

**NOTICE!**

**ALL DRAWINGS  
ARE LOCATED  
AT THE END OF  
THE DOCUMENT**

## JEFFERSON COUNTY REMEDY LANDS SEMI-ANNUAL REPORT - SUMMER 1994

### INTRODUCTION

This report summarizes revegetation activities performed on the Jefferson County Remedy Lands during the first half of 1994 and planned activities for the remainder of 1994. The Remedy Land activities are directed by the 1985 Settlement Agreement, McKay vs the U S Department of Energy (DOE).

In addition to requirements under the Settlement Agreement, the DOE is continuing its assessment of offsite area contamination as directed by the Interagency Agreement (IAG) between the DOE, Environmental Protection Agency (EPA), and Colorado Department of Health (CDH). The offsite area is identified in the IAG as Operable Unit 3 (OU 3). The Jefferson County Remedy Lands are contained within OU 3, east of Indiana Street (Figure 1 and Figure 2). The Remedy Land surface soils were sampled during field sampling activities conducted to determine the nature and extent of contamination and assess the human health risk associated with the contamination. Field sampling results from the Remedy Lands will be reported to Jefferson County as the interpreted data become available. Field sampling results for the offsite area will be presented in the OU 3 Draft Remedial Investigation (RI) Report by the end of 1995. The Final RI Report will be submitted in July 1996.

### BACKGROUND

The 1985 Settlement Agreement outlined a course of remedial action for portions of land containing plutonium concentrations in surface soils above the CDH special construction standard (0.9 pCi/g). Surface soil contamination was limited to the upper few inches of soil. The remedy involved tilling the contaminated areas in strips to reduce surface plutonium concentrations (through mixing) and to stabilize the areas by revegetating to control wind and water erosion of the soil. The Settlement Agreement states that tilling of the alternate set of strips shall not begin until the initial set of strips are successfully reestablished in native plant species.

An aggressive vegetation program for the initial set of strips was initiated in 1991 which consisted of mechanical mowings to control the height of weeds, harrowing for seedbed preparation, reseeding, and applying hay mulch as needed over the reseeded areas. Figure 1 and Figure 2 illustrate the results of the 1991 revegetation activities on the north and south Remedy Land areas. The 1991 revegetation program also included a weed growth monitoring and control plan.

The success of the 1991 revegetation effort was monitored during the Spring and early Summer of 1992. The monitoring results were presented in the "Remedy Lands Semi-Annual Summer 1992 Report" and indicated that the new seeded species were evident, however, their abundance varied over the remediated acreage. In addition, undesirable weed species were noted in the previously tilled areas that were expected to be a significant competitor to the more desirable seeded species. Subsequent monitoring results presented in the Remedy Land semi-annual reports for 1992 and 1993 also indicated that weed competition appeared to be a significant limiting factor to successful revegetation of the disturbed Remedy Land areas.

ADMIN RECORD

A 0003-00048

A weed control program, consisting of mowing operations to inhibit natural growth cycles/seed production and herbicide application to control specific dominant weed species, was initiated for the effected areas in September 1993. Initial mowing operations were conducted in September 1993, and the herbicide applications were planned to begin in early Spring 1994.

### CURRENT ACTIVITIES

A survey of the north and south Remedy Lands was performed in May 1994 by Jefferson County Weed Management personnel and a weed control specialist. The survey was performed as part of the weed control program to inventory undesirable weed species to be considered for herbicidal treatment. Four dominant weed species were identified for chemical treatment, Common Mullen, Musk Thistle, Canada Thistle, and Toadflax. Approximately 20 acres of land in the north remedy acreage and 4 acres in the south acreage were observed to be significantly populated by the dominant weed types.

An herbicide application was performed within the designated areas on June 10, 11, and 12, 1994 to reduce the populations of the four weed types described above. The herbicide application was made by tractor spraying using the herbicide Telar. Telar has been approved by the EPA for this type of application and was determined to be most effective and appropriate for the four weed species of concern. The weeds are most vulnerable to this herbicide later in their growth cycle in early to middle June, when they are more actively growing and before they bloom.

