignment:
Project Report Demolition Activities previous week		Construction Advisor
Planned Demolition Activities for coming week		Construction Advisor
Rad Safety Review		RSO/ARSO
QA/QC		Mill Superintendent
Safety		Health & Safety Supervisor
Salvage Items status		Project Engineer

Attachment 8 Demolition Daily Meeting Form

Cotter

Date

_____

Contractor-

Job Task	Contract #

	#
Foreman	
Operator	
Laborer	

Weather

Equipment	#	Hrs	Loads	Activities	Material	Source	Deposition

Daily Workplace Inspection

Remarks

	Yds3/Ld	Tons/Load
A. Hauler		

Dump Truck		

Other			_____ for Contractor

Appendix A Pre-Demolition Activities

Complete all information use as many sheets as necessary

Task Location	Building or Structure	Task Title	Pre Demolition Activities
Contractor/Department		Prepared By	Richard Wooten
Supervisor		Reviewed By	ALARA Review Committee (ARC)
		Approved By	ARC

Standard Requirements
(SOP, SP, PPE, etc.)

Sequence of Job Steps	Potential Hazards (P,E,C,R)	Safe Procedures/Practices/Controls	Consequence Level	Likelihood	Risk Code	Hazard ID Code*
Asbestos Survey	P,C,R	Outside contractor	II	B	1	
Obtain Demolition Permit		Submit Permit application	I	A	0	

When a completed analysis indicates that the estimated risk code for any of the steps of this task is "medium" or higher (RC=3 or 4), then develop a formal written procedure for the task and have it reviewed and approved prior to beginning the work.

* From Hazard Identification Sheet

Appendix A Salvage Items

Complete all information use as many sheets as necessary

Task Location	Building or Structure	Task Title	Salvage Items
Department	Maintenance	Prepared By	Richard Wooten
Supervisor	Craig Simpson	Reviewed By	ARC
		Approved By	ARC

Standard Requirements
(SOP, SP, PPE, etc.)

Sequence of Job Steps	Potential Hazards (P,E,C,R)	Safe Procedures/Practices/Controls	Consequence Level	Likelihood	Risk Code	Hazard ID Code*
ID salvageable items	P,R	RH-190, PPE	II	C	2	12, 20, 21
Wash Down Equipment	P,C,R	Trained Personnel, PPE, SP-0009, RH-190, Guidelines for Spill Notification	II	B	1	2, 15, 21
Survey Salvageable Items	P,C,R	RH-120 & 121, SP-0009, PPE	II	C	2	11, 21
Isolate Equipment	P,E,C,R	Trained Personnel, PPE, SP-0001, SP-0009, RH-190, Guidelines for Spill Notification	II	B	1	2, 15, 21
Remove Salvageable Items	P,R	PPE, SP-0019, SP-0005, SP-0003	III	B	2	2, 8, 11,12, 14, 17, 21
Place In Storage	P,R	PPE, SP-0019, SP-0005, SP-0003	III	B	2	2, 8, 11,12, 14, 17, 21

When a completed analysis indicates that the estimated risk code for any of the steps of this task is "medium" or higher (RC=3 or 4), then develop a formal written procedure for the task and have it reviewed and approved prior to beginning the work.

* From Hazard Identification Sheet

Appendix A Disconnect Utilities

Complete all information use as many sheets as necessary

Task Location	Building or Structure	Task Title	Disconnect Utilities
Department	Maintenance	Prepared By	Richard Wooten
Supervisor	Craig Simpson	Reviewed By	ARC
		Approved By	ARC

Standard Requirements
(SOP, SP, PPE, etc.)

Sequence of Job Steps	Potential Hazards (P,E,C,R)	Safe Procedures/Practices/Controls	Consequence Level	Likelihood	Risk Code	Hazard ID Code*
Enter MCC	P,E,R	Building entry protocol, Trained electrical personnel, SP-0013	II	B	1	5, 10, 16, 17, 20, 23
ID circuits to disconnect	P,E	Trained electrical personnel, SP-0013	II	B	1	5, 10, 16, 17, 20, 23
De-energize ID'd breakers	P,E	Trained electrical personnel, SP-0001	III	B	2	5, 10, 16, 17, 20, 23
Air gap wires assoc. with breakers	P,E	Trained electrical personnel, PPE, SP-0001	III	B	2	5, 10, 16, 17, 20, 23
Verify power off.	P,E,R	Trained electrical personnel, SP-0013	II	B	1	2, 20, 23
Disconnect other utilities i.e. water (raw, fire, and potable)	P	Trained Personnel, PPE, work practices	II	B	1	20, 23

