United States Department of Energy

LONG-TERM SURVEILLANCE PLAN FOR THE BURRO CANYON DISPOSAL CELL, SLICK ROCK, COLORADO

November 1996

MASTER

Uranium Mill Tailings Remedial Action Project

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**LONG-TERM SURVEILLANCE PLAN
FOR THE BURRO CANYON DISPOSAL CELL,
SLICK ROCK, COLORADO**

November 1996

**Prepared for
U.S. Department of Energy
Environmental Restoration Division
UMTRA Project
Albuquerque, New Mexico**

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LIST OF ACRONYMS

<u>Acronym</u>	<u>Definition</u>
BLM	Bureau of Land Management
DOE	U.S. Department of Energy
DOE	U.S. Department of the Interior
LTSP	long-term surveillance plan
NRC	U.S. Nuclear Regulatory Commission
PLO	Public Land Order
UMTRA	Uranium Mill Tailings Remedial Action
UMTRCA	Uranium Mill Tailings Radiation Control Act

CHANGE HISTORY

Document version	Date	Pages/comments
Rev. 0, Ver. 1	11/1/96	Initial version.

1.0 PURPOSE AND SCOPE

Note: This draft was prepared prior to completion of the Burro Canyon disposal cell. Upon completion of the disposal cell, the draft will be updated with actual volumes, areas, and reference citations.

This long-term surveillance plan (LTSP) describes the U.S. Department of Energy's (DOE) long-term care program for the Uranium Mill Tailings Remedial Action (UMTRA) Project's Burro Canyon disposal cell in San Miguel County, Colorado.

The U.S. Nuclear Regulatory Commission (NRC) developed regulations for the issuance of a general license for the custody and long-term care of UMTRA Project disposal sites in 10 CFR Part 40. The purpose of this general license is to ensure that the UMTRA Project disposal sites will be cared for in a manner that protects the public health and safety and the environment. For each disposal site to be licensed, the NRC requires the DOE to submit a site-specific LTSP. The DOE prepared this LTSP to meet this requirement for the Burro Canyon disposal cell. The general license becomes effective when the NRC concurs with the DOE's determination of completion of remedial action for the Burro Canyon disposal cell and the NRC formally accepts this LTSP. Attachment 1 contains the concurrence letters from NRC.

This LTSP describes the long-term surveillance program the DOE will implement to ensure that the Burro Canyon disposal cell performs as designed. The program is based on site inspections to identify threats to disposal cell integrity. No ground water monitoring will be required at the Burro Canyon disposal cell because the ground water protection strategy is supplemental standards based on low-yield from the upper-most aquifer. The LTSP is based on the UMTRA Project's long-term surveillance program guidance (DOE, 1996a) and meets the requirements of 10 CFR §40.27(b) and 40 CFR §192.03.

2.0 FINAL SITE CONDITIONS

Remedial action at the two former uranium processing sites in Slick Rock, Colorado, consisted of excavating and relocating the residual radioactive materials to the Burro Canyon disposal cell. The DOE constructed a disposal cell to control the residual radioactive material in accordance with 40 CFR Part 192. The Burro Canyon disposal site is fenced and its perimeter is marked with warning signs. The site completion report (MK-ECE, 1996) contains a detailed description of the final site conditions.

2.1 SITE HISTORY

The Burro Canyon Disposal Cell is approximately five miles (eight kilometers) by road northeast of the Slick Rock Post Office and contains the tailings and mill debris from the two Slick Rock UMTRA Project processing sites one to three miles northwest of the small community of Slick Rock in San Miguel County, Colorado (Figure 2.1).

Both processing sites are on the banks of the Dolores River. The North Continent mill was designed to extract vanadium and radium salts from locally mined ores. From 1931 until 1942, vanadium was extracted from ore by a sulfuric acid leaching process. In 1942, the extraction techniques included an initial salt-roast circuit with an acid-leach process to recover vanadium, uranium, and radium concentrates (Merritt, 1971). The tailings and milling wastes were then disposed on the alluvial floodplain below the mill. The quantity of tailings produced at the North Continent site was approximately 28,700 cubic yards (21,950 cubic meters). An additional 80,000 cubic yards (61,000 cubic meters) of contaminated materials were on-site prior to remediation.

The Union Carbide mill began operation in 1957 using a uranium-vanadium upgrading technique to process ore mined from the surrounding area. The milling process at the Union Carbide site included an initial step to dry-grind the coarse-grain sandstone, separating the fines from the coarser ore. The coarse ore fraction was then combined with a recirculated sulfuric acid solution. Following this step, a sand-slime separation process obtained a second uranium product. The sand product was further acid-leached, washed, and discharged to the tailings pile. A third uranium product resulted from an ammonia neutralization step on part of the pregnant solution. All three products comprised the upgraded material, which was shipped to the Umetco mill at Rifle, Colorado, for further processing. The process of separating the finer fraction for shipment off-site is the reason the tailings pile at the Union Carbide site is composed of fine-grained sand with virtually no slimes. The Union Carbide mill closed in December 1961 (Merritt, 1971). The quantity of tailings produced at the Union Carbide site was approximately 278,300 cubic yards (212,800 cubic meters). An additional 522,500 cubic yards (407,900 cubic meters) of contaminated materials were on-site prior to remediation.

Surface remedial action began in April 1995 and ended in December 1996. During 1995 and 1996, the DOE relocated uranium mill tailings and other residual radioactive materials (such as contaminated demolition debris, soils, and vicinity

- LEGEND**
- U.S. HIGHWAY
 - STATE HIGHWAY
 - NATIONAL FOREST

FIGURE 2.1
REGIONAL MAP SHOWING
LOCATIONS OF THE NORTH CONTINENT, UNION CARBIDE, AND BURRO CANYON SITES
NEAR SLICK ROCK, COLORADO

property materials) and placed them in the disposal cell. Construction of the disposal cell was completed in December 1996 with placement of a radon/infiltration barrier and frost and erosion protection layers. The total quantity of contaminated material placed in the disposal cell is approximately 632,000 cubic yards (483,227 cubic meters); the quantity of uncontaminated material placed in the cell is approximately 138,000 cubic yards (105,514 cubic meters)

The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (42 USC §7901 *et seq*) gave the DOE authority to perform remedial action at the Slick Rock processing sites. The DOE evaluated the environmental impacts associated with the Slick Rock sites remedial action in an environmental assessment (DOE, 1995). The NRC and the state of Colorado concurred with the DOE's remedial action plan (DOE, 1996b) to comply with the requirements of 40 CFR Part 192, Subparts A-C.

