2002 Annual Compliance Report
Durango, Colorado, Disposal Site

Compliance Summary

The site, inspected on June 26, 2002, was in good condition. Vandalism continues to be a problem at the site. Three perimeter signs were missing, and new bullet holes were found in other perimeter signs. Several perimeter signs were replaced and reinforced with welded angle iron frames to curtail theft. Deep-rooted plants growing on the cell were cut down and herbicide was applied to their stalks. State-listed noxious weeds were treated with herbicide, and biological control was initiated for a weed recommended for control by the county. Ground water monitoring results indicated that the disposal cell is performing as designed. No requirement for a follow-up or contingency inspection was identified.

Compliance Requirements

Requirements for the long-term surveillance and maintenance of the Durango, Colorado, Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I disposal site are specified in the *Long-Term Surveillance Plan for the Bodo Canyon Disposal Site, Durango, Colorado* (DOE/AL/62350–77, Rev. 2, U.S. Department of Energy [DOE], Albuquerque Operations Office, September 1996) and in procedures established by the DOE Grand Junction Office to comply with requirements of Title 10 *Code of Federal Regulations* Part 40.27 (10 CFR 40.27). These requirements are listed in Table 4–1.

Table 4–1. License Requirements for the Durango, Colorado, Disposal Site

Requirement	Long-Term Surveillance Plan	This Report
Annual Inspection and Report	Section 6.0	Section 1.0
Follow-up or Contingency Inspections	Section 7.0	Section 2.0
Routine Maintenance and Repairs	Section 8.0	Section 3.0
Ground Water Monitoring	Section 5.0	Section 4.0
Corrective Action	Section 5.0	Section 5.0

Compliance Review

1.0 Annual Inspection and Report

The site, southwest of Durango, Colorado, was inspected on June 26, 2002. Results of the inspection are described below. Features and photograph locations (PLs) discussed in this report are shown on Figure 4–1. Numbers in the left margin of this report refer to items summarized in the Executive Summary table.

1.1 Specific Site Surveillance Features

Entrance Gates, Entrance Sign, Perimeter Signs—The site is accessed by LaPlataCounty Road 212, a dedicated public right-of-way that crosses the southwest corner of DOE property.

The new entrance gate and guardrails along the county road, installed in October 2000, and the original entrance gate were in good condition.

Three perimeter signs near the site entrance (P1, P2, and P3) were missing and sixteen perimeter
4A signs had bullet holes. The three missing signs and four other damaged signs were replaced and reinforced with welded angle iron frames to curtail theft. DOE will evaluate the success of these efforts during future inspections.

Trespass and vandalism are very difficult to control because the site is isolated yet near the City of Durango. Although DOE has implemented various structural, institutional, and administrative controls at this site, including increased patrols by County Sheriff officers, vandalism continues to be an on-going concern and maintenance issue.

Site Markers, Survey and Boundary Monuments—Site markers, survey monuments, and boundary monuments were in good to excellent condition. The site marker near the entrance gate (SMK–1) has been damaged by bullets; however, the marker was legible. Previously, several boundary monuments were damaged by erosion or vandalism; however, they were intact and legible, and do not warrant any further action at this time.

Monitor Wells—Monitor wells were locked and in excellent condition. Monitor well 0618 was added to the monitoring network as a supplement to well 0608.

1.2 Transects

To ensure a thorough and efficient inspection, the site was divided into six areas referred to as transects: (1) the top of the disposal cell; (2) the side slopes of the disposal cell; (3) the drainage ditches; (4) the treatment cells and retention pond; (5) the site boundary; and (6) the outlying area.

Top of Disposal Cell—The top of the disposal cell was in excellent condition. No evidence of settling, slumping, or erosion was observed.

At the time of the 2002 inspection, vegetation on top of the cell was dry and stressed due to
4B drought conditions. The vegetation consists of seeded grasses and several volunteer species including deep-rooted shrubs and trees (PL–1), and musk thistle. In accordance with the Long-Term Surveillance Plan, the deep-rooted plants were cut and herbicide was applied to their stalks.

Musk thistle needs to be controlled as recommended by La Plata County. DOE initiated biological
4C control of this weed in 2002 by releasing the Thistle Defoliating Beetle at thistle locations. This beetle has been used by the state to control the thistle in the area around the disposal site. The effectiveness of this biological control effort will be evaluated during future inspections.

