

ENGINEERS
AND
CONSTRUCTORS



MK-FERGUSON COMPANY
A MORRISON KNUDSEN COMPANY

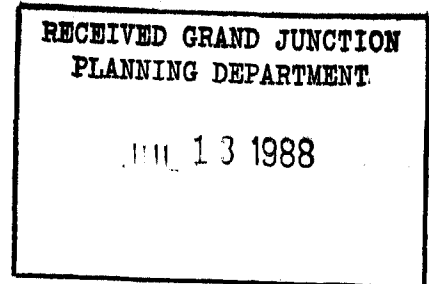
HEADQUARTERS OFFICE
ONE ERIEVIEW PLAZA
CLEVELAND, OHIO U.S.A. 44114
PHONE: (216) 523-5600/TELEX: 985542

REPLY TO: MK-FERGUSON COMPANY
REMEDIAL ACTIONS
CONTRACTOR-UMTRA PROJECT
P.O. BOX 9136
ALBUQUERQUE, NEW MEXICO U.S.A. 87119

CERTIFIED - RETURN RECEIPT REQUESTED
P 805 711 530

July 11, 1988

Mr. Grady McNure
U.S. Army Corps of Engineers
Regulatory Unit Four
764 Horizon Drive
Grand Junction, Colorado 81506



SUBJECT: UMTRA Project - Grand Junction
Dredge and Fill Permit Application

Dear Mr. McNure:

Enclosed is a Section 404 permit application package for excavation and fill activities within designated wetlands adjacent to the Colorado River at the former Climax Uranium Company Uranium Mill Site at Grand Junction. This work will be performed as part of the Uranium Mill Tailings Remedial Action (UMTRA) Project.

The remedial action at the former uranium processing site at Grand Junction was mandated by the Uranium Mill Tailings Radiation Control Act of 1978 (Public Law 95-604). The UMTRA Project is administered by the U.S. Department of Energy (DOE), Albuquerque Operations Office. The cleanup at the Grand Junction UMTRA site is being conducted under the terms of a cooperative agreement between the DOE and the State of Colorado. MK-Ferguson Company, the Remedial Action Contractor for the UMTRA Project, is making this application on the behalf of the DOE.

Phase II excavation, fill and site restoration activities requiring a Corps permit are shown on the attached drawings. These activities will involve the excavation of the tailings pile adjacent to the Colorado River and backfilling to below existing ground levels. Final site restoration, as recommended by Mr. Gary Davis of your office, also will involve recontouring of the fill areas within the wetlands using water bars, etc., to minimize soil erosion and create conditions favorable to reestablishment of native wetlands species. Site restoration will also involve the planting of wetland shrubs and trees. Please note that the Seeding Specification in Exhibit A also includes specification for areas outside the wetlands area.

1259K


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FYL
CH

Mr. Grady McNure
Page 2
July 11, 1988

If you should have any questions, please contact Mr. J. E. Williams,
Construction Engineering Manager, at (505) 766-3093.

Sincerely,

MK-Ferguson Company



J. C. Oldham
Project Director

JGO/MDT/kja

- Enclosures:
1. Corps Permit Application with Attached Drawings
 - Sheet 1 - Grand Junction Processing Site and Vicinity
 - Sheet 2 - Existing Conditions
 - Sheet 3 - Final Site Plan
 - Sheet 4 - Section Views
 2. Exhibit A - Wetland Revegetation Specification and Seeding Specification

cc w/enclosures:

- J. D'Antonio - DOE
- E. Damler - DOE
- K. Agogino - TAC
- B. Glover - TAC
- D. Hotovec - CDH
- S. Schweissing - Mesa County Engineering Dept.
- K. Metzner - Grand Junction Planning Dept.
- M. Teas - Mesa County Planning Dept.

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

(33 CFR 325)

OMB APPROVAL NO. 0702-0036
Expires 30 June 1986

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER (To be assigned by Corps)

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

2. NAME AND ADDRESS OF APPLICANT

MK-Ferguson Company
P.O. Box 9136
Albuquerque, New Mexico 87119
Attention J.G. Oldham, Project Director
UMTRA - RAC

Telephone no. during business hours

A/C () _____ (Residence)

A/C () _____ (Office)

Statement of Authorization: I hereby designate and authorize _____
_____ to act in my behalf as my
agent in the processing of this permit application and to furnish, upon request,
supplemental information in support of the application.

