

**MITIGATION ACTION PLAN FOR REMEDIAL ACTION
AT THE URANIUM MILL TAILINGS SITES AND DISPOSAL SITE
RIFLE, COLORADO**

FINAL

JULY 1992

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**U.S. Department of Energy
UMTRA Project Office
Albuquerque, New Mexico**

MASTER

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0 INTRODUCTION

On February 5, 1990, Secretary of Energy James D. Watkins signed Secretary of Energy Notice 15-90 (SEN-15-90). This Notice directed significant changes in the U.S. Department of Energy's (DOE) policies and procedures for complying with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.). One of the directives of SEN-15-90 requires the preparation of a mitigation action plan (MAP).

To ensure compliance with SEN-15-90 policy, the DOE subsequently issued DOE Order 5440.1D on February 22, 1991. This DOE Order established new responsibilities and procedures for implementing NEPA and defined a MAP as follows:

[a] document that describes the plan for implementing commitments made in a DOE EIS [environmental impact statement] and its associated record of decision (ROD)...to mitigate adverse environmental impacts associated with an action. (DOE, 1991)

The DOE's new NEPA implementing procedures (10 CFR 1021) became effective on May 26, 1992. In accordance with 10 CFR 1021.331, DOE will do the following:

- Prepare a MAP following the completion of an EIS and its associated ROD.
- Address all mitigation commitments made in the ROD.
- Explain how the mitigation commitments will be planned and implemented.
- Prepare a MAP before taking any action directed by the ROD that is the subject of a mitigation commitment.
- Prepare a MAP that is as complete as the information available allows.
- Have the option of revising the MAP as more specific and detailed information becomes available.
- Make copies of the MAP available to the public.

On November 8, 1978, the Uranium Mill Tailings Radiation Control Act (UMTRCA), 42 U.S.C. 7901 et seq. (1988), was enacted to address a Congressional finding that uranium mill tailings and other radiologically contaminated materials [hereinafter referred to as residual radioactive material (RRM)] may pose a health hazard to the public. Inactive uranium mill sites and some properties that are in the vicinity of these mill sites [hereinafter referred to as vicinity properties (VPs)] are contaminated with tailings. On November 8, 1979, the DOE designated 24 inactive uranium milling sites (designated processing sites), including the two former Union Carbide Corporation sites (the Rifle sites, or the Old and New Rifle sites) at Rifle, Colorado, for remedial action under the UMTRCA (44 FR 74891, December 18, 1979).

The Rifle MAP has been prepared to meet the requirements of 10 CFR 1021.331. The MAP addresses commitments made in the Rifle ROD. The ROD was issued in the Federal

Register on January 22, 1991 (56 FR 2167), and is included as Appendix A. No action covered by the Rifle ROD, which is subject to a mitigation commitment before completion and approval of this document, will be taken by the DOE.

2.0 BACKGROUND AND DESCRIPTION OF THE REMEDIAL ACTION

2.1 BACKGROUND

The Old and New Rifle sites (Figure 2.1) cover 66 hectares (164 acres) of private land just outside the town of Rifle, in northwestern Colorado. Approximately 3,161,620 cubic meters (4,135,000 cubic yards) of RRM contaminates the sites and the adjacent land. The tailings piles at both sites have been partially stabilized, seeded, and irrigated to promote a native vegetation cover.

The 8.8-hectare (22-acre) Old Rifle site is less than 1.6 kilometers (1 mile) to the southeast of the town of Rifle. It is bound by U.S. Highway 6 (US-6) to the north, and the Denver and Rio Grande Western Railroad (D&RGW) to the south. The Colorado River and Interstate 70 (I-70) are immediately south of the railroad. The site consists of the 5-hectare (13-acre) tailings pile and a 3.5-hectare (9-acre) mill area which includes the former ore area and the assay building (Figure 2.2). Twenty-one hectares (53 acres) adjacent to the tailings site are contaminated with windblown RRM. The total amount of RRM at the Old Rifle site, including contaminated soils beneath the tailings, is estimated to be 505,400 cubic meters (661,000 cubic yards).

The 57-hectare (142-acre) New Rifle site is approximately 3.2 kilometers (2 miles) west of the center of the town of Rifle. The site is bound by US-6 and the D&RGW railroad on the north, the Colorado River to the east, and the Colorado River and I-70 to the south. The site consists of the 13-hectare (33-acre) tailings pile and a 24-hectare (59-acre) mill area, which includes stockpiled mill demolition debris, ore storage areas, and old evaporation ponds (Figure 2.3). Twenty-five hectares (63 acres) adjacent to the site are contaminated by windblown RRM. The total amount of contaminated materials at the site, including soils beneath the tailings pile, is estimated to be 2,656,220 cubic meters (3,474,000 cubic yards).

In May 1987, the DOE released its Draft Environmental Impact Statement (EIS) on remedial actions at the Rifle sites (DOE, 1987) for public comment. The draft EIS analyzed four alternatives, including:

- Alternative 1 — No action
- Alternative 2 — Stabilizing all of the RRM at the New Rifle site
- Alternative 3 — Disposal of all of the RRM at the Estes Gulch site, which is the preferred alternative
- Alternative 4 — Disposal of all of the RRM at the Lucas Mesa site

Approximately 100 comments on the draft EIS were received from private citizens, public organizations, and government agencies during two public hearings and a 45-day written comment period. The final EIS was released in March 1990 (DOE, 1990a). The ROD, which identified Alternative 3 as the preferred disposal alternative, was published in the Federal Register on January 22, 1991 (56 FR 2166).

