Sohio Western Mining Company
L-Bar Uranium Operations
Mill Demolition/Salvage
Work Plan

INTRODUCTION

The L-Bar Ranch mine and mill facilities were constructed between 1974 and 1976. Operations began in 1976 and continued until shut down in mid-1981. The property has been in a maintenance and care mode in the event that the uranium market improved sufficiently to justify resuming operations. The decision has been made by the Standard Oil Company to decommission the L-Bar facility and a tender document has been developed for salvage and demolition of the surface facilities. The objective of the tender document is to demolish all structures on site, dispose of debris and waste on site in accordance with applicable regulations, and to provide, to the demolition contractor, uncontaminated and decontaminated salable salvage material and equipment.

The purpose of the following work plan is to provide information to the Nuclear Regulatory Commission concerning the work which will be conducted during the demolition, disposal and salvage operations.

SCOPE OF WORK

The scope of work includes demolition, removal and disposal of all buildings, structures and foundations of concrete including structural supports and attachments down to adjacent site grade. Work includes the removal, transport and disposal of all process equipment, material handling equipment, power magazines, mine head frames, compressor buildings, hoist houses, gravity head water tanks, thickeners, warehouse, office facilities, all permanent and temporary buildings, pipe, power transmission lines and equipment, rail, mobile equipment and miscellaneous tools, equipment and supplies.

The scope also includes filling and grading excavations, holes or depressions left after demolition to blend with the existing adjacent site grade.

Acceptable backfill may include broken masonry, soil or other material as authorized by the Standard Oil Company project representative. All backfill materials will be dismantled, crushed and compacted so as to minimize void space and to minimize impact on the final cover. All backfill will be placed in successive, uniform layers not to exceed 12 inches in depth and shall be compacted to a density eliminating subsidence, providing a stable and safe base to support heavy equipment and graded to insure proper drainage and prevent erosion, leaching or ponding. The final 12 inch lift of backfill shall be soil or other material acceptable to the Standard Oil Company project representative. The borrow area for the final 12 inch lift will most likely be Mancos Shale from the hill to the northeast of the mill.

The intent of the cover-in-place approach is to extend the tailings final cover toward the mill area, resulting in a single, contiguous covered area scheduled for title transfer to NRC (Figure 1).

RADIATION SAFETY ASPECTS

Radiation Safety Officer

All decontamination work will be conducted by the contractor under the supervision and authority of the site Radiation Safety Officer (RSO). The RSO will have the primary responsibility for the technical adequacy and correctness of the radiation protection program. The RSO will issue job specific radiation work permits (RWP) for non routine work such as dismantling the yellowcake driers, where the potential for exposure to radioactive material exists and for which no standard written operating procedures already exist. For routine jobs the radiation protection program for the decommissioning will conform to the current license requirements for worker safety and protection. The RSO will have the responsibility and authority for administration and enforcement of the regulations and administrative policies that affect any aspect of the radiological safety program and for issuing RWP's. The RSO will review and approve all routine work plans to assure they do not adversely affect the radiation protection program.

Worker Training

All contract workers on site will have received radiation safety training and will provide adequate documentation of that training to the RSO. The radiation safety training course the contract workers will have received will be the same training and radiation safety instruction normally required of all permanent workers. The radiation safety training course will include the Fundamentals of Radiation Protection, Personal Hygiene, Facility Specific Protection, Health Protection Regulations and Emergency Procedures, as detailed in NRC Regulatory Guide 8.31, Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Mills Will be as Low as is Reasonably Achievable. Supervisors will have received specialized training in their supervisory responsibilities with respect to worker radiation protection.

Exposure Determinations

Film badges or TLD badges for external exposure will be worn by all workers. Respirators, which meet the standards in NRC Regulatory Guide 8.15, Acceptable Programs for Respiratory Protection, will be utilized by workers exposed to airborne radioactive materials. The film processing results will be provided to the RSO. Pocket dosimeters will be worn by all casual visitors to the mill area and the readings reported to the RSO before leaving the restricted area. Action levels to be enforced by the RSO will be as defined in NRC Regulatory Guide 8.30, Health Physics Surveys in Uranium Mills.

Radiation Work Permits and Radiation Surveys

Certain areas of the mill and some of the equipment and vessels are known to be contaminated with ore dust, yellowcake or other materials from various stages of the uranium concentrating process. Radiation Work Permits will be used for these areas and special precautions will be taken during the dismantling process to control airborne dusts (e.g., using respirators, providing backup respirators and washing down first with water and continued use of water spray as necessary to keep dust from forming) and to protect workers from external radiation exposure (e.g., requiring coveralls, gloves or

other protective clothing). The RWP's will describe the details of the job to be performed, the precautions necessary to reduce exposure to uranium and its daughters and the radiological monitoring and sampling necessary before, during and following completion of the job. The RSO will indicate by signature the review of each RWP prior to initiation of the work and will ensure that the work is carried out in strict accordance with the conditions of the RWP.