The DOE prepared a completion report documenting compliance with the remedial action plan and the site as-built conditions (MK-F, 1997). The DOE also will prepare a final audit report and certification summary and submit it along with the completion report to the NRC for concurrence. Concurrence from the NRC on the certification report will be included in the permanent site file.

2.2 GENERAL DESCRIPTION OF THE SITE VICINITY

The population of San Miguel County is approximately 4314 (DOC, 1991). The Slick Rock area is sparsely populated; 10 people live within 10 miles (1.6 kilometers) of the sites. The dominant land use in the area is livestock grazing. In the past, mining was common and there are now numerous abandoned mines and mining roads in the area.

2.3 DISPOSAL SITE DESCRIPTION

This section provides a brief description of the Burro Canyon disposal cell. Detailed descriptions can be found in the site remedial action plan (DOE, 1996b) and completion report (MK-F, 1997).

2.3.1 Site ownership and legal description

The Burro Canyon disposal site is located on U.S. Bureau of Land Management (BLM)-administered land. The area is used by ranchers for grazing cattle approximately seven months of the year. The surrounding area is public land, also administered by the BLM, and is used primarily for grazing, hunting, and other recreational uses, with occasional mineral development as market conditions warrant. Attachment 2 provides a legal description of the disposal site. Plate 1 shows the final site boundary and identifies ownership of the site and surrounding areas at the time of licensing.

2.3.2 Directions to the disposal site

The Burro Canyon disposal site can be reached by automobile via paved and graded dirt roads (Figure 2.2) by following these directions:

1. From Slick Rock, Colorado, take State Highway 141 east approximately five miles (eight kilometers).
2. Turn left (north) on to the access road to the site. Travel approximately three quarters of a mile (1.2 kilometers) to the site. The site access point is marked by a site entrance sign and granite site marker located just inside the site fence.

Entry to the disposal site is restricted by a barbed-wire fence around the site perimeter. The south access gate is kept locked and the key needed to enter the site may be obtained from the DOE Grand Junction Project Office.

2.3.3 Description of surface conditions

The Burro Canyon disposal site is located on approximately 62 acres (25 hectares) of land (Plate 1). The completion report (MK-F, 1997) contains a detailed description of the final site conditions including the results of the final site topographic survey. The site is enclosed with a five-strand, smooth-wire fence that was placed during construction. The exclusion boundary is marked with warning signs, boundary markers, and survey monuments. The tailings and other contaminated materials are contained in a rock-covered disposal cell located in the center of the site.

The final site grading resulted in all areas contoured to promote drainage away from the disposal cell. The DOE used a mixture of grass species to revegetate all disturbed areas of the disposal site not covered by riprap (MK-ECE, 1996).

At the completion of remedial action, the DOE documented final disposal site conditions with site maps, as-built drawings, and ground and aerial photographs (MK-F, 1997). This information illustrates baseline conditions for comparison to future disposal site conditions. Lithologic logs and construction data for monitor wells drilled on and around the disposal site provide detailed information of site hydrogeology. All original drawings, site maps, well logs, and photographs are part of the Slick Rock permanent site file.

2.3.4 Permanent site-surveillance features

Survey and boundary monuments, site markers, and warning signs are the permanent long-term surveillance features of the Burro Canyon disposal cell. Plate 1 shows the locations of these features and Table 2.1 provides their survey grid coordinates. Typical construction and installation specifications for these features are shown in the long-term surveillance guidance (DOE, 1996a) and subcontract documents (MK-ECE, 1996).

FIGURE 2.2
LOCATION OF PROCESSING AND DISPOSAL SITES
SLICK ROCK, COLORADO

Table 2.1 Locations of permanent surveillance features, Slick Rock, Colorado, disposal site

Feature	Location coordinates ^a
<u>Site markers</u>	
SMK-1	N 18,700; E 21,650
SMK-2	N 19,860; E 21,930
<u>Survey monuments</u>	
PM-1	N 18,600; E 22,440
PM-2	N 21,370; E 19,825
PM-3	N 20,00; E 22,500
<u>Boundary monuments</u>	
BM-1	N 19,020; E 21,300
BM-2	N 20,310; E 21,300
BM-3	N 20,310; E 22,625
BM-4	N 19,360; E 22,575
BM-5	N 18,690; E 22,350

^aCoordinates in feet based on Project Survey Control Point (N 15,000; E 15,000 - modified Colorado State Plane Coordinate System).

From MK-ECE, 1996.

Three survey monuments establish permanent horizontal control based on the Colorado State Plane Coordinate System (Central Zone) and are referenced to the Project Survey Control Point, which is located about 700 feet (210 meters) east of the southeast corner of the site at an elevation of 7923.32 feet (2415.03 meters) above national geodetic vertical datum (NGVD). The three permanent survey monuments (PM-1, PM-2, and PM-3) are Berntsen RT-1 markers set in concrete with the monument approximately 4.0 inches (10 centimeters) above ground level. Magnets in the markers permit easier detection if they become buried over time. The survey monument identification number is stamped on the top of the metal cap.

Five boundary monuments lie along the final site boundary. The boundary monuments are Berntsen Model A-1 survey monuments set in concrete with the monument approximately 1.0 inch (25 millimeter) above ground level. Magnets in the A-1 monuments allow easier detection if they become buried. The boundary monument identification number is stamped on the top of the metal cap.

Two unpolished granite markers with an incised message identify the Burro Canyon disposal cell. The message includes a drawing showing the general location of the stabilized disposal cell within the site boundaries, the date of closure, the weight of

tailings (1,140,000 dry tons [1,034,000 metric tons]), and the amount of radioactivity (175 curies of radium-226). Site marker SMK-1, near the south access gate to the site, is set in reinforced concrete that extends 3.0 feet (0.9 meters) below the ground surface. Site marker SMK-2, at the crest of the disposal cell, is set in reinforced concrete that extends to the top of the frost protection barrier.