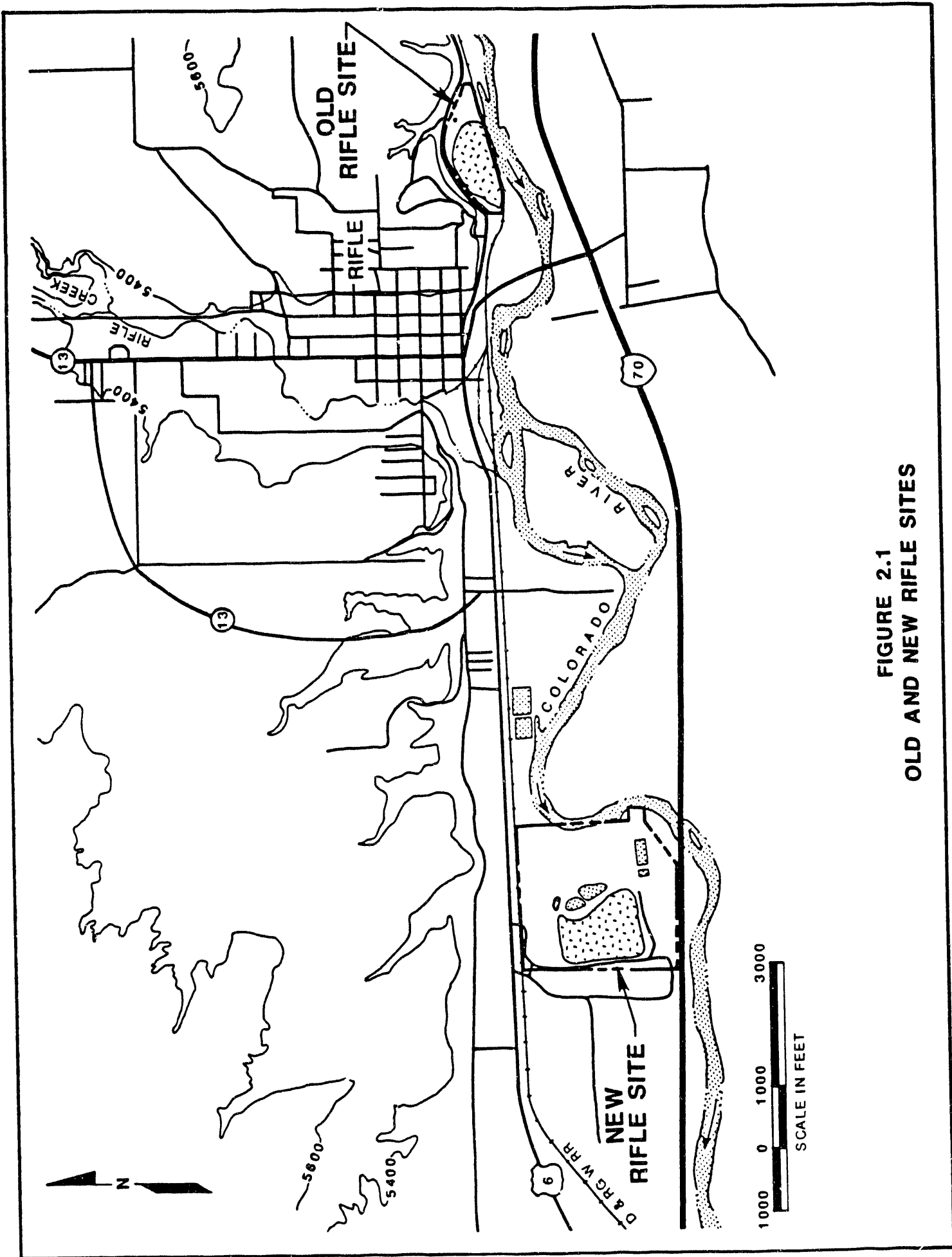


FIGURE 2.1
OLD AND NEW RIFLE SITES

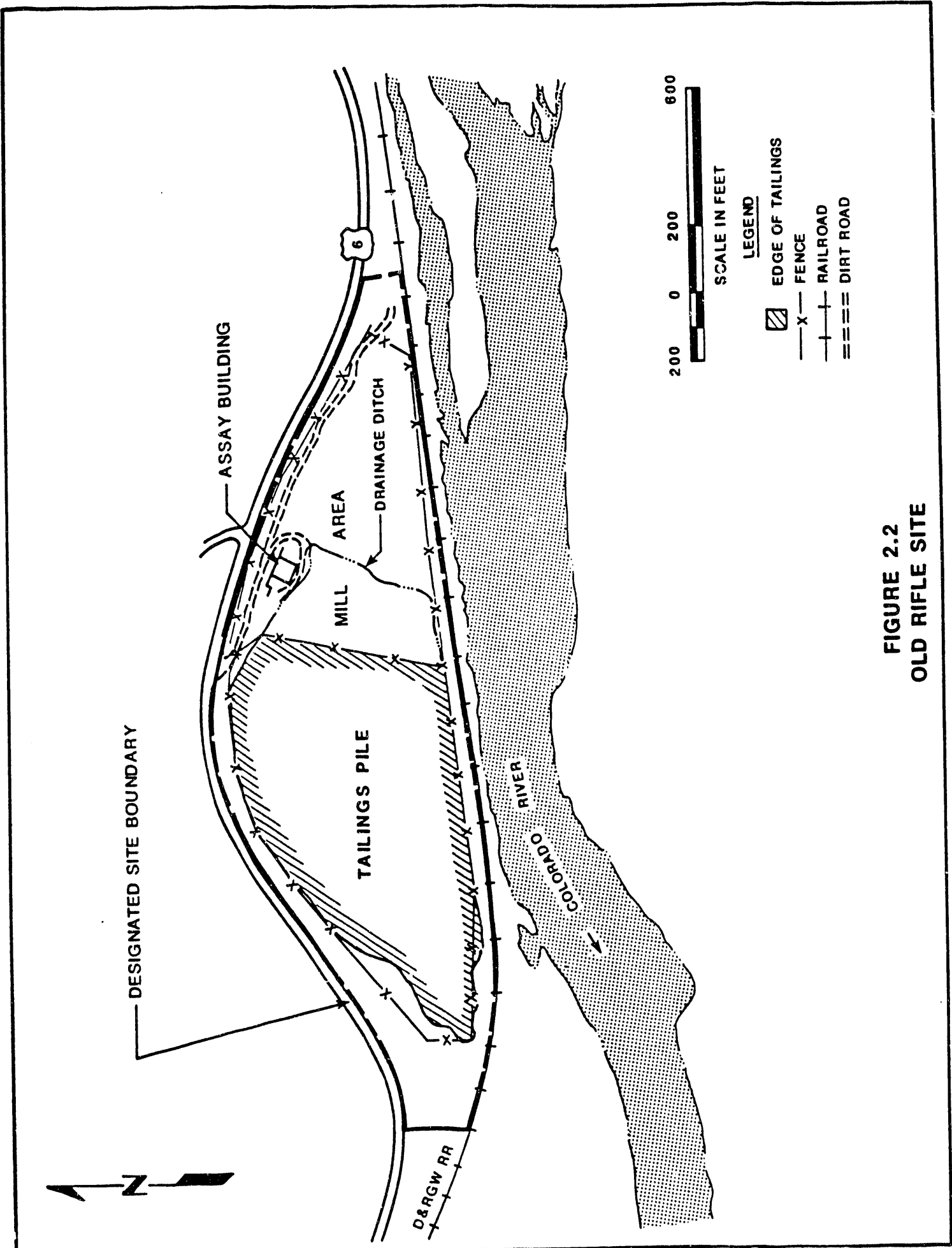
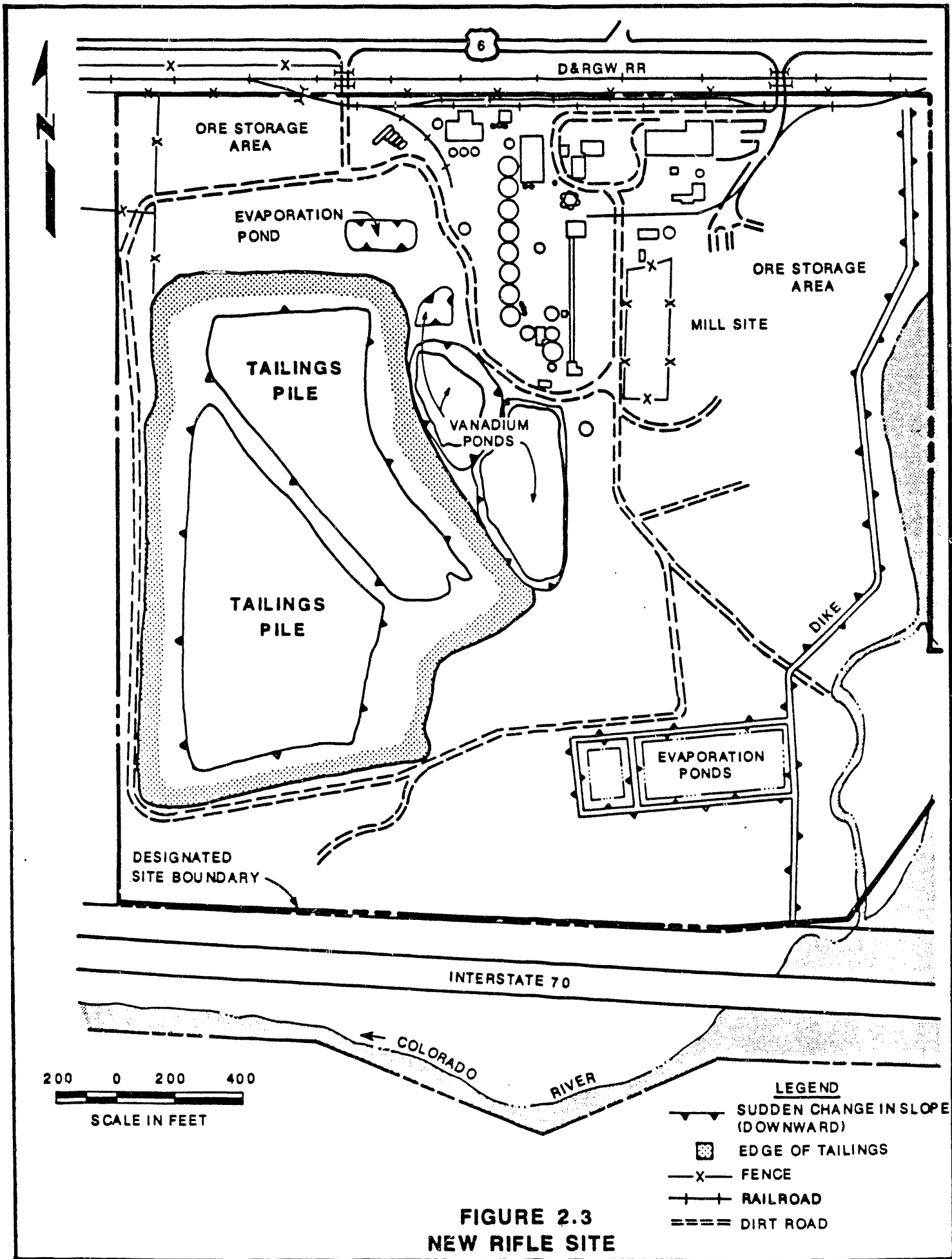


FIGURE 2.2
OLD RIFLE SITE



**FIGURE 2.3
NEW RIFLE SITE**

2.2 SUMMARY

The Estes Gulch disposal site is approximately 10 kilometers (6 miles) north of the town of Rifle, off State Highway 13 on Federal land administered by the Bureau of Land Management (Figure 2.4). The DOE will transport the RRM by truck to the Estes Gulch disposal site via State Highway 13 and place it in a partially below-grade disposal cell. The RRM will be covered by an earthen radon barrier, frost protection layers, and a rock erosion protection layer. A toe ditch and other features will also be constructed to control erosion at the disposal site.

After removal of the RRM and disposal at the Estes Gulch site, the disturbed areas at all three sites will be backfilled with clean soils, contoured to facilitate surface drainage, and revegetated. Wetlands areas destroyed at the former Rifle processing sites will be compensated for by the incorporation of new wetlands into the revegetation plan at the New Rifle site.

The UMTRA Project Office, supported by the Remedial Action Contractor (RAC) and the Technical Assistance Contractor (TAC), oversees the implementation of the MAP. The RAC executes mitigation measures in the field. The TAC provides monitoring of the mitigation actions in cases where mitigation measures are associated with design features. Site closeout and inspection compliance will be documented in the site completion report.

3.0 MITIGATION MEASURES ASSOCIATED WITH THE REMEDIAL ACTION

Table 3.1 describes the proposed mitigation measures presented in the Rifle final EIS and the ROD for the remedial action to be performed at the Rifle, Colorado, processing sites and the Estes Gulch disposal site. The table delineates the mitigation commitment, the authorization for the directive, the implementation of the mitigation, the party to perform the mitigation action, and the status of the mitigation activities. Time frames provided in the table are approximate and indicate when the measure is scheduled. The DOE is responsible for the performance and completion of the mitigation. Questions concerning the mitigation commitments should be directed to the DOE Site Manager for the Rifle sites at 505-845-5668.

Table 3.1 Mitigation commitments associated with the remedial action

Commitment	Reference	Mitigation implementation	Work performed by	Status
<p>Site security: Site security measures will be taken to inhibit unauthorized and inadvertent entry.</p>	<p>Remedial Action Plan and Site Design for Stabilization of the Inactive Uranium Mill Tailings Site at Rifle, Colorado (DOE, 1992).</p>	<p>Security fences have already been installed at the processing sites and will be maintained and removed upon completion of the remedial action. The disposal site will also be furnished with security fences. The fences and the associated gates, posts, hardware, and concrete footings will be constructed to inhibit unauthorized human intrusion during remedial action and to protect sheep and cattle from inadvertent entry while allowing deer to cross unharmed. Warning signs will be posted at each site to inhibit inadvertent human intrusion.</p>	<p>Remedial Action Contractor (RAC)</p>	<p>Completion date: Fall 1988 for processing sites Spring 1992 for disposal site</p>
<p>Transportation route improvements: Transportation routes will be upgraded to reduce the potential for traffic accidents and congestion.</p>	<p>2 C. Colo. Reg. 601 (State Highway Access Code).</p>	<p>Transportation routes have been upgraded as necessary during remedial action to reduce the potential for traffic accidents and reduce congestion. Mitigation measures to reduce short-term transportation impacts include the use of traffic controls, such as flagmen at the New Rifle railroad crossing and the construction of turnouts, passing lanes, and intersection facilities. A paved, 3.65-meter (12-foot) wide, 2286-meter (7500-foot) long climbing lane has been constructed on the east side of SH13 between SH325 and the Estes Gulch site turnout. A 244-meter (800-foot) long, 3.65-meter (12-foot) wide graveled truck turnout has been added and an intersection facility on SH 13, at the Estes Gulch turnout, has been constructed.</p>	<p>RAC</p>	<p>Completion date: September 1991</p>
<p>Prevention of contaminant releases: Measures will be taken to protect against contaminant releases during remedial action.</p>	<p>Colo. Rev. St. 25-8-501, et. seq. (Water Quality); 5 C. Colo. Reg. 1002 (Water Quality). RAP (DOE, 1992).</p>	<p>Temporary erosion controls and wastewater retention basins will be constructed to protect against the release of contaminants during remedial action at both the processing and disposal sites. Measures to control or divert drainage from the disposal cell will be constructed to prevent long-term erosion. Wastewater treatment facilities may be installed. Effluent will be discharged in accordance with Colorado Pollutant Discharge Elimination System (CPDES) permit requirements. The sludges from the retention ponds and water treatment plants will be placed in the disposal cell. Haul trucks will be covered or sprayed to prevent the dispersion of RRM during relocation.</p>	<p>RAC</p>	<p>Target start date for treatment plant installation: undetermined Target completion date for retention pond at disposal site: Summer 1992 Completion date for retention pond at processing sites: Spring 1989</p>
<p>Fugitive dust control: Measures will be taken to inhibit fugitive dust emissions.</p>	<p>Col. Rev. St. 25-7-101 (Air Quality); 5 C. Colo. Reg. 1001 (Air Pollution).</p>	<p>Water will be applied to disturbed areas at the Rifle sites and at the Estes Gulch disposal site to inhibit fugitive dust emissions. Water and chemical dust suppressants will be applied to dirt and gravel access roads to inhibit dust emissions. The dispersion of tailings during relocation will be prevented by covering haul trucks.</p>	<p>RAC</p>	<p>Actual start date for processing sites: Fall 1988 Actual start date for disposal site: Spring 1992</p>