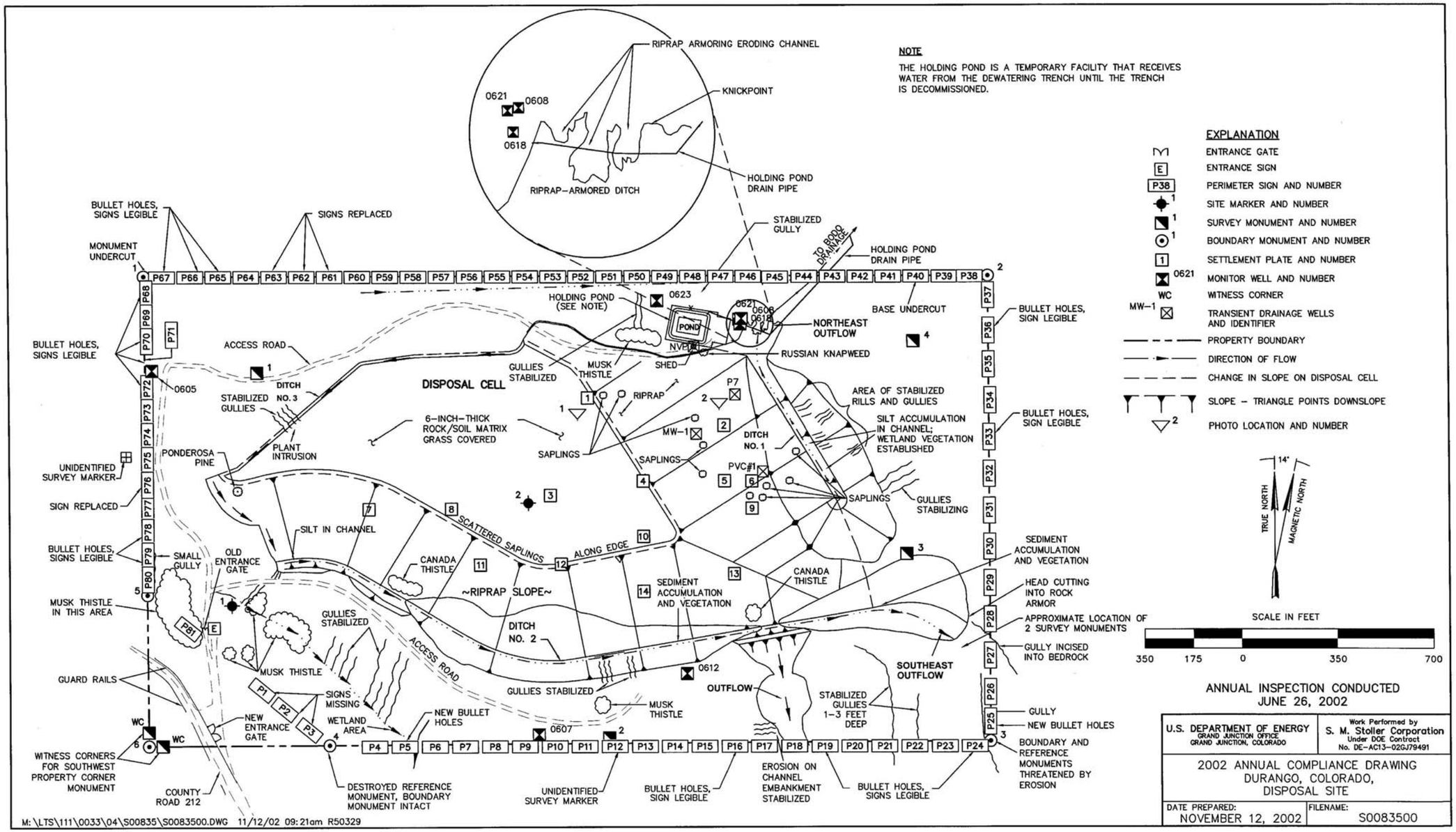

Figure 4–1. 2002 Annual Compliance Drawing for the Durango, Colorado, Disposal Site

Side Slopes of Disposal Cell—The riprap-covered side slopes of the disposal cell were in excellent condition. Disturbances resulting from natural processes, such as subsidence, rock deterioration, or slope failure, were not observed. No evidence of vehicle use on the cell was observed this year.