SIGNATURE OF APPLICANT

DATE

A/C () _____ (Residence)

A/C (505) 766-3327 _____ (Office)

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY AT GRAND JUNCTION PROCESSING SITE

4a. ACTIVITY

- 1) Excavation of contaminated soil from wetland areas at the Colorado River located southwest of the tailings pile.
- 2) Fill and grade affected areas as indicated on attached drawings sheet 3 and 4 to create conditions favorable to reestablishment of wetlands.
- 3) Revegetate as indicated on attached drawing sheet 3 and Exhibit 'A'.

4b. PURPOSE

Cleanup and stabilization of Uranium Mill Tailings as mandated by the Uranium Mill Tailings Radiation Control Act of 1978 (PL-65-604).
This project is a State/Federal cooperative effort.
Projected scheduled construction dates are start Sep.88 finish May 92

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

All excavation and fill activities will take place below the existing ground elevations.

4. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ADJOINS THE WATERWAY

Project site lies entirely within lands of the former Climax Uranium Company Uranium Mill site which will be purchased by the State of Colorado prior to start of construction.

- 1. J.P. Haller: 9700 East 160th Ave. Brighton, Colorado 80601
- 2. State of Colorado
- 3. T.N. Lewis: 1337 White Ave. Grand Junction, Colorado 81501

5. WATERBODY AND LOCATION ON WATERBODY WHERE ACTIVITY EXISTS OR IS PROPOSED

Colorado River: approximately 1 1/2 miles upstream from the confluence of the Colorado River and the Gunnison River.

7. LOCATION ON LAND WHERE ACTIVITY EXISTS OR IS PROPOSED

ADDRESS: Kimball Avenue and 12th Street, Grand Junction. North bank of the Colorado River approximately 1/2 mile east of US Highway 50 bridge.

STREET, ROAD, ROUTE OR OTHER DESCRIPTIVE LOCATION

Mesa Colorado 81502 (Sec. 24, T1S, R100W)
 COUNTY STATE ZIP CODE

Mesa County LOCAL GOVERNING BODY WITH JURISDICTION OVER SITE

8. Is any portion of the activity for which authorization is sought now complete? YES NO
If answer is "Yes" give reasons, month and year the activity was completed. Indicate the existing work on the drawings.

9. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application. (See attached list)

ISSUING AGENCY	TYPE APPROVAL	IDENTIFICATION NO.	DATE OF APPLICATION	DATE OF APPROVAL	DATE OF DENIAL
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10. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