Table 3.1 Mitigation commitments associated with the remedial action (continued)

Commitment	Reference	Mitigation implementation	Work performed by	Status
<p>Noise reduction: Measures will be employed to reduce noise disturbance to local residents.</p>	<p>Col. Rev. St. 25-12-101 (Noise); Garfield County Conditional Use Permit and Certificate of Designation, Resolution 90-017.</p>	<p>To reduce noise disturbance to local residents, no jake brakes on trucks will be used for any hauling or Project-related activity. As agreed during discussions with the local task force, additional noise reduction will be negotiated on an as-needed basis. Decibel levels have been monitored at both processing sites and the disposal site.</p>	<p>RAC</p>	<p>Actual start date: ongoing since 1988</p>
<p>Stockpiling of reclamation soils: Measures will be taken to stockpile soils encountered at the alternative disposal sites for future use during reclamation.</p>	<p>Bureau of Land Management, Glenwood Springs Resource Area, Resource Management Plan (BLM, 1984).</p>	<p>Soils excavated at the Estes Gulch site will be stockpiled for use during reclamation. The soils will be stockpiled on sites away from water courses.</p>	<p>RAC</p>	<p>Actual start date: June 1992</p>
<p>Water treatment: Discharged water will be treated, as necessary, prior to release.</p>	<p>Colo. Rev. St. 25-8-501, et seq. (Water Quality); 5 C. Colo. Reg. 1002 (Water Quality).</p>	<p>If excavation generates waste water, the water will be handled in accordance with the waste water treatment plan.</p>	<p>RAC</p>	<p>Target start date: Fall 1992</p>
<p>Wildlife protection: Measures will be taken to offset the site work impacts to deer and elk winter range.</p>	<p>Bureau of Land Management, Glenwood Springs Resource Area, Resource Management Plan (BLM, 1984).</p>	<p>Vegetation manipulation, in terms of tree removal and seeding, will be instituted on approximately 120 acres of public lands in the vicinity of Estes Gulch, thereby replacing the lost forage value due to construction activities. Operations will be shut down during the winter to offset impacts to deer and elk winter range.</p>	<p>RAC</p>	<p>Target start date: Fiscal year 1996</p>
<p>Survey of sensitive and endangered species: A survey of sensitive and endangered species will be performed. Identified species will be protected.</p>	<p>16 USC 1536, et. seq. (Endangered Species Act of 1973).</p>	<p>A survey was performed of sensitive and endangered species. The wetherill milkvetch was identified. Areas containing known populations of wetherill milkvetch have been staked out during remedial action. A 3.04-meter (10-foot) buffer zone and fence will be established along the haul road.</p>	<p>Ecosphere Environmental Services RAC</p>	<p>Target start date for fencing: Fall 1992 Completion date for survey: 1986</p>

Table 3.1 Mitigation commitments associated with the remedial action (continued)

Commitment	Reference	Mitigation implementation	Work performed by	Status
<p>Borrow site selection: The costs and impacts of increased transportation distances to borrow sites will be minimized.</p>	<p>43 USC 1761, et. seq. (Federal Land Policy and Management Act of 1976); Bureau of Land Management, Glenwood Springs Resource Area, Resource Management Plan (BLM, 1984).</p>	<p>Select materials from the Estes Gulch disposal cell will be used, where possible. Existing borrow sites will be used, when necessary, for additional earthen and rock materials to reduce the amount of land disturbance. Potential borrow sites were identified in the RAP.</p>	<p>RAC</p>	<p>To be decided on an as-needed basis.</p>
<p>Local employment preference: Economic benefits to the local communities will be maximized.</p>	<p>N/A</p>	<p>Local workers will be hired whenever possible. To date, 70 percent of the work force has been drawn from the local community. This percentage will increase during the life of project.</p>	<p>RAC</p>	<p>Ongoing</p>
<p>Immediate off-site spill clean-up: Measures will be taken to minimize the impacts of off-site spills.</p>	<p>UMTRA Project Environmental, Health, and Safety Plan (DOE, 1989).</p>	<p>Off-site spills will be cleaned up immediately. Response procedures have been developed for severe weather and medical emergencies. A site-specific environmental monitoring program has been developed by the RAC and will be instituted throughout the remedial action.</p>	<p>RAC</p>	<p>Monitoring program employed throughout duration of project.</p>
<p>Site restoration: All areas disturbed during remedial action will be restored.</p>	<p>43 USC 1761, et. seq. (Federal Land Policy and Management Act of 1976); Bureau of Land Management, Glenwood Springs Resource Area, Resource Management Plan (BLM, 1984).</p>	<p>Disturbed areas will be restored by backfilling, grading, and revegetating with the exception of the stabilized disposal cell and access roads. All disturbed areas will be recontoured and all earthwork obliterated by removing embankments, backfilling excavations, and grading to re-establish the approximate original contours. All disturbed areas shall be seeded, with a seed mixture certified by the Colorado Department of Agriculture.</p> <p>All construction-related buildings, foundations, structures, conveyors, bins, tanks, scales, drums, existing fencing, and piping will be decontaminated, if need be, demolished, and removed from the sites during remedial action.</p>	<p>RAC</p>	<p>Target start date: Fiscal year 1996</p>
<p>Wetlands reclamation: All destroyed wetlands will be replaced.</p>	<p>33 USC 1344, et. seq. (Clean Water Act).</p>	<p>Wetlands destroyed during remedial action will be compensated for by the incorporation of new wetlands into the revegetation plan at the New Rise site as specified in the U.S. Army Corp of Engineers 404 Permit.</p>	<p>RAC</p>	<p>Target start date: Fiscal year 1996</p>

Table 3.1 Mitigation commitments associated with the remedial action (continued)

Commitment	Reference	Mitigation implementation	Work performed by	Status
<p>Abandoned wells: Measures will be taken to ensure that existing utilities and abandoned wells will be sealed, removed, or plugged.</p>	<p>Col. Reg. St. 37-91-104(1)(d) and Col. Reg. St. 37-91-110(2) (Water Well and Pump Installation Contractors).</p>	<p>As required by state regulations, all existing utilities and abandoned wells that are not required for long-term surveillance will be sealed, removed, or plugged.</p>	<p>RAC</p>	<p>Target start date for remaining processing site wells: Fall 1992 Completion date for processing sites and disposal site: 1988 and Spring 1992, respectively</p>
<p>Design of tailings disposal site: The disposal cell will be designed to withstand the Maximum Credible Earthquake. The terrain adjacent to the embankment will promote sheet flow and prevent erosion or headcutting.</p>	<p>42 USC 4321, et seq. (Uranium Mill Tailings Radiation Control Act of 1978).</p>	<p>A compacted earthen cover will be constructed on the disposal cell to inhibit radon emanation (consistent with the EPA standards), surface water infiltration, and plant root penetration. An earthen frost protection layer and drain layer will protect the radon barrier layer from freeze/thaw effects. A rock cover on the stabilized tailings will ensure that the disposal cell will withstand erosion, and inhibit encroachment by burrowing animals. A partially below-grade facility for the disposal of the tailings and contaminated materials will be constructed to minimize the land area to be occupied by the stabilized pile, and to contribute to the long-term stability of the pile. The terrain adjacent to the embankment will be graded to promote sheet flow, and rock-filled key trenches will be provided along the embankment and existing terrain interface to prevent erosion or headcutting. A rock-lined toe ditch will be constructed along the south end of the pile to collect and divert surface water runoff. The upland drainage area to the north will be graded, riprap will be added, and an interceptor ditch will be built, which together will divert runoff away from the pile (Figures 3.1 and 3.2). Interim design activities during remediation will be designed as required.</p>	<p>RAC</p>	<p>Completion date: Fiscal year 1996</p>
<p>Final equipment decontamination: Equipment used in the remedial action will be cleaned of contaminants.</p>	<p>UMTRA Project Environmental, Health and Safety Plan (DOE, 1989).</p>	<p>Before release for use on other projects, equipment used in the remedial action will be cleaned of contaminated materials in accordance with levels specified in the UMTRA Project Environmental, Health, and Safety Plan.</p>	<p>RAC</p>	<p>Target start date: Fiscal year 1996</p>
<p>Quality assurance: Quality assurance standards will be established and implemented.</p>	<p>UMTRA Project Quality Assurance Program Plan (DOE, 1990b).</p>	<p>DOE has prepared the site-specific Remedial Action Inspection Plan (RAIP) for Rifle (RAC, 1992) in conformance with guidelines established in the UMTRA Project Quality Assurance Program Plan. DOE will audit the construction activities and will publish audit reports as appropriate.</p>	<p>RAC</p>	<p>Actual start date: Audit activities are ongoing</p>

Table 3.1 Mitigation commitments associated with the remedial action (concluded)

Commitment	Reference	Mitigation Implementation	Work performed by	Status
<p>Cultural resources survey: A cultural resources survey will be performed prior to surface disturbance.</p>	<p>16 USC 470 (National Historic Preservation Act of 1966, as amended).</p>	<p>A cultural resources survey was performed. Cultural resources were found in an area adjacent to the disposal site. A cultural resources clearance has been obtained for all areas to be disturbed during construction.</p>	<p>Complete Archeological Service Associates</p>	<p>Completion date: 1986</p>
<p>Public contact: DOE will maintain close contact with the public.</p>	<p>N/A</p>	<p>Close contact with the public will be maintained through the established Rifle Task Force. Information concerning haul hours will be announced in the local media. DOE has established a local Remedial Action Site Manager who provides information to the public and local media. Prior to and during construction, DOE, with assistance from State of Colorado officials and local citizens, will conduct public meetings; DOE will provide status and progress reports for the State of Colorado and the Nuclear Regulatory Commission. Information on related issues will be available via locally distributed factsheets and the toll-free telephone information line (1-800-522-6495).</p>	<p>DOE RAC</p>	<p>Ongoing</p>