When a completed analysis indicates that the estimated risk code for any of the steps of this task is "medium" or higher (RC=3), then develop a formal written procedure for the task and have it reviewed and approved prior to beginning the work.
* From Hazard Identification Sheet

Appendix A Soils Assessment and Removal or Stabilization

Complete all information use as many sheets as necessary

Task Location	Mill Building	Task Title	Soils Assessment & Removal or Stabilization
Contractor		Prepared By	Richard Wooten
Supervisor		Reviewed By	ARC
		Approved By	ARC

(SOP, SP, PPE, etc.)

Sequence of Job Steps	Potential Hazards (P,E,C,R)	Safe Procedures/Practices/Controls	Consequence Level	Likelihood	Risk Code	Hazard ID Code*
Barricade area	P	Work practice, area isolation	I	A	0	12
Install silt fences	P	Work practice	I	A	0	12
Radiation survey	P,R	Training; Work Practice; RH-110	I	A	0	21
Soil Sampling	P,R	Training; Work Practice;	I	A	0	21
Identify areas for soil removal			I	A	0	
Dust control	P,R	Work practice, SP-0005	I	A	0	14, 17, 19, 21
Soils removal	P,R	SP-0005, training, PPE, Wind Speed in excess of 25mph	III	B	2	2, 14, 17, 19, 21
Transport of soils to Disposal Area	P,R	SP-0005, training, PPE, Wind Speed in excess of 25mph. No use of man lift at wind gust in excess of 30 mph.	III	B	3	2, 14, 17, 19, 22

When a completed analysis indicates that the estimated risk code for any of the steps of this task is "medium" or higher (RC=3 or 4),
then develop a formal written procedure for the task and have it reviewed and approved prior to beginning the work.
* From Hazard Identification Sheet

Appendix A Post Demolition

Complete all information use as many sheets as necessary

Task Location	Mill Building	Task Title	Post Demolition
Contractor		Prepared By	Richard Wooten
Supervisor		Reviewed By	ARC
		Approved By	ARC

Standard Requirements
(SOP, SP, PPE, etc.)

Sequence of Job Steps	Potential Hazards (P,E,C,R)	Safe Procedures/Practices/Controls	Consequence Level	Likelihood	Risk Code	Hazard ID Code*
Radiation survey	P,R	Training; Work Practice; RH-110	I	A	0	21
Dust Control	P,C,R	Work practice, SP-0005, PPE	II	B	1	1, 2, 10, 14, 17, 21
Regrade area for drainage	P	Work practice, SP-0005, PPE	II	B	1	1, 2, 10, 14, 17, 21
Remove silt fences	P,R	Work practice, SP-0005	I	A	0	12, 14, 17, 21
Remove Barricades	P	Work practice	I	A	0	12

When a completed analysis indicates that the estimated risk code for any of the steps of this task is "medium" or higher (RC=3 or 4),
then develop a formal written procedure for the task and have it reviewed and approved prior to beginning the work.
* From Hazard Identification Sheet

Appendix B Hazard Identification Worksheet

Task: Demolition **Date:** 2011

Instructions: Use the following list as a guide to evaluating task conditions and hazards. Apply information to the task hazard analysis sheet.