The herbicide was applied to specific areas using a tractor equipped with independently controlled spray booms. Spray from the booms could be turned on and off as necessary to treat only the areas observed to be significantly populated by the weeds of concern. Documentation photographs were taken of the herbicide application equipment and application operations in progress. Photographs were also taken of the areas planned for herbicide treatment prior to the herbicide application event. Selected photographs are presented as attachments to this report.

The weed control actions were performed under the control of a DOE-approved Site Specific Health and Safety Plan developed specifically for this work and designed to protect the health of the workers and the public.

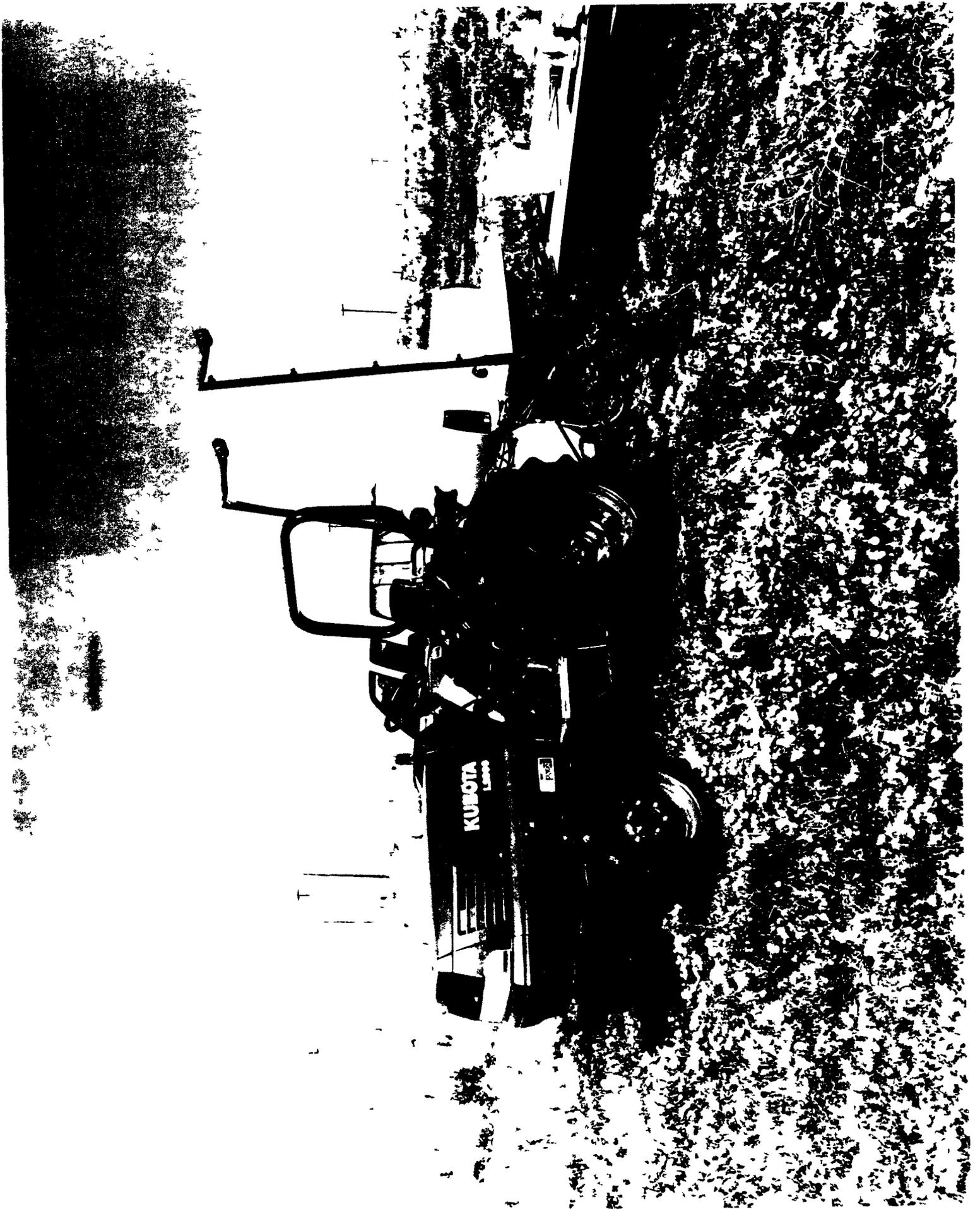
The DOE has issued a National Environmental Policy Act (NEPA) Categorical Exclusion Determination (RFO/CX033-92) for the weed control actions as defined in Section D of 10 Code of Federal Regulations 1021. Under this Categorical Exclusion the weed control actions are removed from further NEPA review and documentation due to the relatively benign nature of the actions.