Vegetation is increasing on the side slopes of the cell, particularly on the east and southeast sides (PL–2). The species included deep-rooted shrubs and trees, state-listed noxious weeds (Canada thistle and Russian knapweed), and musk thistle. The deep-rooted plants were cut and herbicide was applied to their stalks. Herbicide was also applied to the noxious weeds. Biological treatment was initiated to control musk thistle.

Drainage Ditches—Rock-armored drainage ditches were constructed beneath the toe of the side slope on the northwest, south, and east sides of the disposal cell. These ditches direct runoff into natural drainages that carry storm water away from the disposal site. Erosion and sedimentation occurred at several places along these channels where the slopes above the ditches are steep, creating locales favoring plant growth. At places in Ditch Number 1, moist sediments support wetlands vegetation. Inspectors saw no evidence of recent slope erosion or accumulations of sloughed material into the rock-armored drainage ditches.

Treatment Cells and Retention Pond—The treatment cells, retention pond, and surrounding fence were in good condition.

Site Boundary—The site is not fenced. No evidence of vehicular trespass was observed during the 2002 inspection; however, vehicles can still access the disposal cell site from County Road 212 south of the recently installed guardrails. Vehicular trespass at this site has resulted in damage to survey monuments, creating ruts in roads and off-road areas, and damage to sensitive, reseeded areas that jeopardize soil and slope stabilization efforts. Future inspections will continue to monitor trespass conditions at the site, and appropriate preventative measures will be implemented as needed.

Previously rutted and disturbed areas at the site entrance were seeded in October 2000. During 2001, inspectors observed young grasses and non-noxious annual weeds emerging in these areas. However, due to the drought conditions, it was not possible to ascertain if the new grass is still viable. Grass growth will be evaluated during future inspections.

Areas of rill and gully erosion on the south-facing slope along the southern boundary of the site appeared stable. Establishment of vegetation in these areas and exposure of resistant bedrock in the gully are effectively preventing further erosion.

Migration of riprap down the steep hill below the outflow of Ditch Number 2 has subsided. No new erosion had occurred on or around the site.

Outlying Area—The area beyond the site boundary for a distance of 0.25 mile was visually inspected for signs of erosion, development, or other disturbance. No activity or development that might affect site integrity was observed.

2.0 Follow-up or Contingency Inspections

No follow-up or contingency inspections were required in 2002.

3.0 Routine Maintenance and Repairs

Several perimeter signs were replaced and reinforced. On the cell cover and side slopes, deep-rooted shrubs and trees were cut and treated with herbicide, noxious weeds were treated with herbicide, and biological treatment was initiated to control musk thistle plants.

4.0 Ground Water Monitoring

Ground water is monitored at the Durango site to verify the initial performance of the disposal cell. The monitoring network consists of six wells. Four wells are completed in the uppermost aquifer (bedrock of the Cliff House Sandstone and the Menefee Formation), including one upgradient (0605) and three downgradient point of compliance wells (0607, 0612, and 0621). Two wells are completed in the alluvium upgradient (0623) and downgradient (0608) from the cell. Monitor well 0618 (screened to the bottom of the alluvial aquifer) near companion well
4D 0608 (screened to 10 feet above the base of the alluvial aquifer) was added to the monitoring network because it represents the full section of the alluvial aquifer.

The monitor wells are sampled annually. Samples are analyzed for standard water quality parameters and three indicator analytes: molybdenum, selenium, and uranium. The performance standards for the three indicator analytes are the respective maximum concentration limits established by the U.S. Environmental Protection Agency in Table 1 to Subpart A of 40 CFR 192.

Results of monitoring in 2002 were consistent with previous years. Concentrations of all three indicator analytes were below the respective maximum concentration limits, and most results were less than detection limits or minimum detectable activity. The data give reasonable assurance that the disposal cell is performing as designed.

5.0 Corrective Action

Corrective action is action taken to correct out-of-compliance or hazardous conditions that create a potential health and safety problem or that may affect the integrity of the disposal cell or compliance with 40 CFR 192.

No corrective action was required in 2002.

6.0 Photographs

Table 4–2. Photographs Taken at the Durango, Colorado, Disposal Site

Photograph Location Number	Azimuth	Description
PL–1	45	Deep-rooted plant growth on disposal cell.
PL–2	270	Vegetation on east side slope of cell.

PL–1. Deep-rooted plant growth on disposal cell.

PL–2. Vegetation on east side slope of cell.

End of current section