The DOE-posted warning signs (18 inches [460 millimeters] by 24 inches [610 millimeters]) indicate property use around the disposal site perimeter. The site entrance sign displaying the DOE 24-hour phone number is at the south access gate to the disposal site near site marker SMK-1. In addition to the entrance sign, 28 perimeter warning signs are located approximately 5.0 feet (1.5 meters) inside the site fence at approximately 200-foot (60-meter) intervals. The warning signs are mounted on steel posts with the tops of the signs approximately 6.0 feet (2.0 meters) above the ground surface. The sign posts are embedded in concrete to a depth of approximately 3.0 feet (1.0 meter) below ground surface.

2.4 DISPOSAL CELL DESIGN

The 12-acres (4.9-hectares) disposal cell is located on a small mesa top isolated from upland drainage runoff. The disposal cell also is located in an area that is not subject to any significant hazard from slope failure processes such as landslides, debris flows, mud flows, and rock falls. The geomorphic processes posing a potential hazard to the stabilized disposal cell are ephemeral drainage channel changes, low-gradient slope erosion, and wind erosion; however, these processes are not reasonably expected to affect the disposal cell within the next 1000 years, or in any case for at least 200 years.

The disposal cell is constructed partially below grade and rises above the surrounding terrain to a maximum elevation of about 5895 feet (1797 meters) above NGVD. The disposal cell contains approximately 632,000 cubic yards (483,200 cubic meters) of relocated tailings and other residual radioactive materials, primarily contaminated soil and demolition debris. The disposal cell is capped with a 5.0-foot (1.5-meter)-thick multiple-component cover.

A 1.5-foot (0.45-meter)-thick radon/infiltration barrier is placed over the contaminated materials. This barrier is constructed of on-site sandy clay and is designed to reduce the radon-222 flux from the disposal cell to less than 20 picocuries per square meter per second and minimize water infiltration into the tailings. A 2.0-foot (0.6-meter)-thick layer of compacted soil lies on top of the radon/infiltration barrier to prevent the clay barrier from being adversely affected by freezing and thawing cycles. A 0.5-foot (0.15-meter)-thick, coarse-grained bedding layer is between the radon/infiltration barrier and the frost protection barrier to provide a capillary break and promote drainage of infiltrating water away from the radon barrier. The topslopes and sideslopes of the disposal cell are capped with rock to protect against wind and water erosion and prevent damage to the underlying radon/infiltration barrier. Because of the disposal cell's location, no permanent drainage or interceptor ditches were required at the Burro Canyon disposal site.

The erosion protection layer is 0.67-foot (0.20-meter)-thick riprap on the topslopes and 1.0-foot (0.3-meter)-thick riprap on the sideslopes. A 0.5-foot (0.15-meter)-thick bedding layer is between the riprap and the radon/infiltration barrier to prevent damage to the barrier by rocks and loss of the fined-grained radon/infiltration barrier material. The maximum grade is 4.0 percent on the topslopes and 25 percent on the sideslopes. These grades, in conjunction with the bedding layer, will allow excess surface water to run off the disposal cell and be conveyed to adjacent site grades in a manner that minimizes the risk of significant erosion. The components of both the topslope and sideslope covers are intended to minimize the potential for deep percolation of precipitation into the residual radioactive material.

There is a riprap apron at the toe of the disposal cell, which is up to 5.0 feet (1.5 meters) thick. At ground surface, riprap protection extends up to 20 feet (6.0 meters) from the toe of the disposal cell.

2.5 GROUND WATER PROTECTION STRATEGY

To achieve compliance with the U.S. Environmental Protection Agency ground water protection standards (Subpart A of 40 CFR Part 192), the DOE proposes to apply supplemental standards for limited use ground water (40 CFR §192.2(g) [1995]). Supplemental standards are appropriate due to the low yield (less than 150 gallons per day) (6.6×10^{-3} liters per second) in the upper-most aquifer (upper sandstone unit of the Burro Canyon Formation). Ground water in this aquifer is not a current nor potential source of drinking water because of the low yield. Pursuant to 40 CFR §192.03 (1995), the DOE has determined that proposing concentration limits and ground water monitoring at point of compliance wells at the Burro Canyon disposal site would not further protect human health and the environment (DOE, 1995).

3.0 SITE INSPECTIONS

The DOE will conduct routine inspections of the Burro Canyon disposal site to detect progressive change caused by slow-acting natural processes and to identify potential problems before the need for extensive maintenance, repairs, or corrective action. Reports of events or conditions that have affected or potentially could affect the disposal site will also be investigated. The DOE will compare the findings from these inspections to initial baseline conditions to identify any changes over time and to provide a basis for future inspections, repairs, and corrective actions. This process is shown in Figure 3.1.

Site inspections will be documented. After each inspection, the DOE will prepare a report for the NRC that records the findings of the inspection and clearly identifies any adverse impacts or threats to the disposal cell.

3.1 INSPECTION FREQUENCY

The DOE will inspect the Burro Canyon disposal site annually. The DOE may schedule more frequent inspections if necessary; for example, the DOE may schedule a separate inspection of site vegetation if the annual site inspection does not coincide with the general growing season. The DOE will notify the NRC of the inspection schedule.

3.2 INSPECTION TEAM

The inspection team will consist of a minimum of two inspectors qualified to inspect disposal cell integrity and make preliminary assessments of modifying processes that could adversely affect the disposal cell. A plant specialist may also participate in inspections to evaluate planned revegetation on the disposal site.

If any problems are observed that require more investigation, follow-up inspection teams will be assembled. These will include one or more technical specialists in appropriate disciplines to assess the problem(s) under investigation. For example, a follow-up inspection by a plant specialist may be required to evaluate reports of significant plant growth on the rock cover, or a soils scientist or geomorphologist may be needed to evaluate erosion processes.

3.3 ANNUAL INSPECTION

Before each inspection, inspectors will perform a readiness review. The long-term surveillance program guidance (DOE, 1996a) contains information useful in preparing for inspections.