A plant/animal endangered species survey and a migratory bird survey was performed within the north and south Remedy Lands by the EG&G Ecology and NEPA Division during the week ending June 10, 1994, prior to the herbicide application event. A nesting pair of Burrowing Owls was observed in the north remedy acreage. A flagging line was placed to mark the protective buffer and boundary beyond which the subcontractor was instructed not to spray. No other endangered plant and/or animal species were observed within the north and south Remedy Land areas surveyed. No migratory bird nesting activity was observed within or in the vicinity of the surveyed areas. Several ground nesting bird nests were flagged in the north and south Remedy Land areas to avoid injury to the adult birds, nestlings, or eggs. The subcontractor was instructed to allow a buffer of 20 feet from these flagged areas.

### PLANNED FUTURE ACTIVITIES

The weed control program for the previously tilled areas is planned as a three year effort targeting specific weed types and their growth cycles. A follow-up survey of the treated areas is scheduled in early Fall 1994 to evaluate the effectiveness of the Spring 1994 herbicide application. The effectiveness of the initial Spring herbicide treatment is expected to be from between 80% and 90%. A second mowing event may be scheduled in the Fall 1994 to reduce the amount of material that could interfere with additional herbicidal application (i.e., in the Spring 1995).

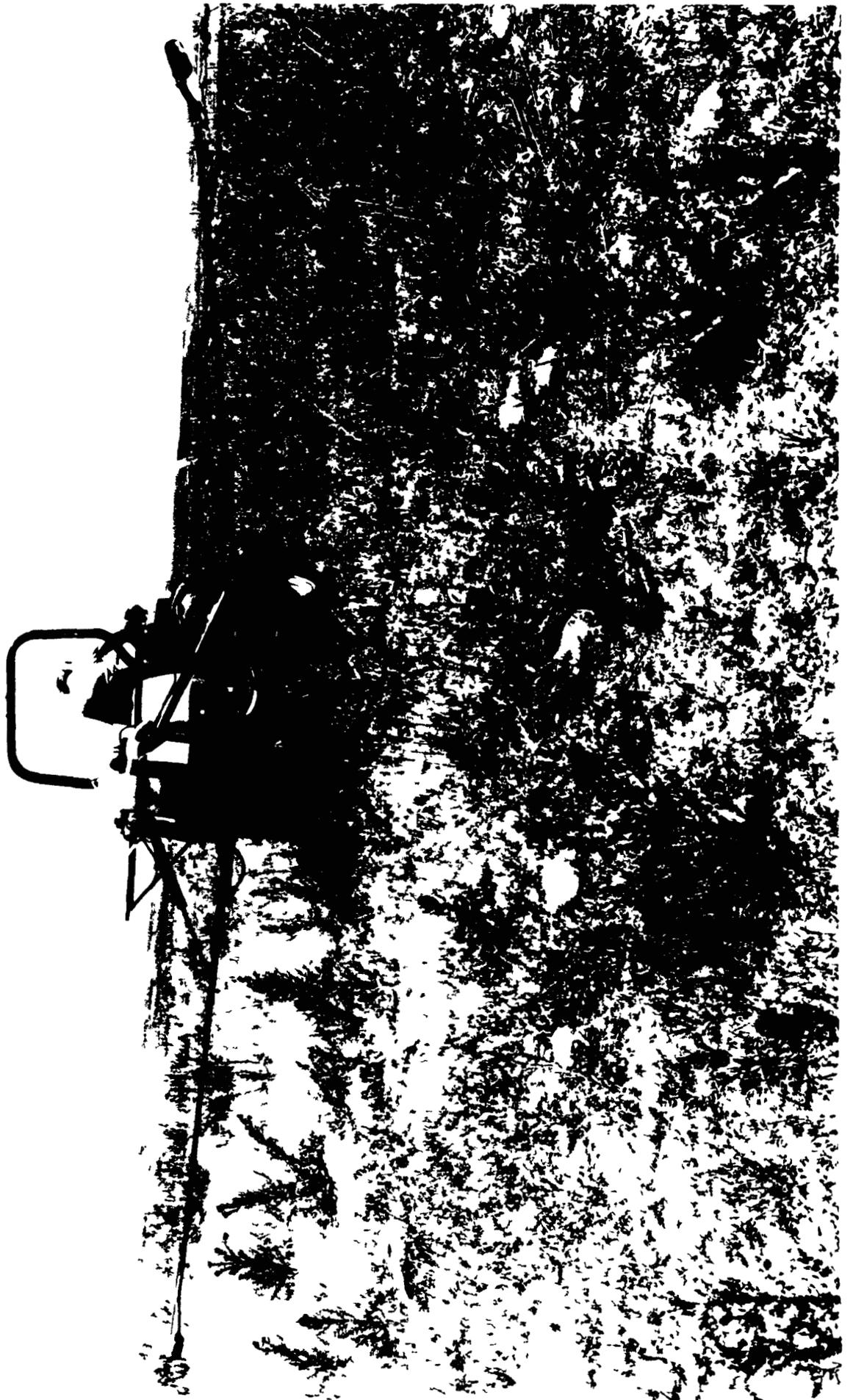
As previously reported, the ability to schedule future tilling operations to complete the remedy activities is limited by lack of revegetation success. Tilling operations will be resumed following successful reestablishment of native plant species as required by the 1985 Settlement Agreement. It is anticipated that continued efforts at weed control will create more favorable growing conditions for the revegetated grasses. Weed control will continue to be the primary activity and will be thoroughly implemented before considering another reseeding effort.





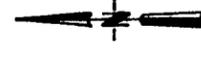


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(Figure 1)  
 Map of North Area (Sec 7)  
 of Jefferson County  
 Remediation Land Showing  
 Results of Summer 1991  
 Revegetation Activities

-  Streams, ditches and other drainage features
-  Medium duty roads
-  Unimproved dirt roads
-  Rocky Flats Plant boundary
-  Surface water impoundments
-  Seeded with clayey foothill seed mixture November 1991
-  Seeded with cobbly foothill seed mixture November 1991
-  Locations where hay mulch was spread December 1991
-  Area not seeded during 1991 (grass species already well established)