Airborne radioactivity measurements, surveys for surface contamination, surveys for contamination of skin and personal clothing, and surveys of equipment prior to release to unrestricted areas will be conducted by the contractor in accordance with NRC Regulatory Guide 8.30, Health Physics Surveys in Uranium Mills. These procedures and measurements will be performed and documented by the contractor and submitted to the RSO for approval. The RSO will monitor all decontamination procedures and verify that materials and equipment meet specified release limits.

RADIOACTIVITY RELEASE LIMITS

Unrestricted Use

All structural material or equipment considered for unrestricted salvage use or release to unrestricted areas must meet the criteria as specified in NRC Regulatory Guide 10.4, Guide for the Preparation of Applications for Licenses to Process Source Material, and NRC Draft Document "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for By-product, Source or Special Nuclear Material".

Restricted Use

All equipment or structural materials released for use in other uranium operations must meet the limits for surface contamination and external radiation during transport as specified in the Department of Transport Regulations Sections 49 CFR 173.392(d)(1)(iv), 49 CFR 173.393(j) and 49 CFR 173.397(a).

All material leaving the site will be accompanied by shipping documents verifying the radiation survey and certifying that radiation or transport limits are met, and will be approved in writing by the RSO. The RSO will utilize a shipping manifest and logging system which documents the radiation survey results and provides chain of custody information to final disposition. Items determined to have excessive radiation levels for final disposition will be cleaned and resurveyed before being allowed offsite, or disposed on site.

GENERAL PROJECT SAFETY PROGRAM

Contractor shall implement a Project Safety Program which includes, but is not limited to, the following:

Contractor shall conduct its activities in accordance with the Demolition Safety Manual, National Association of Demolition Contractors, 1981, and in accordance with MSHA standards and guidelines and the NRC Regulatory Guides incorporated by reference in this work plan.

Contractor shall be required to maintain a shower and clothes washing facility so that all employees may shower and change clothing before leaving premises, and so that contaminated work clothing is washed on site. Shower and clothes washing facilities exist on site and may be used for this purpose.

Daily inspections of work areas for safety compliance shall be conducted.

Adequate protective clothing including, when appropriate, hard hats, safety glasses, and safety-toed shoes shall be worn on the work site. Respirators, welding hoods, cutting goggles, face shields, hearing protection, safety belts, and other safety equipment shall be provided and used as the work activities dictate.

Contractor shall notify Owner's Project Representative immediately following any serious accident or property damage. Contractor shall provide Owner with all relevant information including copies of any reports prepared by Contractor.

Contractor shall maintain its own record and reporting files and is responsible for notifying the appropriate agencies (such as MSHA) following any reportable accident.

Contractor shall acquire from employees and subcontractors, any required certification demonstrating adequate training and education for all work activities including radiation safety training and specialized activities such as high voltage electrician, crane operator, blaster, etc.
Contractor shall train all supervisory personnel in basic first aid.

Contractor shall provide first aid supplies and equipment consistent with MSHA standards.

Contractor shall develop and implement a fire protection and fire fighting procedure plan.

Contractor shall ensure that all equipment used on-site is in compliance with applicable MSHA regulations, prior to and during operation at the project site. Any equipment that does not meet applicable requirements shall not be permitted on the project site.

Contractor shall obtain and post Material Safety Data Sheets for all chemicals and hazardous substances on the project site.

Contractor shall perform all employee sampling and monitoring as specified in NRC Regulatory Guide 8.30, Health Physics Surveys in Uranium Mills and as required by MSHA and maintain adequate records.

Contractor shall develop and implement a plan for emergency medical care.

DISPOSAL OF UNSALVAGEABLE MATERIAL

All unsalvageable material from the demolition work on the mill site will be dismantled, crushed and compacted in place so as to minimize void space and subsidence and to minimize impact on the integrity of the final cover. The

mill area will be covered in place and the final cover of the mill area will be a continuation of the tailings final cover, so as to result in a single contiguous variable thickness covered area for title transfer to NRC (Figure 1).

All holes and depressions left after demolition will be filled and graded to blend with existing adjacent site grade. Backfill will be broken masonry, soil or other material as authorized by the Standard Oil Company project representative. Backfill will be placed in successive uniform layers not to exceed 12 inches in depth, with a final 12 inch lift of soil/Mancos Shale as approved by the Standard Oil Company project representative.

A second area of unsalvageable material is located at the southern end of the tailings area. These materials consist of used pipe, construction debris and equipment. Equipment or unsalvageable material from the mine/mill area will be placed in this area for final disposal. Final disposal will be by trench and fill in the native Mancos Shale immediately south of the tailings area (See Figure 1). These materials will be dismantled, crushed and compacted in the trench subsequent to burning combustibles such as wood and other construction/ demolition debris. A minimum 3 ft. of cover material (Mancos Shale) will be placed above the debris. Disposal adjacent to the tailings rather than in trenches within the tailings allows for immediate disposal of demolition debris irrespective of the degree of consolidation of the tailings. The landfill trench will also be covered with the radon barrier final cover during the final reclamation.