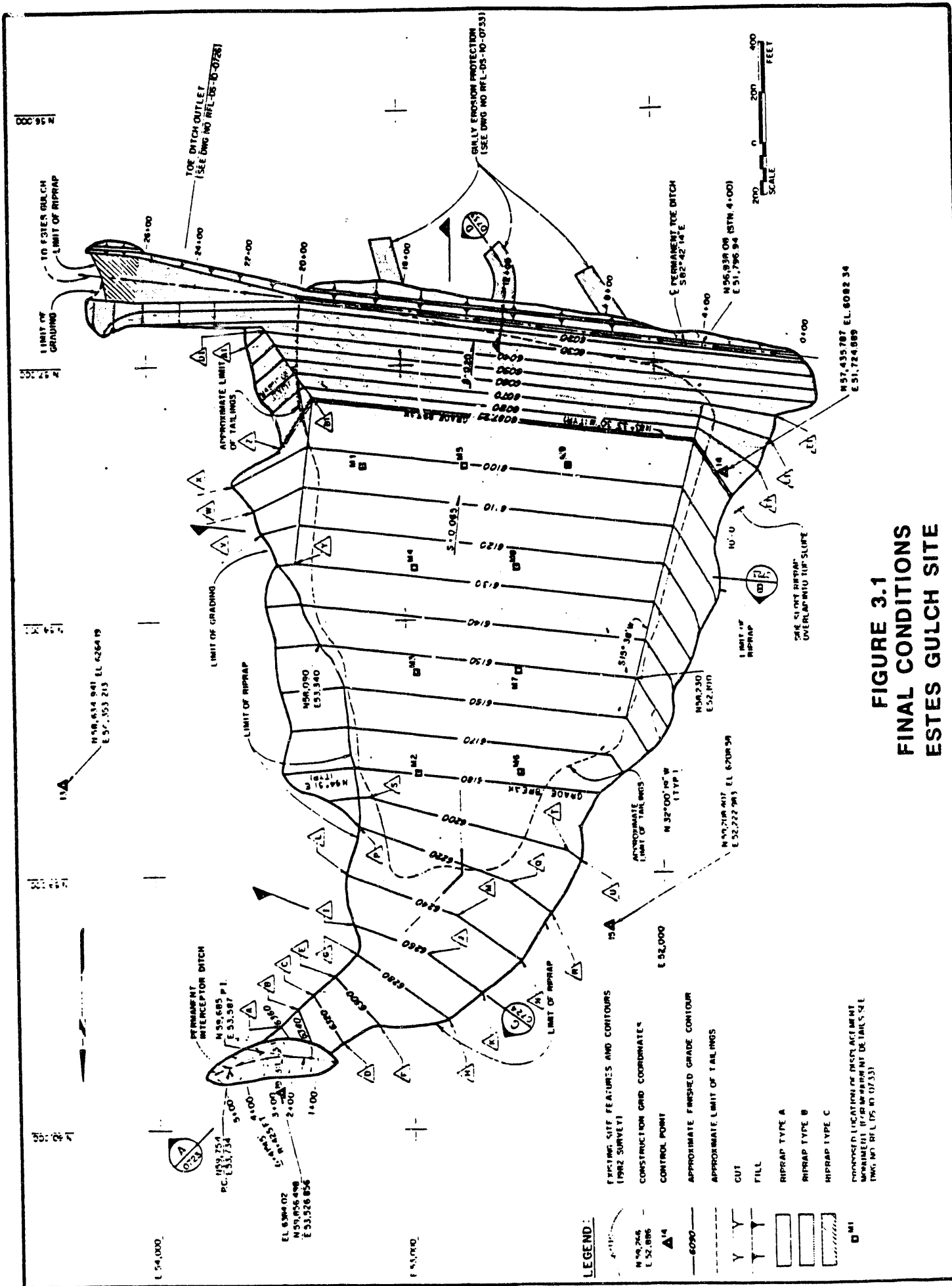


FIGURE 3.1
FINAL CONDITIONS
ESTES GULCH SITE

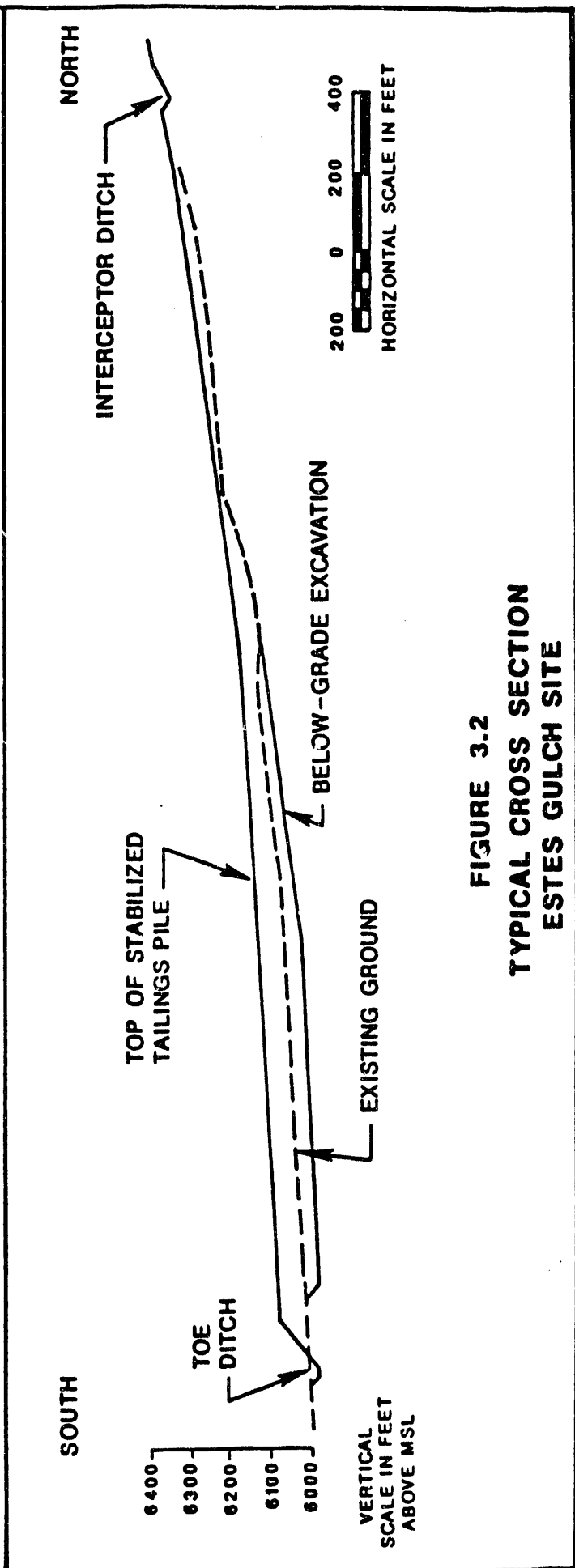
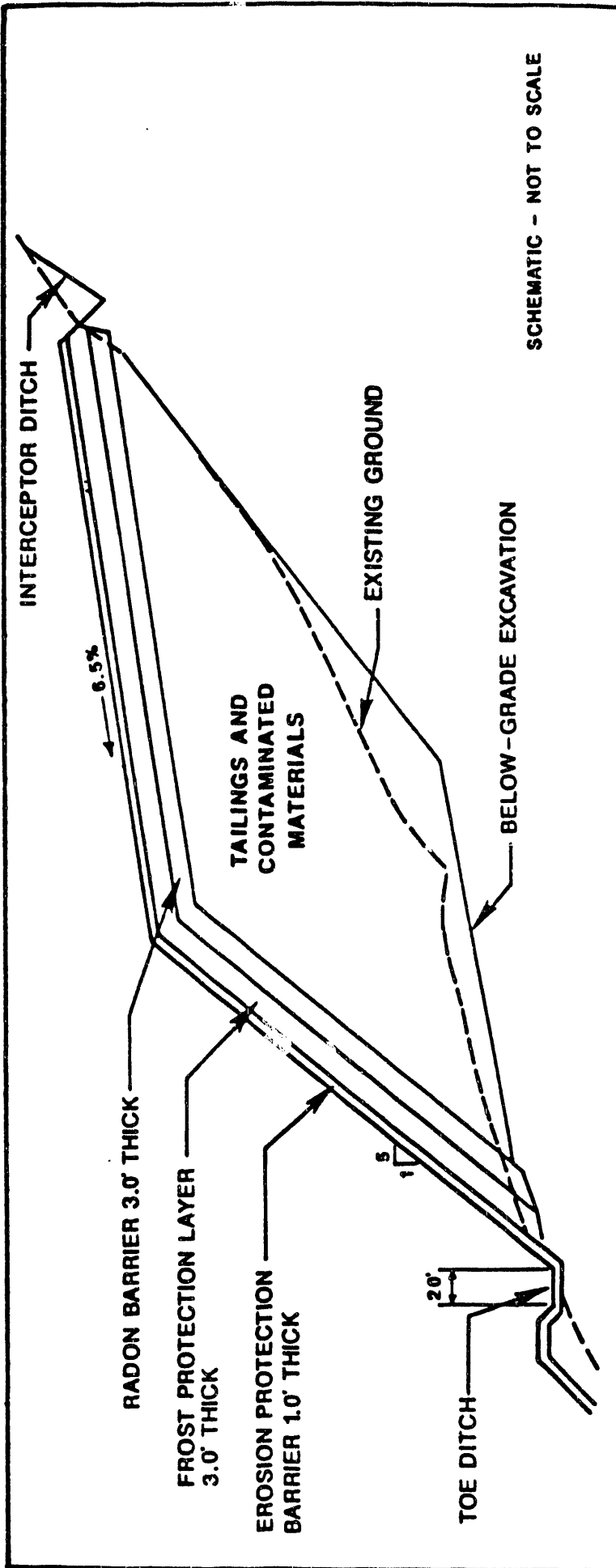


FIGURE 3.2
TYPICAL CROSS SECTION
ESTES GULCH SITE

4.0 SUMMARY OF THE MITIGATION ACTION PLAN

4.1 SUMMARY

All mitigative commitments in the final EIS and the ROD have been addressed in the MAP. As remedial action proceeds on the Rifle sites, adverse environmental impacts associated with the remediation will be mitigated as described in this MAP. The DOE UMTRA Project Office, supported by the RAC and the TAC, will implement mitigation commitments including, but not limited to, wildlife and endangered species protection, site restoration, and prevention of contaminant release. Figure 4.1 provides a schedule showing the timing of the measures. The remedial action will be conducted in accordance with the UMTRA Project Environmental, Health, and Safety Plan while maintaining a public outreach program responsive to the local task force.

4.2 SCHEDULE

Figure 4.1 lists each mitigation commitment and the schedule for commencement and completion of the activity.