Site inspections will cover the disposal cell, the surrounding disposal site area, and the immediate off-site areas. Site inspections must be thorough enough to identify any significant changes or active modifying processes that could potentially impact the disposal cell in an adverse manner. Surveillance should be performed to identify unanticipated effects of modifying processes such as gully formation, slope erosion,

FIGURE 3.1
STEPS FOR FOLLOW-UP INSPECTIONS,
CUSTODIAL MAINTENANCE, AND CORRECTIVE ACTION
BURRO CANYON, COLORADO, DISPOSAL SITE

changes to the rock cover, ephemeral drainage channel changes, and significant modifications by humans, animals or plants.

Inspectors will evaluate the integrity of the disposal cell by walking a series of transects around the perimeter and over the rock cover. Sufficient transects, at approximately 150-foot (46-meter) intervals, will be walked to ensure that the disposal cell is thoroughly covered and inspected. Diagonal transects of the topslopes will be made and the crest line will be walked. Additional transects will be walked along the sideslopes and rock apron. Transects along the entire length of the drainage ditch will be made to determine whether it is functioning as designed and can be expected to continue to function properly. Inspectors will review transect paths from previous inspections and make efforts to vary the path of transects from one inspection to the next to ensure smaller anomalies are not overlooked. The sample inspection checklist (DOE, 1996a) lists items that should be examined during inspections.

The disposal cell has a rock cover and there is no planned vegetation on the disposal cell. However, remedial action of the areas surrounding the disposal cell included revegetation with grasses. The area surrounding the disposal cell will be monitored to determine the success of the revegetation efforts. Inspectors also will inspect this area for evidence of erosion caused by wind, sheet wash, or changes in drainage patterns.

Site inspections also will monitor damage to or disturbance of permanent site-surveillance features, fencing, gate, and locks.

From inside the disposal site, inspectors will visually survey the area within a maximum of 0.25 miles (0.40 kilometers) from the boundary of the disposal site for evidence of land-use changes that indicate increased human activity such as new roads and paths. Inspectors will note the condition of and changes to site access roads, surrounding vegetation, and relevant geomorphic features like gullies or ephemeral drainage channels; potential impacts to the site will be noted. The condition of off-site DOE monitor wells will be inspected until they are properly abandoned.

All site inspections will be conducted in accordance with a DOE-approved safety and health plan.

3.4 FOLLOW-UP INSPECTIONS

In addition to the annual inspections, DOE may conduct follow-up inspections to investigate and quantify specific problems found during a previous inspection, other DOE-initiated activity, confirmed reports of vandalism, intrusion, damage, or other significant threat to the disposal site. Notifications of severe rainstorms, flash floods, or unusual events such as tornadoes or earthquakes in the vicinity of the Burro Canyon disposal site also can trigger follow-up inspections. Follow-up inspections determine whether processes currently active at or near the site threaten site security or stability, and evaluate the need for custodial maintenance, repair, or

other corrective action. The scope of these follow-up inspections may be broad and similar in nature to routine site inspections or focused on specific areas of concern.

A follow-up inspection usually will begin with an on-site visit by technical specialists to confirm whether or not the disposal cell has been damaged or to determine the need for more definitive tests or studies. The DOE will schedule additional site visits if more data are needed to draw conclusions and to recommend repairs or corrective action.

3.5 QUALITY ASSURANCE

The DOE developed and implemented a quality assurance plan (DOE, 1992) for the site inspection program that meets the requirements of DOE Order 5700.6C. All site inspections will be conducted in accordance with this quality assurance plan.

3.6 SITE INSPECTION DOCUMENTATION

During site inspections, all activities and observations will be recorded and described using a site inspection checklist, site inspection map, photographs and photo log, and field notes. Documentary evidence of anomalous, new, or unexpected conditions or situations must describe developing trends and enable the DOE to make decisions concerning follow-up inspections, custodial maintenance, and corrective action. The DOE will prepare a site inspection report documenting the findings and recommendations from each field inspection as required in Section 7.0, Record Keeping and Reporting.

3.6.1 Site inspection checklist

The sample site inspection checklist (DOE, 1996a) is a guideline for the inspectors to prepare for and conduct site inspections. Inspectors will prepare a site-specific checklist that addresses the features to be inspected and monitored at the Burro Canyon disposal site. All checklist items should be completed. Annotations should be made on the checklist to add more detailed information and all entries must be clearly stated and legible because the completed checklist becomes part of the field record of the inspection in the permanent site file.

After each inspection is complete, the inspection checklist is revised as appropriate for the next inspection.

3.6.2 Site inspection maps

Plate 1 will serve as the baseline for preparing the site inspection map. The inspection team will annotate copies of the site inspection map during site inspections. The annotated site inspection map must include the following information:

- Inspection traverses
- Photographic locations

- Locations and descriptions of any new, anomalous, or unexpected features
- Features identified during previous inspections for observation or monitoring
- Inspection date and type of inspection.

3.6.3 Site inspection photographs

A photographic record of the site inspection must be maintained. Site conditions should be documented by ground photographs to record developing trends and to enable the DOE to make decisions concerning additional inspections, custodial maintenance or repairs, or corrective action. If possible, any site feature or condition requiring inspectors to make a written comment, explanation, or description will be photographed. A site inspection photo log will be used to record the photographs. A separate photo log should be completed for each roll of exposed film, with an entry for each photograph.

At a minimum, the site features listed in the long-term surveillance guidance (DOE, 1996a) should be documented with photographs during site inspections. In addition, any new or potential problem areas identified during a site inspection must be well documented with photographs. All site inspection photographs, as well as all corresponding photo log forms, will be maintained in the permanent site file.

3.6.4 Field notes

The inspection team will use field notes to record observations made during the inspection but not recorded on the inspection checklist or inspection map. The field notes will become part of the permanent site file.

3.6.5 Site inspection report

The DOE will prepare a site inspection report after every site inspection that discusses scope of the inspection, observations made, and conclusions drawn from the inspection. An inspection report will typically include:

- Description of the site conditions
- Completed site inspection checklists and any relevant supporting documentation, including names and qualifications of the field inspectors
- Site inspection map and other relevant drawings, maps, or figures
- Inspection photographs and photo logs
- Conclusions and recommendations for follow-up inspections, custodial maintenance, or repairs, if required
- Custodial maintenance or repair report and certification, if any was performed.