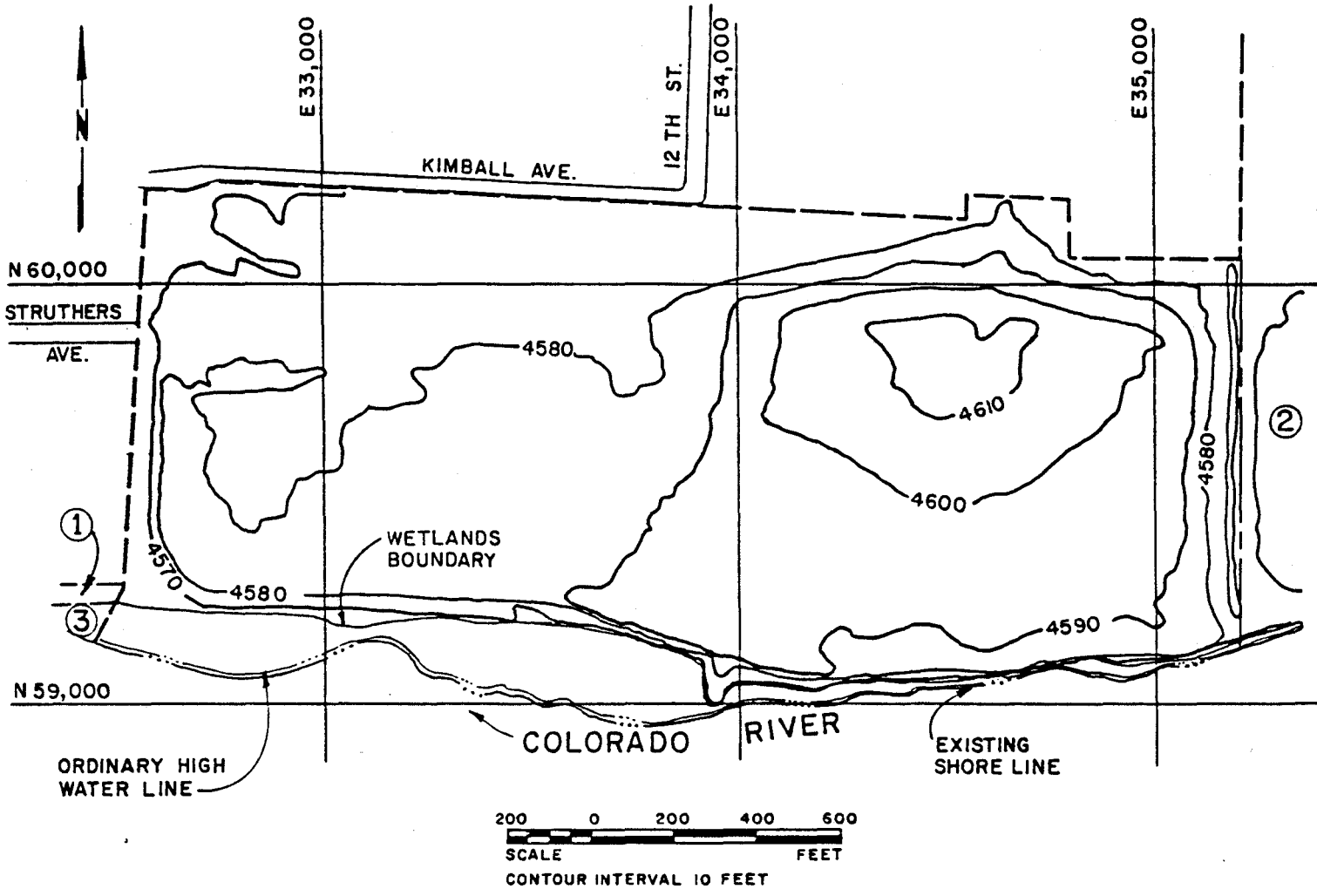
7-11-88

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.



LEGEND:

- SITE BOUNDARY
- LOT DIVISION

PURPOSE: CLEANUP OF ABANDONED URANIUM MILL TAILINGS (UMTRA PROJECT SITE)

ADJACENT PROPERTY OWNERS:

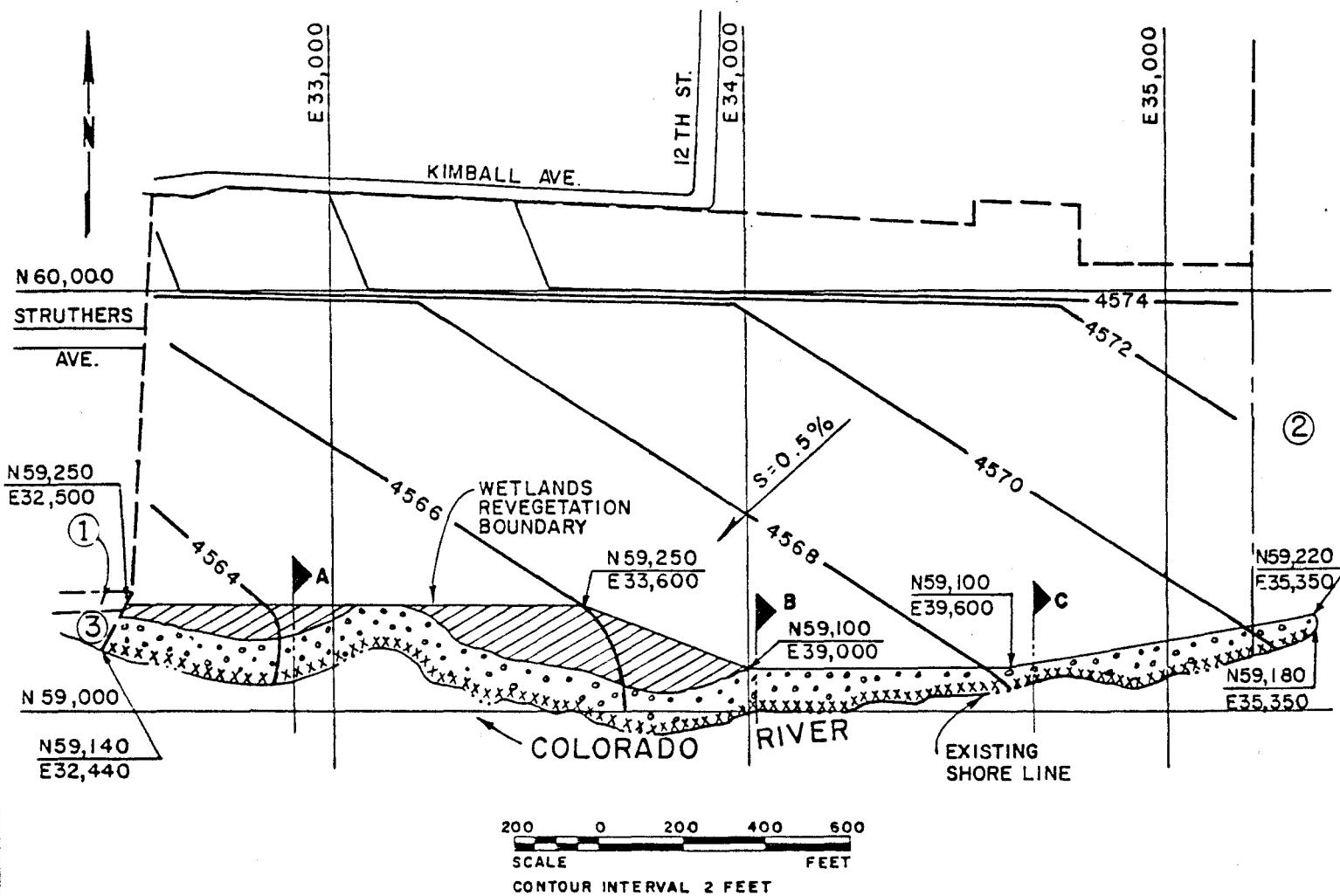
- ① J. P. HALLER
- ② STATE OF COLORADO
- ③ T. N. LEWIS

EXISTING CONDITIONS PLAN


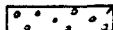
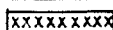
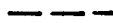
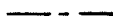

MK-FERGUSON CO.
PO BOX 9136
ALBUQUERQUE, NM 87119

PROPOSED EXCAVATION, FILL AND REVEGETATION

IN: COLORADO RIVER
AT: GRAND JUNCTION
COUNTY OF: MESA STATE: COLORADO
APPLICATION BY: MK-FERGUSON CO.
SHEET 2 OF 4 DATE 5 MAY 1988



LEGEND:

-  COTTONWOOD
-  SKUNKBUSH & AUTUMN OLIVE
-  SAND BAR WILLOW
-  SITE BOUNDARY
-  LOT DIVISION
-  FINAL GRADING CONTOUR

PURPOSE: CLEANUP OF ABANDONED URANIUM MILL TAILINGS (UMTRA PROJECT SITE)

ADJACENT PROPERTY OWNERS:

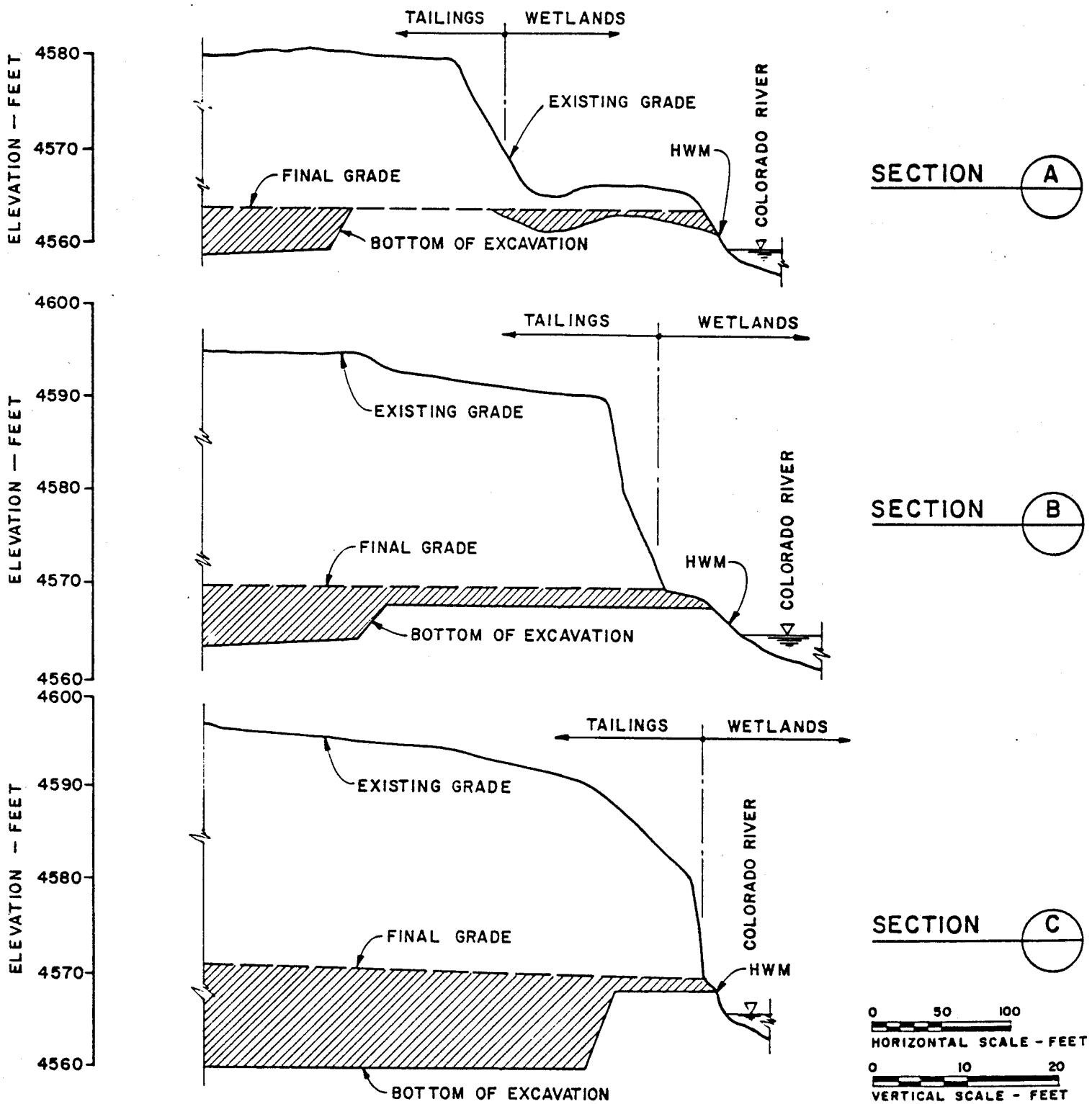
- ① J. P. HALLER
- ② STATE OF COLORADO
- ③ T. N. LEWIS

FINAL SITE PLAN

MK-FERGUSON CO.
 PO BOX 9136
 ALBUQUERQUE, NM 87119

PROPOSED EXCAVATION, FILL AND REVEGETATION

IN: COLORADO RIVER
 AT: GRAND JUNCTION
 COUNTY OF: MESA STATE: COLORADO
 APPLICATION BY: MK-FERGUSON CO.
 SHEET 3 OF 4 DATE 5 MAY 1988



PURPOSE: CLEANUP OF ABANDONED URANIUM MILL TAILINGS (UMTRA PROJECT SITE)

CROSS SECTIONS

MK-FERGUSON CO.
 PO BOX 9136
 ALBUQUERQUE, NM 87119

PROPOSED EXCAVATION, FILL AND REVEGETATION

IN. COLORADO RIVER
 AT: GRAND JUNCTION
 COUNTY OF: MESA STATE: COLORADO
 APPLICATION BY: MK-FERGUSON CO.