MITIGATION MEASURES	INTERIM ACTIONS												1991												1992												1993												1994												1995												1996												INDEFINITE
	Q1				Q2				Q3				Q4				Q1				Q2				Q3				Q4				Q1				Q2				Q3				Q4																																								
LOCAL EMPLOYMENT	[Solid black bar]																																																																																				
IMMEDIATE OFF-SITE SPILL CLEAN-UP	[Solid black bar]																																																																																				
SITE RESTORATION	[Solid black bar]																																																																																				
WETLANDS RECLAMATION	[Solid black bar]																																																																																				
TREATMENT OF ABANDONED WELLS	[Solid black bar]																																																																																				
DESIGN OF TAILINGS RESPOSITORY	[Solid black bar]																																																																																				
FINAL EQUIPMENT DECONTAMINATION	[Solid black bar]																																																																																				
QUALITY ASSURANCE	[Solid black bar]																																																																																				
CULTURAL RESOURCES	[Solid black bar]																																																																																				
PUBLIC CONTACT	[Solid black bar]																																																																																				

**FIGURE 4.1 (CONCLUDED)
REMEDIAL ACTION SCHEDULE FOR RIFLE SITES**

5.0 REFERENCES

- BLM (Bureau of Land Management), 1984. Glenwood Springs Resource Management Plan, Record of Decision, U.S. Department of Interior, Bureau of Land Management, Glenwood Springs Resource Area, Glenwood Springs, Colorado.
- DOE (U.S. Department of Energy), 1992. Remedial Action Plan and Site Design for Stabilization of the Inactive Uranium Mill Tailings Sites at Rifle, Colorado, prepared by the U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1991. National Environmental Policy Act Compliance Program, DOE Order 5440.1D, February 1991, Office of Environment, Safety and Health, Washington, D.C.
- DOE (U.S. Department of Energy), 1990a. Final Environmental Impact Statement, Remedial Actions at the Former Union Carbide Corporation Uranium Mill Sites, Rifle, Garfield County, Colorado, Environmental Impact Statement DOE/EIS-0132-F, DOE UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1990b. UMTRA Project Quality Assurance Program Plan, Rev. 3, UMTRA-DOE/AL-185, prepared by the U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1989. UMTRA Project Environmental, Health, and Safety Plan, UMTRA-DOE/AL-150224.006, DOE UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- DOE (U.S. Department of Energy), 1987. Draft Environmental Impact Statement, Remedial Actions at the Former Union Carbide Corporation Uranium Mill Sites, Rifle, Garfield County, Colorado, UMTRA-DOE/EIS-0132-D, DOE UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.
- RAC (U.S. Department of Energy), 1992. Remedial Action Inspection Plan, UMTRA Project, Rifle, Colorado, Rev. D, MK-F UMTRA-41, DOE UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.

APPENDIX A
RECORD OF DECISION

sectors, including business, organized labor, community organizations, ethnic associations or interest groups, social services and human services agencies, job training and job placement agencies, correctional facilities, housing authorities, civic organizations, and public officials are invited to give testimony at the public hearings.

The hearings will be conducted by Betsy Brand, Assistant Secretary for the Office of Vocational and Adult Education, and officials from the Departments of Labor and Health and Human Services.

Information gathered at the hearings will assist the Office of Vocational and Adult Education in preparing an agenda for the Conference on Coordination in the Spring of 1991; the Division of Adult Education and Literacy in planning for the 1991 Conference of State Directors of Adult Education and the reauthorization of the Adult Education Act in 1992-93; and the Domestic Policy Council Task Force on Literacy in preparing recommendations for improved coordination among Federal basic skills programs.

MEETING INFORMATION: The public hearings will be held from 9 a.m. to 1 p.m. on:

January 29, 1991

Seattle Central Community College, 1701 Broadway, room BE-1110, Main Building, Seattle, WA.

February 5, 1991

Boatmen's Plaza, 800 Market Street, St. Louis, MO.

February 12, 1991

The Citadel, The Military College of South Carolina, Mark Clark Hall, Charleston, SC.

February 20, 1991

Mutual Benefit Life Insurance Company, 520 Broad Street, Pelican Room, Newark, NJ.

ORAL TESTIMONY: Advance registration is requested for individuals who wish to testify orally. Requests to testify must be received by the Department of Education (Department) contact person no later than three days prior to the hearing date. Guidelines for testifiers are available from the Department's contact person.

WRITTEN TESTIMONY: Individuals or organizations that wish to present their views, but are unable to attend the hearing, are invited to submit written testimony that will be made part of the official record. This testimony may be submitted at hearing locations or sent to the Department's contact person.

Testimony should be typed and double-spaced and can be of any length.

FOR FURTHER INFORMATION CONTACT: Persons desiring to testify or participate or seeking additional information should contact Phyllis Dorsey, Hearing Coordinator, Division of Adult Education and Literacy, Office of Vocational and Adult Education, U.S. Department of Education (Mary E. Switzer Building, room 4424), 400 Maryland Avenue, SW., Washington, DC 20202-7240. Telephone: (202) 732-2411; deaf and hearing impaired persons may call (202) 732-2235 for TDD services.

Dated: January 15, 1991.

Betsy Brand,
Assistant Secretary, Office of Vocational and Adult Education.
[FR Doc. 91-1347 Filed 1-16-91; 8:45 a.m.]
BILLING CODE 4000-01-M

DEPARTMENT OF ENERGY

Compliance with the National Environmental Policy Act: Record of Decision for Remedial Action at the Former Union Carbide Corporation Uranium Mill Sites, Rifle, Garfield County, CO

AGENCY: U.S. Department of Energy.

ACTION: Record of decision.

SUMMARY: Pursuant to the Council on Environmental Quality (CEQ) regulations (40 CFR parts 1500-1508), which implement the procedural provisions of the National Environmental Policy Act (NEPA), and the U.S. Department of Energy (DOE) guidelines for compliance with the NEPA (52 FR 47662, December 15, 1987), the DOE Office of Environmental Restoration and Waste Management is issuing a Record of Decision (ROD) on remedial actions at the former Union Carbide Corporation uranium mill sites at Rifle, Garfield County, Colorado. DOE has decided to perform remedial actions and to relocate the uranium mill tailings by truck transport from the former uranium mill sites for long-term control at a disposal site at Estes Gulch, in Garfield County northwest of Rifle. The Final Environmental Impact Statement (FEIS), entitled "Remedial Actions at the Former Union Carbide Corporation Mill Sites, Rifle, Garfield County, Colorado" (DOE/EIS 0132-F), was issued on March 23, 1990.

PUBLIC AVAILABILITY: To receive a copy of the FEIS or ROD, please contact: Mark L. Matthews, Project Manager, Uranium Mill Tailings Remedial Action Project Office, 5301 Central Avenue,

NE, Suite 1720, Albuquerque, New Mexico 87108, (505) 845-4628.

For further information on the NEPA process, contact: C. M. Borgstrom, Director, Office of NEPA Oversight, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-4600.

Background

On November 8, 1978, the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (Pub. L. 95-604, as amended) was enacted to address a Congressional finding that uranium mill tailings and other radiologically contaminated materials (hereinafter referred to as residual radioactive material, or RRM) may pose a health hazard to the public. Inactive uranium mill sites and properties that are in the vicinity of these mill sites (hereinafter referred to as vicinity properties) are contaminated with tailings. On November 8, 1979, DOE designated 24 inactive uranium milling sites (the designated processing sites), including the two former Union Carbide Corporation uranium mill sites (the "Rifle sites" or the "Old and New Rifle sites") in Rifle, Colorado, for remedial action under the UMTRCA (44 FR 74691, December 18, 1979).

Effective October 19, 1981, and pursuant to the UMTRCA, DOE and the State of Colorado entered into a cooperative agreement to perform remedial action at the Rifle sites. Under this cooperative agreement, the State of Colorado and the U.S. Nuclear Regulatory Commission (NRC) must concur with the remedial action plan developed by DOE. Consistent with the UMTRCA, the cooperative agreement provides for DOE to pay 90 percent and the State of Colorado to pay 10 percent of the actual costs of remedial action, including RRM transport and site acquisition.

The UMTRCA also requires the U.S. Environmental Protection Agency (EPA) to promulgate standards of general application to protect the public health, safety, and environment from radiological and nonradiological hazards associated with the RRM located at the designated processing sites. The standards established by EPA must provide protection that is consistent, to the maximum extent practicable, with the requirements of the Solid Waste Disposal Act, referred to as the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 *et seq.* The UMTRCA requires DOE to conduct remedial action at the designated processing sites in compliance with these standards.

On January 5, 1983, EPA published final standards at 40 CFR part 192 for the control (subpart A) and cleanup (subpart B) of RRM. EPA has also issued guidance for implementation of these standards (subpart C). However, on September 8, 1985, the Tenth Circuit Court of Appeals set aside the groundwater provisions of the regulations at 40 CFR 192.20(a) (2) and (3), and remanded those standards to EPA. See *American Mining Congress v. Thomas*, 722 F.2d 617, 640 (10th C. 1985).

EPA has proposed new groundwater protection standards to replace those remanded [52 FR 36,000 (1987) (to be codified at 40 CFR part 192) (proposed September 24, 1987)]. These groundwater protection standards, however, have not been issued in final form. Nevertheless, the UMTCA requires any remedial actions taken by DOE to comply with the EPA proposed groundwater protection standards until they become final.

DOE has determined that the selected remedial action at the Estes Gulch disposal site would comply with the requirements of subpart A and C of the proposed EPA groundwater protection standards. Planning activities supporting compliance with groundwater restoration pursuant to subpart B of the proposed groundwater protection standards are expected to begin in 1991.¹

NRC has issued regulations for general licensing for all disposal sites, such as Estes Gulch (Final rule, 55 FR 45591 (1990) (10 CFR part 40) (October 30, 1990)). For NRC to grant a license for the disposal site, NRC must concur with DOE's determination that the disposal site has been properly reclaimed and with DOE's long-term surveillance plan. Section 5.21 of the Rifle FEIS contains a brief summary of the long-term surveillance plans for the Rifle sites for licensing.

Project Description

The Rifle sites consist of the separate Old and New Rifle sites, which together cover 184 acres of private land west of the center of Rifle, Colorado, on the north bank of the Colorado River. The tailings piles at both sites have been partially stabilized, vegetated and irrigated to promote a native vegetation cover. (Tailings consist of the chemicals used in the milling process and the finely ground sands and clays from the

processed ore.) Some erosion has occurred at the New Rifle tailings pile.

The Old Rifle site is approximately 0.3 mile from the center of Rifle. The site consists of a 13-acre tailings pile and a 9-acre mill area, including the old assay building and foundations of other mill facilities. Adjacent to the processing site is a 53-acre area contaminated with windblown tailings.

The New Rifle site includes a 33-acre tailings pile and a 109-acre mill area that includes mill facilities, various water retention ponds, and two ore-storage areas. Adjacent to the processing site is a 63-acre area that has been contaminated with windblown tailings. The mill structures were demolished and stockpiled on the site during interim actions (discussed below).