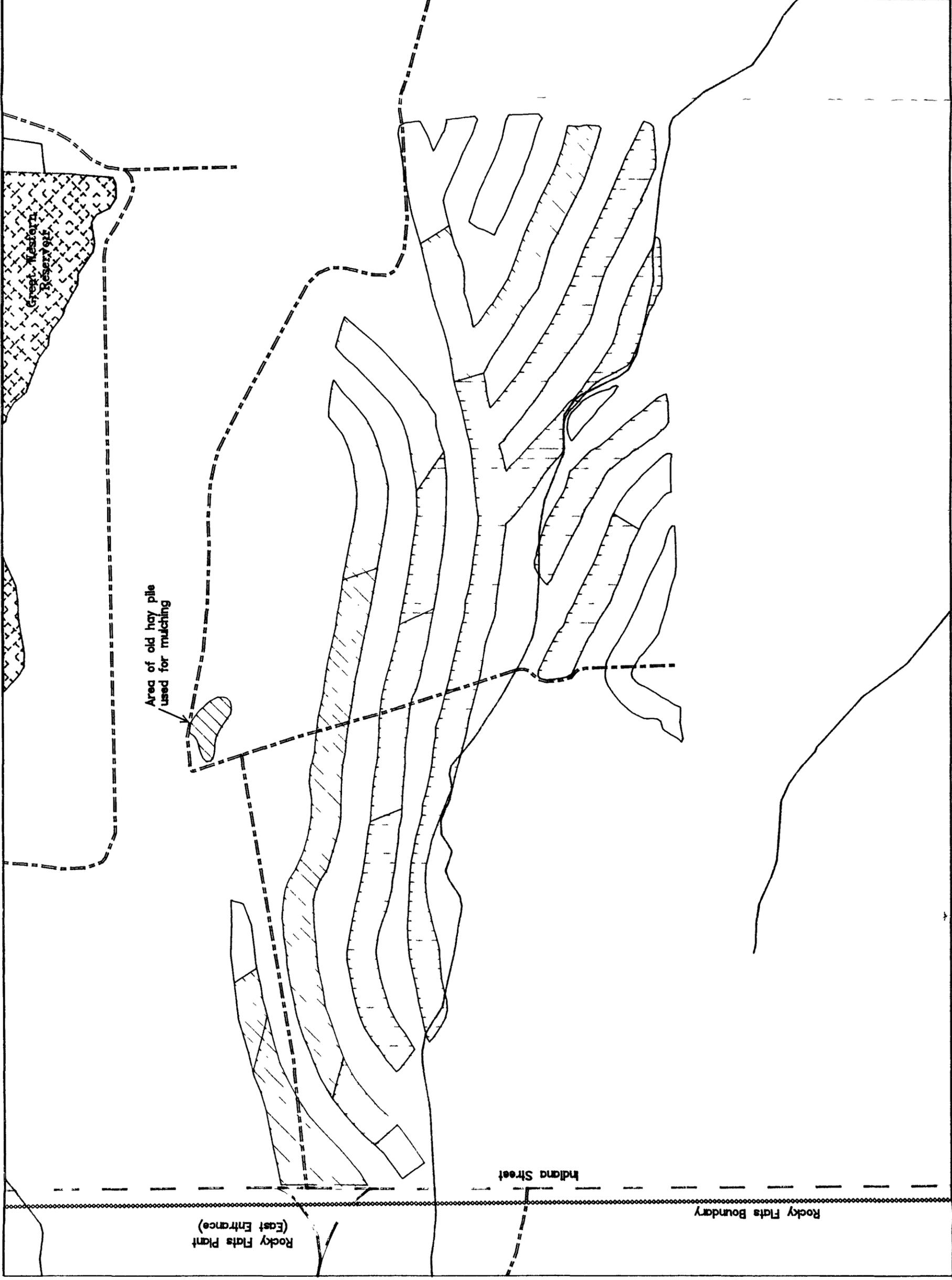
Mapscale 1 5400  
 1 inch = 450 feet

Prepared by



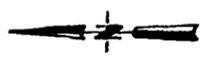
Rocky Flats Plant  
 P O Box 464  
 Golden Colorado 80402-0464

Date 1-28-92



(Figure 2)  
 Map of South Area (Sec 18)  
 of Jefferson County  
 Remediation Land Showing  
 Results of Summer 1991  
 Revegetation Activities

-  Streams ditches and other drainage features
-  Medium duty roads
-  Unimproved dirt roads
-  Rocky Flats Plant boundary
-  Surface water impoundments
-  Seeded with clayey foothill seed mixture November 1991
-  Seeded with cobbly foothill seed mixture November 1991
-  Area not seeded during 1991 (grass species already well established)



Mapscale 1 2900  
 1 inch = 242 feet

Prepared by



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Date 1-28-92