If new conditions requiring monitoring or immediate action are discovered during the inspection, the inspection report will detail any observed modifying features, and will include a description of the problem, relevant measurements and photographs, and an impact assessment. The description of the modifying process will include information such as the following:

- Extent of area affected
- Number, spacing, and size of features (e.g., gullies)
- Locations and patterns of occurrence
- Species, location and density of volunteer plant growth.

Evidence of deliberate and repeated human intrusion such as cover removal, extensive vandalism to signs and monuments, or the presence of well-established trails will be described in detail. All signs of vandalism will be noted since evidence of continued vandalism may indicate the need to implement more active measures to control site access.

The results of all follow-up inspections also shall be documented in written reports. Other appropriate documentation such as photographs, measurements, and drawings also shall be included. At a minimum, a follow-up inspection report must include the following:

- Description of the problem and preliminary assessment of impact.
- Conclusions and recommendations for custodial maintenance, repair, or corrective action required.
- Assessment data, photographs, and supporting documentation.

A copy of all site inspection reports and supporting documentation will be maintained in the permanent site file.

4.0 CUSTODIAL MAINTENANCE OR REPAIR

The DOE does not plan to conduct routine maintenance at the Burro Canyon disposal site. However, the DOE will perform needed custodial maintenance or repair as determined from site inspections. The DOE will prepare a statement of work that will include qualifications of the maintenance/repair contractor and certify all custodial maintenance and repair work performed at the Burro Canyon disposal site.

Unscheduled custodial maintenance or repair required at the Burro Canyon disposal site may include the following:

- Repairing or replacing deteriorated or vandalized warning signs, fencing, gate, locks, and monitor well caps
- Removing volunteer plant growth from riprap-covered areas
- Reseeding areas surrounding the disposal cell.

If repairs can be made without a follow-up inspection, a statement of work will be prepared.

After the work is completed, the maintenance/repair contractor must submit verification of the completed work and/or a written report if the action is considered significant. The DOE will inspect the site, as necessary, and review the report before certifying that all work is completed in accordance with all required specifications.

The annual report to the NRC must include the following information on unscheduled maintenance or repair:

- Work order, purchase order, or statement of work
- Contractor documentation of work completion
- DOE certification of work completion.

Copies of all records, reports, and certifications will be included in the permanent site file.

5.0 CORRECTIVE ACTION

Corrective action is required when repairs are needed to address problems that may affect the integrity of the disposal cell or compliance with 40 CFR Part 192. The NRC must approve the recommended action in advance.

Site inspections are designed to identify problems at the developmental stage. Examples of conditions that might trigger corrective action are as follows:

- Surface rupture or subsidence of the disposal cell
- Development of rills or gullies or slope instability on the disposal cell
- Deterioration of the erosion protection rock on the disposal cell
- Seepage originating from the disposal cell
- Gully development on or immediately adjacent to disposal site property that could affect the integrity of the disposal cell
- Damage to the cell cover or disposal site property from natural catastrophic events or vandalism
- Evidence of hazardous material spills near monitor wells
- Damage to the disposal cell cover from deep-rooted plant growth.

If conditions such as these are observed during an annual inspection, a follow-up inspection will be conducted.

The DOE will evaluate the factors that caused the problem and identify actions to mitigate the impact and prevent recurrence by:

- Identifying the nature and extent of the problem.
- Reevaluating germane engineering design parameters.

The DOE will submit a preliminary assessment report to the NRC for review no more than 60 days after the problem is identified. The preliminary assessment report will evaluate the problem and recommend the next step (e.g., immediate action or continued evaluation). If the problem requires immediate repair, the DOE will develop a corrective action plan for NRC approval. Once the NRC approves the corrective action, the DOE will implement the plan. In some cases, corrective action could include temporary measures taken prior to the completion of the normal approval process. If the problem does not require immediate repair, the problem will be documented in the annual report and assessed at the next annual inspection.

The NRC regulations do not stipulate a time frame for implementing corrective action. However, 40 CFR §192.04 requires that a corrective action program begin within 18

months after a finding of an exceedance in established ground water concentration limits. The DOE does not consider assessing the extent of a problem and developing a corrective action plan to be initiation of the corrective action program.

In addition to the preliminary assessment report, the DOE may prepare progress reports on each corrective action while it is under way or under evaluation.

After corrective action is complete, DOE will certify all work and submit a certification statement and supporting documentation to the NRC for review and concurrence. A copy of the certification statement will become part of the permanent site file, as will all reports, data, and documentation generated during the corrective action.

6.0 EMERGENCY NOTIFICATION AND RESPONSE

To ensure that timely investigation of potential problems affecting the disposal cell is performed, the DOE requests notification from federal, state, and local agencies of discoveries or reports of any purposeful intrusion or damage at the disposal site as well as the occurrence of earthquakes, tornadoes, or floods in the disposal site area.

The DOE is negotiating notification agreements with the San Miguel County Sheriff's Office, the U.S. Geological Survey's National Earthquake Information Center, and the Colorado area office of the National Weather Service (Attachment 3). These agreements request notification of the more probable occurrences that could cause an emergency response. In addition, the DOE 24-hour phone number is posted on the site entrance sign so the public can notify the DOE if problems are discovered.

The nature of the occurrence and the amount of first-hand knowledge available will determine the DOE's response. If an emergency situation poses an immediate threat to the public, the DOE will notify individuals who may be affected and appropriate federal, state, and local agencies, including the NRC. The DOE will take appropriate response action and advise the affected individuals of precautions that should be taken.

In all cases, the notification, response, and any follow-up activities shall be documented. This documentation will become part of the permanent site file. Discussions of emergency notifications and responses also will be included in the annual site report to the NRC.

7.0 RECORD KEEPING AND REPORTING

7.1 PERMANENT SITE FILE

The DOE will maintain a permanent site file containing site inspection reports and other supporting documentation of long-term surveillance program activities. The information placed in the site file will include:

- Documentation of disposal site performance
- Demonstration that licensing provisions were met
- Information needed to forecast future site-surveillance and monitoring needs
- Reports to stakeholders regarding disposal cell integrity.

After the site is brought under the general license, the DOE will compile copies of site documentation required by the long-term surveillance program guidance (DOE, 1996) for the Burro Canyon disposal site permanent site file. Copies of all deeds, custody agreements, and other property documents will be kept in the site file.