DOE originally estimated that there were as many as 102 potential vicinity properties (residences, businesses, or open lands, potentially contaminated by the use of tailings for building or fill materials) in the Rifle area; however, only 85 properties were found to require remedial action. Of these 85, 60 have already been remediated and the remaining 25 will be remediated by September 1991. All RRM from these vicinity properties will be placed in the disposal cell at the Estes Gulch disposal site.

NEPA review of the impacts of remedial action at the vicinity properties was completed in 1985 and, therefore, these impacts were not considered in the FEIS. However, the impacts of remedial action at the vicinity properties are considered in connection with the remedial action at the Rifle sites to obtain the total impacts of remedial action.

When the State of Colorado acquired the Rifle sites in July 1988, the mill structures were unsafe. In addition, vanadium-contaminated materials, asbestos, oils, gases, solvents, chemicals, and cleaners, often in unmarked containers or in unsecured areas, were present on the New Rifle site. The Rifle sites were neither guarded nor considered physically secured. The conditions at the Rifle sites presented a constant hazard to the groundskeeping crew, as well as to anyone who might easily gain unauthorized access.

Because of the potentially unsafe conditions, DOE approved the performance of interim actions in July 1988. (Interim actions began in August 1988 and were completed in August 1989.) Interim actions included removing asbestos and other chemicals and materials, demolishing unstable and unsafe mill structures, and improving

site security. Vanadium-contaminated materials were transferred to a vanadium refining facility for reprocessing; all other chemicals, acids, and materials were transferred to a licensed disposal facility. No uranium mill tailings piles were disturbed as a result of this activity.

Decision

DOE has selected Alternative 3 in the FEIS, relocation of the RRM and other contaminated materials at the New and Old Rifle sites to a permanent disposal site at Estes Gulch as the preferred alternative.

The Estes Gulch disposal site is approximately six miles north of the City of Rifle. The site lies between the Grand Hogback to the northeast and State Highway (SH) 13 to the south and west. The terrain slopes gently upward to the north-northwest, toward the Grand Hogback; it is sparsely vegetated with grasses and shrubs; and there are no major perennial surface drainages nor any near-surface groundwater at the site.

The Estes Gulch disposal site and most of the land surrounding the site is federal land administered by the Bureau of Land Management (BLM); however, there is some private land south of the site along SH 13. The disposal site is used primarily for low-density grazing, but there are two existing oil and gas leases at the site.

BLM has published a notice of proposed withdrawal (51 FR 37498, October 22, 1986) for the Estes Gulch disposal site. This notice indicates that BLM proposes to withdraw an area of about 240 acres in Township 5 South (T5S) Range 83 West (R93W), Section 14. DOE will request that the U.S. Department of Interior, through BLM, transfer jurisdiction over the final disposal site of approximately 81 acres permanently to DOE. The remaining lands are for temporary use in stockpiling of materials, equipment storage, water retention basins, and other construction-related activities. This transfer of jurisdiction over the final disposal site will not take place, however, until BLM has completed all administrative, procedural and legal requirements. In addition, DOE must consult with the Governor of Colorado.

In response to the State of Colorado and public comments received on the draft EIS and to comply with State of Colorado Public Highway Access Permit requirements, DOE has determined that mitigation measures are necessary to reduce the potential for transportation-related impacts associated with the numerous and heavily loaded trucks

¹ DOE is planning to decouple surface remediation and groundwater restoration. Consequently, the need for and extent of groundwater restoration will be evaluated separately. This approach has been recognized by EPA in its proposed groundwater protection standards.

et will be transporting RRM on the public highway. Therefore, DOE will construct improvements to SH 13 to mitigate transportation impacts and construct an access road from SH 13 to the disposal site. The mitigation measures include the construction of a paved, 12-foot-wide, 7,500-foot-long climbing lane on the east side of SH 13 between SH 325 and the disposal site turnoff, an 800-foot-long, 12-foot-wide gravel truck turnout, and an intersection facility to the Estes Gulch disposal site. Under the terms of the DOE-State Cooperative Agreement, the State of Colorado has agreed to pay for the full costs of construction as part of the State's 10 percent share of total remedial action costs. The reasons for these mitigation measures are discussed below.

In their comments on the EIS, the Colorado Department of Highways (CDOH) indicated that the high haul truck volume could cause a traffic hazard on SH 13 between the junction of SH 325 and the disposal site turnoff because of the narrow and curving, steep grades and poor passing sight distances. For this reason, CDOH indicated that it would require the construction of a third lane, or truck passing lane, and an intersection facility to the Estes Gulch disposal site as part of the necessary Colorado State Highway Access Permit requirements. The Colorado Access Code requires CDOH approval of a highway access permit to ensure protection of the public health, safety, and welfare; to maintain smooth traffic flow; to maintain the highway right-of-way drainage; and to protect the functional level of public highways. The Colorado Access Code emphasizes that new highway access points, such as the access between SH 13 and the Estes Gulch disposal site, must not compromise the safety and efficiency of the public highway. Likewise, State of Colorado law prohibits the impeding or blocking of normal and reasonable forward traffic flow. The law provides that slower traffic, the haul trucks in this case, must pull over and use any posted special uphill traffic lanes or roadside turnouts to allow other vehicles to pass or maintain normal traffic flow.

The FEIS indicates that projected SH 13 use will increase by 52 to 66 percent as a result of truck haul trips. Posted speed limits are 50 to 55 mph for these areas and it is highly probable that, without construction and use of these transportation-specific mitigation measures, the numerous and heavily laden haul trucks would impede the flow of traffic, cause or substantively

increase congestion, and increase accident potentials. The construction features will reduce the potential for accidents, reduce congestion, prevent the impeding of private and commercial traffic flow by removing the truck traffic from the main traffic lanes to the dedicated climbing lane and the disposal site turnoff, and comply with the requirements of the CDOH access permit and State law.

Site preparation at the Rifle sites will include removing RRM from the access roads and access control areas, fencing the site, and installing temporary construction facilities. After disposal site preparation, the RRM will be trucked to the Estes Gulch disposal site; placed in the 20-foot deep disposal cell; and covered with the earthen radon and frost protection layers, drain and filter layers, and a rock erosion protection layer. After the RRM are covered, the toe ditch and erosion protection features will be constructed, and the final site grading and restoration will take place. The maximum height will be flush with the adjacent terrain and at the top will slope at 7.5 percent. The slope at the toe of the disposal cell will be a maximum of 20 percent. The road from SH 13 to the Estes Gulch disposal site will be maintained as permanent access for surveillance and maintenance inspections.

After removal of the RRM, the disturbed areas at both Rifle sites, including the disturbed wetlands areas, will be backfilled with clean soils, contoured for surface drainage, and revegetated. During the groundwater restoration phase of the Uranium Mill Tailings Remedial Action (UMTRA) Project, DOE will evaluate groundwater restoration requirements and perform such groundwater restoration as is necessary to ensure compliance with the final EPA groundwater protection standards. The State of Colorado will retain title to the Rifle sites and may dispose of them in accordance with section 104 of the UMTRCA.

Description of Alternatives

In addition to the preferred alternative, the following alternatives were considered in detail by DOE in reaching its decision to relocate the RRM by truck and to dispose of, stabilize and control these materials at the Estes Gulch disposal site. All of the action alternatives (Alternatives 2, 3, and 4) include the RRM from the remediated vicinity properties.

Alternative 1—No Action. This alternative consisted of performing no remedial action. The tailings piles, vicinity properties and other RRM would remain in their present locations

and conditions. Interim actions, however, discussion above, have been completed.

Alternative 2—Stabilization at the New Rifle Site. This alternative involved stabilizing all of the RRM at the New Rifle site. The Old Rifle RRM would have been excavated, trucked to the New Rifle site on U.S. Highway 6, and consolidated with the New Rifle RRM to form one disposal cell. The consolidated RRM would then have been covered with an earthen radon barrier, a frost protection layer, a drain layer, a filter layer, and a rock erosion protection barrier. A below-grade rock apron would have been constructed around the base of the entire stabilized disposal cell to protect against the erosional forces of flooding in the Colorado River. Drainage diversion ditches would have been constructed on the north, east, and south sides of the disposal cell to divert surface-water runoff around and away from the disposal cell. All areas not occupied by the disposal cell and associated erosion protection features would have been restored with clean fill material to promote positive drainage and then revegetated.

Alternative 4—Disposal at the Lucas Mesa Site by Truck Transport. This alternative would have relocated the Old and New Rifle RRM by truck to the Lucas Mesa site, approximately 35 miles southwest of Rifle. An access road would have been constructed from County Road V.5 onto Lucas Mesa, and a disposal cell averaging 15 feet in depth would have been excavated at the site. All of the RRM would have been trucked to the Lucas Mesa site; placed in the disposal cell; and covered with an earthen, bentonite-amended radon barrier, a 4-foot-thick earthen frost protection layer, a filter layer, and a rock erosion protection barrier. A large, below-grade rock apron would have been constructed along the northwest base of the disposal cell. Rock-lined drainage diversion ditches would have been constructed on the northeast, southeast, and southwest sides of the disposal cell to divert surface-water runoff around and away from the disposal cell. After the removal of the RRM, the Old and New Rifle sites would have been restored with clean fill material to promote positive drainage and then revegetated.

COMMENTS RECEIVED: DOE received comments on the FEIS from two private individuals, CDOH, and BLM. The private individuals expressed concern over the potential use of the Rifle Creek limestone quarry as a borrow source for erosion control rock, concern over the conflicting State and EPA radon

emission standards for the UMTRA Project, and the perceived impacts to a private landowner near the Estes Gulch disposal site. CDOR requested a pavement overlay for SH 6 and SH 13 as part of the transportation-related mitigation measures.

BLM had several issues of concern relating to the adequacy and level of detail of the information in the FEIS for use in supporting BLM in transferring jurisdiction over the Estes Gulch disposal site to DOE. In summary, these issues included the need for additional information to clarify the location and size of the lands to be transferred, the amount of acreage to be impacted by remedial action and the amount of lost forage acreage. BLM also sought to describe the land transfer process and schedule, including BLM procedural and legal requirements; define DOE's disposal site access and utilities needs; determine BLM requirements for the SH 13 upgrade; expand the description of the mitigation measures and assure adequate revegetation; determine impacts to a nearby stock pond; assess and mitigate impacts to wildlife; and incorporate an analysis of BLM's critical elements and the FEIS's conformance with BLM's Resource Management Plan (RMP).

These comments are responded to in summary form below. All of these comments and issues will be addressed specifically during the final design process, through consultation with the State of Colorado and BLM.

- Rifle Creek limestone quarry.

DOE eliminated this quarry from further consideration in the EIS process because of the potential public policy and transportation impacts associated with its use.

- State/EPA dual radon emission standards.