INCORPORATED BY REFERENCE

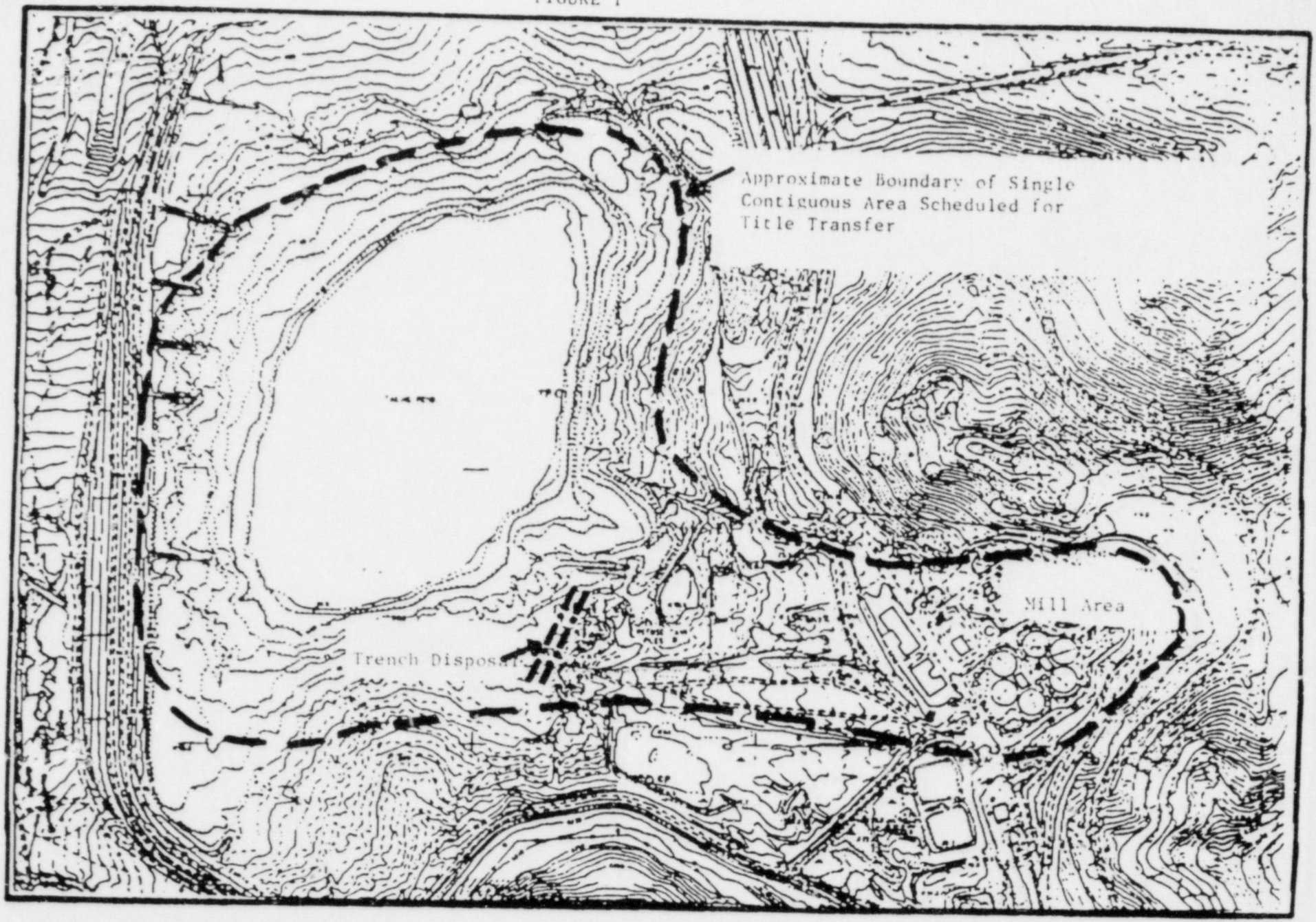
NRC Draft of Document "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for By-Product, Source or Special Nuclear Material".

NRC Regulatory Guide 8.15
NRC Regulatory Guide 8.30
NRC Regulatory Guide 8.31
NRC Regulatory Guide 10.4

DOT Regulations Section 49 CFR 173.392((d)(1)(iv))
DOT Regulations Section 49 CFR 173.393(j)
DOT Regulations Section 49 CFR 173.397(a)

National Association of Demolition Contractors, Demolition Safety Manual, 1981

FIGURE 1


Approximate Boundary of Single
Contiguous Area Scheduled for
Title Transfer
Mill Area