The surveillance and maintenance documentation identified in other sections of this LTSP will be maintained by the DOE and become part of the permanent site file. The DOE will update the site file as necessary after disposal site inspections, maintenance activities, or corrective actions are complete. These records will be handled in accordance with DOE directives to ensure that proper handling, maintenance, and disposition is performed. The archival procedures set forth in 41 CFR Part 101 and 36 CFR Parts 1220-1238 (Subchapter B) will be followed. All information will be available for NRC and public review.

7.2 INSPECTION REPORTS/ANNUAL REPORTS

Site inspection reports will be submitted to the NRC no more than 90 days after the date of the last UMTRA Project site inspection for that calendar year. If inspections are done annually, this submittal will be part of an annual report documenting the results of site inspections and any other activities conducted in conjunction with the long-term surveillance program. This submittal will also include reports on any follow-up inspections and custodial maintenance or repairs performed during the year.

If inspections are required more frequently than annually, site inspection reports will be submitted to the NRC no more than 90 days after the date of inspection.

If any unusual damage or disruption is discovered at the Burro Canyon disposal site during an inspection, a preliminary report assessing the impact must be submitted to the NRC within 60 days. If maintenance or repair or corrective action is warranted, the DOE will notify the NRC. The NRC will receive a copy of corrective action plans and each corrective action progress report, or the reports will be attached to the annual report.

The DOE will provide copies of inspection reports and other reports generated under the long-term surveillance program to the state of Colorado as required in their cooperative agreement with the state.

8.0 REFERENCES

- DOC (U.S. Department of Commerce), 1991. *1990 Census of Population and Housing: Summary Social, Economic, and Housing Characteristics*, Colorado, U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census.
- DOE (U.S. Department of Energy), 1996a. *Guidance for Implementing the Long-Term Surveillance Program for UMTRA Project Title I Disposal Sites*, DOE/AL-62350-189, Rev. 0, DOE Environmental Restoration Division, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1996b. *Remedial Action Plan and Site Conceptual Design for Stabilization of the Inactive Uranium Mill Tailings Site at Slick Rock, Colorado*, UMTRA-DOE/AL-050508.0000, DOE UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1995. *Environmental Assessment of Remedial Action at the Slick Rock Uranium Mill Tailings Sites Near Slick Rock, Colorado*, DOE/EA-0376, DOE UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1992. *Long-Term Surveillance and Maintenance Program Quality Assurance Program Plan*, P-GJPO-152, prepared by Chem Nuclear Geotech, Inc., for the DOE Grand Junction Projects Office, Grand Junction, Colorado.
- Merritt, R.C., 1971. *The Extractive Metallurgy of Uranium*, Colorado School of Mines Research Institute, Golden, Colorado.
- MK-ECE (Morrison Knudsen Corporation - Engineering, Construction, & Environmental Group), 1996. *UMTRA Project, Slick Rock, Colorado, Surveillance and Maintenance Subcontract Documents - Final Design for Review*, prepared by MK-ECE for the DOE Environmental Restoration Division, Albuquerque Operations Office, Albuquerque, New Mexico.
- MK-F (MK-Ferguson), 1997. *Slick Rock, Colorado, Draft Completion Report*, prepared by MK-F for the DOE Environmental Restoration Division, Albuquerque Operations Office, Albuquerque, New Mexico. (This document was not complete at the time the LTSP was prepared. The final document date and title will be updated.)

CODE OF FEDERAL REGULATIONS

10 CFR Part 40, Domestic Licensing of Source Material, U.S. Nuclear Regulatory Commission.

36 CFR Parts 1220-1238, National Archives and Records, Subchapter B - Records Management, National Archives and Records Administration.

40 CFR Part 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, U.S. Environmental Protection Agency.

41 CFR Part 101, Federal Property Management Regulations, General Services Administration.

DOE ORDERS

Order 5700.6C, *Quality Assurance*, 21 August 1991, U.S. Department of Energy, Washington, D.C.

UNITED STATES CODE

42 USC §7901 et seq., Uranium Mill Tailings Radiation Control Act of 1978, 8 November 1978, as amended.

ATTACHMENT 1

NRC CONCURRENCE DOCUMENTATION

(To be provided when received)

ATTACHMENT 2

SITE REAL ESTATE INFORMATION

REAL ESTATE DOCUMENTATION

INTRODUCTION

Remedial action at the Slick Rock, Colorado, UMTRA site consisted of relocation of the contaminated materials from two former mill processing sites near Slick Rock to the Burro Canyon disposal site.

JURISDICTIONAL TRANSFER OF THE DISPOSAL SITE

The disposal site is located on public land administered by the U.S. Department of the Interior's (DOI) BLM. Under the requirements of the UMTRCA, as amended, the DOE acquired the disposal site land via a Public Land Order (PLO). The PLO permanently transferred 61.25 acres from the public domain in San Miguel County, Colorado. Publication in the Federal Register (Vol. 60, No. 88, 21984, FR Doc. 95-10992) of PLO 7138 established the effective date of the transfer as May 4, 1995. As a result of the transfer, the land is longer subject to the operation of the general land laws, including the mining and mineral leasing laws. The transfer of the land to the DOE vested in the DOE the full management, jurisdiction, responsibility, and liability for the land and all activities conducted thereon, except that the DOI, through the BLM, retained the authority to administer any claims, rights, and interests in the land established before the effective date of the transfer.

LEGAL DESCRIPTION

The legal description in the PLO describes the disposal site area as follows:

Township 44 North, Range 18 West, New Mexico Principal Meridian.
Section 21: S1/2 S1/2 SE1/4 SW1/4; Section 28: NE1/4 NW1/4, N1/2
NE1/4 SE1/4 NW1/4, N1/2 S1/2 NE1/4 SE1/4 NW1/4, NE1/4 NW1/4 SE1/4
NW1/4, and N1/2 SE1/4 NW1/4 SE1/4 NW1/4. The area described contains
approximately 61.25 acres (24.79 hectares) of public land in San Miguel
County, Colorado.

REPOSITORY

Real estate correspondence and related documents are maintained and filed by the Property Management Branch, Property and Administrative Services Division, Albuquerque Operations Office, P.O. Box 5400, Albuquerque, NM 87115, (505) 845-5598.

after reconsideration, the head of the appropriate Examining Division section will send the applicant written notification of the reasons for refusal. The applicant may again request reconsideration. If the claim is refused again, the Chief of the Examining Division will notify the applicant in writing of the reasons. The Division Chief's decision constitutes final agency action.