The UMTRCA required EPA to set standards for the control of radon releases of UMTRCA Project sites. Initially, EPA proposed a radon emission standard of 2 picocuries per square meter per second (pCi/m²s); however, after reevaluation of the original standard, EPA revised it to 20 pCi/m²s (See 40 CFR 192.32(b)(1)(ii)). Among the reasons for the change were that the incremental benefits of the original proposed standard did not justify the increased costs when compared to the revised standard, and the test results indicated a 2 pCi/m²s standard might be more difficult to achieve than EPA originally believed (46 FR 506, January 5, 1983). EPA has determined that the revised standard provides adequate protection of public health and safety and the environment since it provides for more than 96

percent of the reduction in potential lung cancers from radon emissions as provided by the original proposed standard. In addition, the State of Colorado is currently reviewing its existing standard of 2 pCi/m²s, with the intention of changing it to 20 pCi/m²s. DOE will comply with EPA standards.

- Perceived impacts to adjacent private landowner.

The commenter expressed concern over perceived adverse economic impacts and potential impacts on land uses to private lands adjacent to BLM land containing the Estes Gulch disposal site. The commenter also indicated that economic impacts, including impacts to livestock and game, will result from the projected haul-truck traffic to the Estes Gulch disposal site along and through the commenter's property. Other impact concerns include the direct impacts of roadway construction and use; real or perceived contamination and pollution from RRM transportation; degradation of the entire area from the existence of the RRM; and reduced market value of the affected lands. This commenter believed the EIS did not adequately consider these impacts.

It is DOE's position that land use was addressed in sufficient detail in the EIS. Based on information gathered during scoping of the EIS, preparation of the draft EIS, and the public commenting period for the FEIS, DOE analyzed existing land ownership and uses, and assessed reasonably foreseeable future impacts. Since the site is surrounded by BLM land, DOE determined that BLM land will receive the majority of the direct impacts, if any. No information was brought to DOE's attention during the public review process that would have necessitated a more in-depth analysis of other land use issues. Under the CEQ guidelines (46 FR 18031, March 23, 1981), DOE is not required to engage in speculation or contemplation about future plans of unknown future landowners or unknown future land uses.

The EIS analyzed transportation-related impacts and stated that all affected parties would be monetarily compensated for access use. All disturbed areas will be reclaimed according to the stated mitigation measures. The transportation and disposal of the RRM will be conducted in compliance with all applicable regulations and laws, particularly EPA standards. Since the RRM disposal will inhibit the spread of contamination, and all disturbed areas will be reclaimed, adjacent areas will not be degraded as a result of project activities. U.S. Army Corps of Engineers appraisers have determined that there will be no

significant impacts to area landowners, based on current usage and predictable regional trends. Unfortunately, the EIS cannot address "perceived contamination" or the potential future market value of acreage in the vicinity of the Estes Gulch disposal site. Perceptions vary widely between individuals and agencies and are a matter of personal choice and opinion.

- SH 6 and SH 13 overlays.

The State of Colorado has requested that DOE include a pavement overlay of SH 6 and SH 13 as part of the mitigation plan to offset or compensate for the anticipated highway deterioration associated with the large volume of haul truck traffic. DOE intends to abide by the intent of the "Statement of Principles and Directives for the Implementation of the UMTRA Project in the State of Colorado," which was signed by the Governor of Colorado and DOE on May 2, 1990. Item 7 of the Directives requires the joint development of a plan for the appropriate upkeep and maintenance of roadways for each of the Colorado sites, including the Rifle sites.

- Location and size of disposal site transfer lands, acreage to be impacted, and forage acreage lost. DOE provided clarification to BLM concerning the original 240-acre land withdrawal application area. The disposal site area is located in the southwest quarter of the north half of the northwest quarter of Section 14, T3S, R93W. Figure 3.5 of the FEIS shows the approximate location of the 71-acre disposal cell; an unfenced 10-acre buffer zone will encircle the disposal cell, for a total of approximately 81 acres in the final disposal site. An additional 12 acres of disturbance will be caused by the access road to the site from SH 13 and upgrade of SH 13. Therefore, approximately 93 acres would be permanently lost from forage use by wildlife and livestock because of the disposal cell, buffer zone, and access road. It is anticipated that approximately 10 to 40 acres will be temporarily disturbed during remedial action, but eventually will be revegetated and returned to BLM for resumption of previous uses. Based on a BLM analysis of lost values, DOE will provide monetary compensation for losses to the grazing permittees as part of the remedial action mitigation measures and the land transfer process.

- Land transfer process, schedule, and BLM procedural and legal requirements. As provided in the FEIS, prior to the relocation of the RRM and stabilization at Estes Gulch, DOE will request BLM approval of the DOE land withdrawal application and land

transfer. This process cannot be completed until after publication of the ROD, the completion of mitigation and compensation negotiations with BLM, and the successful completion of all BLM procedural and legal requirements. Completion of the land transfer will also require an amendment of BLM's Glenwood Springs RMP. The RMP amendment process requires the preparation of an environmental assessment (EA) and a 30-day public "protest" and Governor's review period.

- **Disposal site access and utility needs.** DOE will submit right-of-way (ROW) permit application packages for the site access road and for utility service needs to BLM for approval. As part of these packages, DOE will submit detailed engineering design and survey information, and mitigation measures to offset impacts. In addition, DOE will obtain a small piece of private land required for permanent access to the site.

- **SH 13 upgrade.** Because the proposed upgrade features exceed the existing use and limitations, BLM will prepare an EA to analyze the impacts of the proposed upgrade features. DOE will provide detailed engineering information, as well as the results of the completed threatened and endangered species and cultural resources surveys to BLM for incorporation into the EA.

- **Expanded mitigation measures and revegetation description.** BLM requested more specific details on mitigation measures, revegetation plans, and weed control plans from DOE. DOE will provide this information after completion of the Final Design, and BLM will review and comment on the uplands and wetland revegetation plan, including the weed control plan. DOE is committed to the joint development and implementation of an appropriate site-specific revegetation plan for all uplands and wetlands disturbed during remedial action, and for the implementation of appropriate measures to control noxious weeds.

- **Stock pond impacts.** DOE has determined a small stock pond located at the southern end of the site would be impacted by remedial action. BLM has stated that this pond provides the only water for the existing grazing allotment. The pond's drainage area will be impacted through the diversion of runoff around the disposal cell and into Government Creek. This action is necessary to halt the existing gullying in the area. DOE will work with BLM to develop an acceptable measure to offset this impact.

- **Wildlife data and impacts.** BLM supplied additional and more current deer population and use data, which

further supported DOE's statement that the Estes Gulch area is a critical wintering use area for deer. DOE acknowledged BLM's concern over potential truck traffic-related deer mortalities. DOE feels that the access road to the disposal site will not be conducive to speeds higher than 20 to 30 mph. Both agencies agreed that SH 13 presents a greater collision risk, particularly for returning trucks. DOE, in coordination with BLM, will develop additional mitigation measures for this area. In addition, a resolution of BLM's general five-month versus DOE's estimated three-month winter shutdown period will be coordinated between DOE and BLM.

- **BLM critical elements and RMP analysis.** BLM requested that DOE address conformance with the Glenwood Springs RMP and BLM Critical Elements. The emphasis of the RMP for this area is grazing and wildlife habitat. The disposal at Estes Gulch would result in the loss of 93 acres of critical deer habitat and a loss of one animal grazing unit per month (AUM) per 10 acres or 9 AUMs. (An AUM is the amount of forage required by an animal for one month.) An analysis of the RMP and consultation with BLM resource specialists has determined that the critical elements of Areas of Critical Environmental Concern, Farm Lands, Native American Indian Religious Concerns, Wild and Scenic Rivers, and Wilderness are not present in the disposal site area.

Basis for Decision

DOE has characterized conditions at the Estes Gulch disposal site and has determined that the proposed remedial action will comply with the requirements of EPA standards. The disposal cell at Estes Gulch will comply with 40 CFR Part 192, Subparts A and C of EPA proposed groundwater protection standards. This compliance is based on an assessment of the hydrogeologic characteristics of the disposal site, a design analysis of the disposal cell, and a performance assessment of the disposal site.

The disposal cell will meet all proposed concentration limits at the point-of-compliance (POC) in the uppermost water-bearing unit. The POC will be at the down gradient edge of the engineered facility in the uppermost water bearing unit. At the Estes Gulch disposal site, the Wasatch Formation is the uppermost water-bearing unit.

The RRM will be placed in a partially below-grade disposal cell. A cover will be constructed over the RRM. The disposal cell cover at Estes Gulch will consist of the following (in ascending

order): (1) A clay radon/infiltration barrier with a hydraulic conductivity of 10^{-9} centimeters per second (cm/s), (2) a lower filter layer of sand, (3) an earthen frost protection layer, (4) an upper filter (bedding) layer of sand, and (5) a layer of erosion protection riprap. These disposal cell components will function as an integrated system to limit vertical seepage and inhibit radon emanation from the RRM. The radon barrier will restrict steady state vertical seepage through the RRM to 10^{-9} cm/s and will inhibit radon emanations to levels lower than the EPA radon standard. The lower filter layer will eliminate the potential for standing water to remain within the radon barrier. The frost protection layer and the erosion protection layer will prevent future degradation of the radon barrier by frost heave or erosion.

The steady state seepage flux of 10^{-9} cm/s is within the drainage capacity of the underlying Wasatch Formation bedrock, thereby preventing RRM seepage from perching along the low hydraulic conductivity strata beneath the disposal cell. No groundwater mounding in the underlying Wasatch Formation will occur in the disposal cell because the depth to groundwater is 163 feet.

The disposal cell will comply with EPA proposed groundwater protection standards because the average linear groundwater velocity in the Wasatch Formation is less than 0.1 ft/year. Consequently, contaminated groundwater will travel less than 100 feet in the 1000 year design-life of the disposal cell. This is approximately the distance from the perimeter of the RRM to the downgradient edge of the riprap (the POC).

In the unlikely event that contaminated groundwater does migrate beyond the POC within 1000 years, it would not significantly affect human health or the environment. Groundwater in the Wasatch Formation beneath the disposal cell could be classified as Class III (see 52 FR 36007 (1987) (40 CFR 192.11(e)) (proposed September 24, 1987), based on the high concentrations of naturally occurring contaminants and on the low yield of the formation. Because of the poor quality of groundwater, the low yield of the Wasatch Formation, the relatively remote location, and Federal ownership of the site, Wasatch Formation groundwater resources in the immediate vicinity of the disposal cell at Estes Gulch will probably remain undeveloped.

If the proposed concentration limits were exceeded for any hazardous

constituents at the POC, DOE would begin corrective action to bring the disposal cell into compliance. Corrective action measures may include disposal cell cover modification, application of supplemental standards for Class III groundwater, or alternate concentration limits (ACLs), as specified in 40 CFR part 192.