	General Conditions	Mitigations
1	Are you familiar with MSDS requirements for the materials being used and the required Personal Protective Equipment (PPE)?	SP-0009 "Hazard Communication"; SPA-0003 "Personal Protective Equipment"; Mill Safety Manual
2	Will you create dust, welding arcs, heat, excessive noise, or chemical mixtures during the task?	SP-0008 "Hearing Protection"; SP-0009 "Hazard Communication"; SP-0018 "Welding"; Mill Safety Manual; RH-190 "Respiratory Protection"; RH-130 "Occupational General Air Particulate Survey"; RH-150 "Occupational Breathing Zone Monitoring"
3	Are there any fire or explosive hazards associated with the task or likely to develop because of the task?	SP-0007 "Hot Work Permit"; SP-0017 "Fire Extinguishers"; Mill Safety Manual
4	Could the task create headaches, breathing problems, or dizziness from odors, etc.?	RH-190 "Respiratory Protection"; Mill Safety Manual
5	Is the task performed where limited entry, egress, or poor ventilation exists?	SP-0004 "Confined Space Entry"; Mill Safety Manual
6	Does the task require compressed, liquefied, or noxious gases?	SP-0014 "Compressed Gas Cylinders: Transportation, Storage, and Use"; Mill Safety Manual
7	Does the task require work in areas or with materials subject to extreme temperatures?	SP-0012 "Guarding"
8	Does the task involve the use of fork lifts, cranes, man lifts?	SP-0003 "Cranes and Lifting Equipment"; Mill Safety Manual
9	Does the task involve the use of powered hand tools?	SP-0010 "Hand & Power Tools"
10	Does the work involve the risk of electrical shock or other forms of hazardous energy?	SP-0001 "Control of Hazardous Energy (Lock Out/Tag Out); SP-0013 "Electrical Safety"; Mill Safety Manual
11	Does the task involve working above or below ground?	SP-0002 "Fall Protection"; SP-0004 "Confined Space Entry"; SP-0011 "Trenching and Shoring; Mill Safety Manual
12	Does the task involve lifting, pulling, pushing, or carrying heavy objects or repetitive motion?	SP-0019 "Proper Lifting"; Mill Safety Manual

13	Does the task involve work with pressurized vessels or lines?	SP-0001 "Control of Hazardous Energy (Lock Out/Tag Out); Mill Safety Manual; Guidelines for Spill Notification
14	Does the task involve the use of mobile equipment such as trucks, loaders, rail cars, etc.?	SP-0003 "Cranes and Lifting Equipment"; SP-0005 "Vehicles"; SP-0015 "Shuttle Car Operation; Mill Safety Manual
15	Does the task involve the use of non-pressurized that could create spills?	Guidelines for Spill Notification
16	Does the task require any permits?	SP-0004 "Confined Space Entry"; SP-0006 "Hazardous Work Permit"; SP-0007 "Hot Work Permit"; RH-060 "Radiation Work Permit"
17	Does the task require specialized training?	SPA-0007 "Training and Education"; Mill Safety Manual
18	Will waste products require special handling or disposal requirements?	
19	Environmental releases such as spills, leaks, dusts, smoke, fumes, gases, etc.	EV-020 "Environmental Air Particulate Sampling"
20	Exposure to insects, reptiles, animals (i.e. mice), etc.?	Mill Safety Manual
21	Radioactive materials present? Uranium Ore, Caldesite Ore, other concentrates, tailings material	RH-010 "Radiological Health & Safety Training"; RH-110 "Beta and/or Gamma Exposure Rate Surveys"; RH-120 "Alpha, Beta/Gamma Contamination Surveys; RH-140 Radon-222/Radon-220 Decay Product Surveys
22	Radioactive materials present? Yellowcake	RH-010 "Radiological Health & Safety Training"; RH-110 "Beta and/or Gamma Exposure Rate Surveys"; RH-120 "Alpha, Beta/Gamma Contamination Surveys
23	Radioactive materials present? Contaminated Materials, soils, dust	RH-010 "Radiological Health & Safety Training"; RH-110 "Beta and/or Gamma Exposure Rate Surveys"; RH-120 "Alpha, Beta/Gamma Contamination Surveys; RH-121 "Alpha, Beta/Gamma Smear Sampling"; RH-200 "Personnel Release Surveys"
24	Radioactive materials present? Nuclear Density Gauges, Nuclear Level Gauges, Other Sources	RH-010 "Radiological Health & Safety Training"; RH-110 "Beta and/or Gamma Exposure Rate Surveys"; RH-120 "Alpha, Beta/Gamma Contamination Surveys; RH-170 "Industrial Device Installation"
25	Is there a possibility of exposure to gaseous or particulate concentrations that are Immediately Dangerous to Life or Health (IDLH)?	Monitor for gaseous or particulate concentrations

26	Does the task involve work with or around moving machinery or conveyor belts?	SP-0012 "Guarding"; Mill Safety Manual
27	Any other hazards that have been overlooked with this list?	