Section 606.04 Compendium II of Copyright Office Practices.

II. Circumstances Leading to Modification

Although the Office's practice concerning appeals is long-standing, we have periodically considered modifying it. A number of commentators have criticized the current practice on the grounds that containment within the Examining Division leads to an overly closed system. Even under the existing practice, however, there has been some discussion of particular cases with the General Counsel or the Register. More recently, the Library of Congress appointed an Advisory Committee on Copyright Registration and Deposit, (ACCORD); in their meetings, members of this Committee criticized the appeals procedure and suggested that it be changed. Library of Congress, Advisory Committee on Copyright Registration and Deposit, 31 (1993).

The Copyright Office is committed to improving this procedure and will be publishing a Notice of Proposed Rulemaking seeking public comment on legal and administrative issues associated with establishing a more formal procedure at a later date. Meanwhile, as a first step, the Office has decided to establish a Board of Appeals within the Copyright Office as an interim system. By instituting this Board, we will gain experience in administering an alternative system.

After the Office has some practical experience with the new system, we will make a detailed proposal and seek public comment. Following review of these comments, the Copyright Office will publish the new appeal procedure as a regulation. Although we are now adopting as an interim system the Board of Appeals described below, the precise nature of the final appeal procedure will not be established until we publish final rules. Anyone who wishes to suggest specific guidelines for our consideration before the proposed rulemaking should submit them to the Board of Appeals, Copyright GC/I&R, P.O. Box 70400, Southwest Station, Washington, D.C. 20024.

III. Policy Decision

The Copyright Office's appeal procedure set out in § 606.04 of the

Compendium is amended to read as follows:

Appeals of refusal to register: request for reconsideration. When the Copyright Office has refused to register a claim as submitted, it notifies the applicant in writing of the refusal to register. After such notification, the applicant may set forth in writing his or her objections to the refusal and request that the Office reconsider its action. The appeal letter should be addressed to the appropriate section of the Examining Division, Copyright Office, Washington, D.C. 20559. The first request for reconsideration must be received in the Copyright Office within 120 days of the date of the Office's first refusal to register, and the envelope containing the request should be clearly marked: **FIRST APPEAL// EXAMINING DIVISION.**

If the claim is refused after reconsideration, the head of the appropriate section of the Examining Division sends the applicant written notification of the reasons for refusal. The applicant may again request reconsideration in writing. This second appeal must be received in the Copyright Office within 120 days of the date of the Office's refusal of the first appeal, and be directed to the Board of Appeals at the following address: Copyright GC/I&R, P.O. Box 70400, Southwest Station, Washington, D.C. 20024. The Board of Appeals shall consist of the Register of Copyrights, the General Counsel, and the Chief of the Examining Division, or their respective designees. The Board shall consider the second appeal and render a final decision. The designated Chair of the Board of Appeals will write the applicant setting out the reasons for acceptance or denial of the claim. The Appeals Board's decision constitutes final agency action.

Dated: April 27, 1995.

Marybeth Peters,

Register of Copyrights.

Approved by:

James H. Billington,

The Librarian of Congress.

[FR Doc. 95-11045 Filed 5-3-95; 8:45 am]

BILLING CODE 1410-30-P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Public Land Order 7138

[CO-930-1920-00-4355; COC-61843]

Transfer of Public Land for the Slick Rock Disposal Site; Colorado

AGENCY: Bureau of Land Management, Interior.

ACTION: Public Land Order.

SUMMARY: This order permanently transfers 61.25 acres of public land to the Department of Energy in accordance with the terms of the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7916 (1988)), as amended.

EFFECTIVE DATE: May 4, 1995.

FOR FURTHER INFORMATION CONTACT: Doris E. Chelius, BLM Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215-7076, 303-239-3706.

By virtue of the authority vested in the Secretary of the Interior by the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7916 (1988)), as amended, it is ordered as follows:

1. Subject to valid existing rights, the following described public land is hereby permanently transferred to the Department of Energy, and as a result of this transfer, the land is no longer subject to the operation of the general land laws, including the mining and the mineral leasing laws, for the Slick Rock Disposal Site:

New Mexico Principal Meridian

T. 44 N., R. 18 W.,

• Sec. 21, S $\frac{1}{2}$ S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$;

Sec. 28, NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$,

N $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$,

NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, and

N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$.

The area described contains approximately 61.25 acres of public land in San Miguel County.

2. The transfer of the above-described land to the Department of Energy vests in that Department full management, jurisdiction, responsibility, and liability for such land and all activities conducted therein, except as provided in paragraph 3.

3. The Secretary of the Interior shall retain the authority to administer any existing claims, rights, and interests in this land established before the effective date of the transfer.

Dated: April 21, 1995.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 95-10992 Filed 5-3-95; 8:45 am]

BILLING CODE 4310-JB-P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 15 and 90

[ET Docket 93-235; FCC 95-148]

Additional Frequencies for Cordless Telephones

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: By this action, the Commission makes available 15 new channel pairs for cordless telephones. This action is taken to relieve

ATTACHMENT 3

AGENCY NOTIFICATION AGREEMENTS

DRAFT

Bill Masters, San Miguel County Sheriff
P.O. Box 455
Telluride, CO 81435
Dear Sheriff Masters:

The U.S. Department of Energy (DOE) Uranium Mill Tailings Remedial Action Project is requesting notification in the event of any unusual activities or events in western San Miguel County at the Burro Canyon disposal cell. The disposal cell is east of Slick Rock and can be reached by going east on SH-141 from Slick Rock, and north onto CR-T11 to the disposal site. A map to the site is enclosed.

The purpose of the notification request is to assist the DOE in monitoring and maintaining the integrity of the Burro County disposal site and to ensure public safety.

If, during the course of routine activities, anything out of the ordinary that could potentially impact the site is observed by your staff or reported to your office, we would appreciate notification to the DOE Grand Junction Projects Office's 24-hour phone line at (970) 248-6070.

If the notification request discussed above is agreeable to you, please sign and return the attached reply letter for our records as soon as possible.