The height of the disposal cell at Estes Gulch will be flush with the adjacent terrain. It will blend with the color and form of the surrounding landscape, and will not be visible from SH 13. Long-term impacts will be minimal because the disposal site is isolated. Disposal at the Estes Gulch site will also release the 142-acre New Rifle site for future development. The major concerns for this alternative result from the higher costs and longer hauling distances in comparison to stabilization at the New Rifle site (Alternative 2) for both the RRM and the borrow materials.

In summary, DOE believes that disposal of the RRM at the Estes Gulch site would provide the most stable, permanent and reliable design while balancing reasonable cost and lower environmental impacts. Also, the Estes Gulch site is not subject to the same engineering design concerns as Alternatives 2 and 4, nor the same hydrologic concerns as Alternative 2.

Alternative 4, disposal at the Lucas Mesa site, could provide similar cell design stability, permanence, reliability, and compliance with EPA proposed groundwater standards. However, there are increased access road design and construction and transportation-related impacts, as well as substantial increases in costs and materials consumption due to the much greater hauling distances for both the RRM and the borrow materials. Since a shorter hauling distance reduces the risk of exposure to the population, the Estes Gulch alternative is the environmentally preferred alternative.

Alternative 2, stabilization at the New Rifle site, provides the least stable, permanent, or reliable design, and may not guarantee complete nor permanent compliance with EPA's proposed groundwater protection standards. Major concerns related to disposal at the New Rifle site include its proximity to the Colorado River, its vulnerability to river channel shifting, the high groundwater water table, the large quantity of RRM involved coupled with the constraints imposed by the limited areal extent of the site, a permanent loss of 142 acres at the New Rifle site, and the visual annoyance of the above-ground disposal cell to the nearby community of Rifle.

The New Rifle disposal cell would have to be located within the floodplain

of the Colorado River, a major western river that provides water resources to Colorado, other western states, and Mexico. The disposal cell could be subject to erosion or undermining from a major flood event or lateral migration of the river channel. The rock apron constructed around the base of the disposal cell was designed according to standard engineering practices and flood analyses based on computer modeling. This design should be able to withstand predictable flood events, normal erosion, and lateral channel migration. However, the potential exists for the disposal cell to be damaged or destroyed by any unpredictable or unusual events and processes that could occur over the next 1000 years. Also, additional design changes or emergency disposal cell stabilization efforts could increase the overall project costs considerably.

In addition, if the Colorado River were to flood, groundwater levels beneath the disposal cell would become elevated. This could result in water encroaching into the lower portions of the disposal cell and cause substantial amounts of contaminant to be released into the groundwater. The proposed EPA groundwater protection standards could be temporarily exceeded following each flooding episode. If compliance with the proposed EPA groundwater protection standards cannot be permanently achieved with the proposed conceptual design, then design modifications or ACLs would have to be considered. Either option is likely to increase overall project costs considerably.

Selection of this alternative would also result in a permanent visual annoyance to the local community and to travelers along Interstate 70 and the Denver and Rio Grande Western Railroad. In addition, some local public concern was expressed over the potential loss of the 142-acre New Rifle site from future development.

Alternative 1, the no action alternative, would consist of taking no steps toward remedial action at the Rifle sites and vicinity properties, except for the interim steps that were taken by DOE to remediate the safety hazards at the Rifle sites. Selection of this alternative would not be consistent with the requirements of the UMTRCA. The Rifle sites would remain in their present locations and conditions, and the RRM would be subject to continued dispersion by wind and water, and possible unauthorized removal by man. The contamination of groundwater beneath the Rifle sites and the risk of contaminating surface waters would continue for an indefinite period of time. Radon emanations and external gamma

radiation at the Rifle sites and vicinity properties would continue to exceed EPA standards.

Considerations in Implementation of the Decision

Pursuant to section 7 of the Endangered Species Act, and as summarized in the FEIS, DOE prepared several biological assessments for disposal at Estes Gulch and the other alternatives considered. The U.S. Fish and Wildlife Service (FWS) concurred with DOE's "no effect" determinations for remedial actions affecting all species at both the Rifle processing sites and the Lucas Mesa site, and for most species at the Estes Gulch disposal site. Prior to the publication of the FEIS, the major issues of concern were potential impacts caused by the upgrade of SH 13 and the Estes Gulch access road to threatened or candidate plant species or Colorado plant species of special concern, and the impacts of using Colorado River water on endangered or candidate fish species. The plant species include the Wetherill milkvetch, the Uinta Basin hookless cactus, the DeBeque milkvetch, and the DeBeque phacelia; the fish species include the Colorado squawfish, the bonytail chub, and the razorback sucker. During an earlier survey of the disposal site and access road for these plants, a population of the Wetherill milkvetch was found along the access road. DOE has agreed to avoid the identified plants. A subsequent plant survey of the SH 13 upgrade area did not locate any additional plant populations that are endangered, threatened, candidates for listing, or State species of special concern.

The FWS concurred with DOE's determination that remedial actions at Estes Gulch "may affect" the three fish species. In their Biological Opinion (Attachment G1 of Appendix G in the FEIS), the FWS stated that cleanup of the RRM, with the inclusion of specified conservation measures, would not likely jeopardize the continued existence of the fish species. The conservation measure requires that DOE make a one-time payment of \$10 per acre-foot average annual water depletion (or a total payment of \$2,150.00) to offset the remedial action water use, or water depletion, and impacts, as specified in the "Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin". The FWS also determined the incidental take associated with the remedial action to be zero, and did not require any mitigation measures. DOE made the conservation payment in August 1989, thus satisfying the Endangered Species

Act commitment identified in the Biological Opinion.

Pursuant to Executive Orders 11988 and 11990, and 10 CFR part 1022, DOE published a Floodplain Statement of Findings as appendix F in the FEIS. As shown in that assessment, remedial actions at the Rifle sites will take place in the 100- and 800-year floodplains of the Colorado River and will impact wetlands along the Colorado River. DOE has determined that there is no practicable alternative to carrying out the remedial action in the floodplain and in the wetlands areas, but has proposed mitigation measures to offset these impacts.

Interim actions were conducted and remedial actions will be conducted in compliance with all applicable permit requirements and will incorporate mitigative measures to further reduce impacts. The following monitoring and mitigative measures, which are also described in section F.3.3 of the FEIS, will be implemented to avoid or minimize impacts during remedial action.

- Fences or other access barriers will be constructed to inhibit unauthorized human intrusion during remedial action.
- Transportation routes will be upgraded, as necessary, during remedial action to reduce the potential for traffic accidents and reduce congestion. Transportation mitigation measures to reduce short-term transportation impacts include the use of traffic controls, such as flagmen and additional signals, and the construction of turnout and passing lanes and intersection facilities. A paved, 12-foot-wide, 7500-foot-long climbing lane will be constructed on the east side of SH 13 between SH 325 and the Estes Gulch site turnout. An 800-foot-long, 12-foot-wide gravel truck turnout will be added and an intersection facility on SH 13 at the Estes Gulch turnout will be constructed to ease local transportation-related impacts. Under the terms of the DOE-State Cooperative Agreement, the State of Colorado has agreed to pay for the full costs of construction as part of the State's 10 percent share of the total remedial action costs.
- Areas containing known populations of the Wetherill milkvetch, a State-listed species of special concern, will be avoided during construction and use of the Estes Gulch access road.
- Temporary erosion controls, wastewater retention basins, and treatment plants (if required) will be constructed to protect against the release of contaminants during remedial action. Measures to control or divert drainage from the disposal call toward

direct surface runoff will be constructed to prevent long-term erosion.

- Any discharged water will be treated in accordance with applicable State and federal standards.
- Soils encountered at the Estes Gulch site will be stockpiled for use during reclamation.
- Water will be applied to disturbed areas at the Rifle sites and at the Estes Gulch disposal site to inhibit fugitive dust emissions.
- Water and chemical dust suppressions will be applied to dirt and gravel access roads to inhibit dust emissions. Haul trucks will be covered to prevent the dispersion of RRM during relocation.
- The borrow sites were selected for locations as close to the Estes Gulch disposal site as possible to reduce costs and minimize the impacts of increased transportation distances.
- Existing borrow sites will be used, where possible, for earthen and rock materials to reduce the amount of land disturbance.
- Local laborers will be hired, whenever possible, to maximize economic benefits to the local communities.
- Construction operations will take place so as to reduce noise disturbance to local residents.
- Off-site spills will be cleaned up immediately. An environmental monitoring program will be in place throughout remedial action.
- All areas disturbed during interim/remedial action will be restored by backfilling, grading, and revegetating, except the stabilized RRM and access roads.
- Disturbed wetlands (20 acres) will be restored and revegetated.
- Before releasing the equipment used in the remedial action for use on other projects, it will be cleaned of contaminated material.
- Close contact with the public will be maintained through the established public information task force.

Conclusion

DOE has weighed the costs, benefits, schedule, and environmental impacts and has decided to perform remedial action at the Rifle sites and to relocate the RRM, by truck, from the Rifle sites to the Estes Gulch disposal site for long-term control in compliance with EPA standards and the UMTRCA.

Issued at Washington, DC on January 16, 1991.

Paul D. Grimm,

Deputy Director, Office of Environmental Restoration and Waste Management.

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BILLING CODE 6450-01-M

Energy Information Administration

Agency Information Collections Under Review by the Office Management and Budget

AGENCY: Energy Information Administration.

ACTION: Notice of requests submitted for review by the Office of Management and Budget.

SUMMARY: The Energy Information Administration (EIA) has submitted the energy information collection(s) listed at the end of this notice to the Office of Management and Budget (OMB) for review under provisions of the Paperwork Reduction Act (Pub. L. 96-511, 44 U.S.C. 3501 et. seq.). The listing does not include collections of information contained in new or revised regulations which are to be submitted under section 3504(b) of the Paperwork Reduction Act, nor management and procurement assistance requirements collected by the Department of Energy (DOE).

Each entry contains the following information: (1) The sponsor of the collection (the DOE component or Federal Energy Regulatory Commission (FERC)); (2) Collection number(s); (3) Current OMB docket number (if applicable); (4) Collection title; (5) Type of request, e.g., new, revision, extension, or reinstatement; (6) Frequency of collection; (7) Response obligation, i.e., mandatory, voluntary, or required to obtain or retain benefit; (8) Affected public; (9) An estimate of the number of respondents per report period; (10) An estimate of the number of responses per respondent annually; (11) An estimate of the average hours per response; (12) The estimated total annual respondent burden; and (13) A brief abstract describing the proposed collection and the respondents.

DATES: Comments must be filed within 30 days of publication of this notice. If you anticipate that you will be submitting comments but find it difficult to do so within the time allowed by this notice, you should advise the OMB DOE Desk Officer listed below of your intention to do so as soon as possible. The Desk Officer may be telephoned at

**DATE
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