Should you have any questions, please contact me at (505) 845-4022. Thank you for your attention in this matter.

Jay Pape
Project Site Manager
Environmental Restoration Division
U.S. Department of Energy

Enclosures

cc: w/o enclosures
J. Virgona (GJPO)
S. Hamp (ERD)
C. Jones (MACTEC-ERS)
M. Gawthrop (TAC)
W. Migdal (TAC)

DRAFT

Jay Pape
Project Site Manager
Environmental Restoration Division
U.S. Department of Energy
P.O. Box 5400
Albuquerque, NM 87115

Dear Mr. Pape:

This letter is to concur with the U.S. Department of Energy (DOE) request for notification as set forth in the DOE's letter. As requested in your letter, this office will contact the DOE's Grand Junction Projects Office at (970) 248-6070 if any unusual event or anomaly is observed or reported at or around the DOE's Burro Canyon disposal site, San Miguel County, Colorado.

Sincerely,

Bill Masters, San Miguel County Sheriff
P.O. Box 455
Telluride, CO 81435
(970) 728-4442

cc: J. Virgona (GJPO)
S. Hamp (ERD)
C. Jones (MACTEC-ERS)
M. Gawthrop (TAC)
W. Migdal (TAC)

Department of Energy
Albuquerque Operations Office
P. O. Box 5400
Albuquerque, New Mexico 87185-5400

APR 24 1996

Charlie Liles
Area Manager
National Weather Service
Albuquerque, New Mexico 87119

Dear Mr. Liles:

The U.S. Department of Energy (DOE) Uranium Mill Tailings Remedial Action Project is requesting notification in the event of issuance of flash flood or tornado warnings in south-central McKinley County, New Mexico. We would appreciate notification to the DOE Grand Junction Projects Office's 24-hour phone line at (970) 248-6070 within 8 hours of issuance of a warning or episode of warnings.

The purpose of this warning is to assist the DOE in monitoring and maintaining the integrity of its Ambrosia Lake uranium mill tailings disposal site located north of Grants, New Mexico, about 5 miles northwest of the junction of State Highways 509 and 605 (see enclosed map).

If the notification request discussed above is agreeable to you, please sign and return the enclosed reply letter for our records as soon as possible.

Should you have any questions, please contact me at (505) 845-5758.

Sincerely,

Michael F. Abrams

Michael F. Abrams

Site Manager

Environmental Restoration Division

Enclosures

cc w/o enclosures:
J. Virgona, GJPO
S. Hamp, ERD
C. Jones, RUST
A. Vollmer, TAC
S. Cox, TAC

IN UPDC

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE

2341 Clark Carr Loop SE
Albuquerque, New Mexico 87106

July 12, 1996

Michael F. Abrams, Site Manager
Environmental Restoration Division
Department of Energy
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Dear Mr. Abrams:

Someone (Art?) contacted us yesterday concerning your request for notification within eight hours of the issuance of tornado or flash flood warnings for McKinley County. Unfortunately, we were disconnected in the middle of our conversation due to a problem within our telephone system.

We have numerous requests for similar setups, but are not staffed to operate in this manner, especially during severe weather episodes. Instead, we rely on mass dissemination vehicles for distribution to customers. I'm enclosing information on one of the newest systems available, that comes with very low costs.

I hope that this system will meet your needs. Please don't hesitate to call Keith Hayes, our warning coordination meteorologist, with any questions regarding this system or other options.

Sincerely,

Charlie A. Liles
Area Manager

224-9007

Enclosure

IN LPDC

National Earthquake Information Center

World Data Center A for Seismology

Director
(303) 236-1510

Research
(303) 236-1506

U.S. Geological Survey
Box 25046, DFC, MS-967
Denver, Colorado 80225 USA
Telex: (WLTTCO) 510601-1123ESL UD

Operations
(303) 236-1500

QED
(800) 358-2663

Clinton C. Smythe
Engineering and Construction Group Leader
Uranium Mill Tailings Remedial Action
Project Office
2155 Louisiana NE, Suite 4,000
Albuquerque, NM 87110

Dear Mr. Smythe:

This letter is to confirm that the DOE Grand Junction Projects Office (24-hour phone line, (303) 248-6070 has been added to our notification list for the occurrence of earthquakes near the following locations:

Disposal Site	Latitude	Longitude
COLORADO		
Durango (Bodo Canyon)	N37.15	W107.90
Grand Junction	N38.91	W108.32
Gunnison (Landfill)	N38.51	W106.85
Maybell	N40.55	W107.99
Naturita (Dry Flats)	N38.21	W108.60
Rifle (Estes Gulch)	N39.60	W107.82
Slick Rock (Burro Canyon)	N38.05	W108.87
IDAHO		
Lowman	N44.16	W115.61
NEW MEXICO		
Ambrosia Lake	N35.41	W107.80
NORTH DAKOTA		
Bowman	N46.23	W103.55
OREGON		
Lakeview (Collins Ranch)	N42.2	W120.3
PENNSYLVANIA		
Canonsburg	N40.26	W80.25
Burrell VP	N40.62	W79.65
TEXAS		
Falls City	N28.91	W98.13
UTAH		
Mexican Hat	N37.10	W109.85
Salt Lake City (Clive)	N40.69	W113.11

National Earthquake Information Center

World Data Center A for Seismology

Director
(303) 236-1510
Research
(303) 236-1506

U.S. Geological Survey
Box 25046, DFC, MS-967
Denver, Colorado 80225 USA
Telex: (WUTCO) 5106014123ESL UD

Operations
(303) 236-1500
QED
(800) 358-2663

Clinton C. Smythe

-2-

We have entered the following selection criteria into our notification program:

1. Any earthquake of magnitude 3.0 or greater, within 0.3 degrees (about 20 miles) of any site shown above, or
2. Any earthquake of magnitude 5.0 or greater, within 1.0 degrees (about 70 miles) of any site shown above.

Sincerely,

Bruce W. Presgrave

Bruce Presgrave
U.S. Geological Survey
National Earthquake Information Center
P.O. Box 25046
Mail Stop 967
Denver Federal Center
Denver, Colorado 80225

Please address future correspondence to Stuart Koyanagi at the above address. I have moved to a different project.

Thank you + best regards,

Bruce Presgrave