SHEET 4 OF 4 DATE 23 JUNE 88

SECTION 02936WETLANDS REVEGETATIONPART 1 - GENERAL

1.1 SCOPE

- A. This Specification Section covers the furnishing and planting of shrubs, trees and other plant materials (plants) in the wetlands at the processing site, adjacent to the Colorado River (wetlands), as shown on the Subcontract Drawings and as specified in this Section.
- B. The locations of shrubs, trees and other plant materials shall be as shown on the Subcontract Drawings.

1.2 WORK NOT INCLUDED

Seeding of the wetlands.

1.3 RELATED WORK

Section 02935 - Seeding

1.4 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this Specification to the extent applicable:
 - 1. State of Colorado, Division of Highways:
 - a. Standard Specifications for Road and Bridge Construction, 1986 Edition, (Colorado Highway Specifications).
 - b. Division of Highways, M & S Standards, January 1982, (Colorado Standard Plans).
 - 2. American Standard for Nursery Stock
 - 3. U.S. Department of Agriculture Publications

1.5 SHIPPING, HANDLING AND STORAGE

- A. Plants shall be dug, properly pruned and prepared for shipping in accordance with recognized standard practice. The root system shall be kept moist and plants shall be protected from adverse conditions due to climate and transportation, between the time they are dug and actual planting.
- B. Except for deciduous plants, all other plants shall be balled and burlapped, or in suitable containers. Deciduous plants may be supplied bare root. Baling and burlapping shall conform to the recommended specifications of the "American Standard for Nursery Stock". The ball shall be natural, not made, and the plant shall be handled by the ball at all times. No balled or burlapped plant shall be accepted if the ball is broken or if the trunk is loose on the ball.
- C. Each specie of plant shall be identified by means of grower's label affixed to the plant. The grower's label shall give the data necessary to indicate conformance with the Specification.
- D. Site preparation materials such as manure or mountain peat shall be delivered and stockpiled in a manner to avoid contamination or dilution with other materials.

PART 2 - MATERIALS

2.1 PLANTS

- A. The plants listed in Table 02936-A shall be used for revegetation of the wetlands.
- B. Plants shall be first-class representatives of the specified specie or variety, in healthy condition with normal well developed branch and root systems, shall be free of all objectionable features, and shall conform to the requirements of the current "American Standard for Nursery Stock".
- C. Plants shall be free from diseases and insect pests. Shipment of plants shall comply with the nursery inspection and plant quarantine regulations of the state of origin and destination, and applicable Federal regulations governing interstate movement of nursery stock.

2.2 ACCEPTANCE OF PLANTS

- A. Final acceptance of the plants by the Contractor will be based on the following:
1. Plants shall conform to the size requirements specified in Table 02936-A. Plant sizes shall be measured before pruning, with branches in normal position.
 2. Plant hardiness shall conform to the requirements of zones 2, 3, 4 and 5. Hardiness zones are defined in U.S. Department of Agriculture Publications.

2.3 ADDITIONAL MATERIAL REQUIREMENTS

- A. Mulch: Materials for straw mulching shall consist of straw of oats, barley, wheat or rye and shall not contain seed of noxious weeds. Hay mulch shall consist of clean field or marsh hay and shall not contain seed of noxious weeds. Straw or hay in such an advanced stage of decomposition as to smother or retard the normal growth of grass will not be accepted. Old dry straw which breaks in the crimping process in lieu of bending will not be accepted.
- B. Stakes: Wood stakes shall be 2 inches x 2 inches square, or 2-1/2-inch round and 6 feet long free from bends. Metal stakes shall be 6 feet long standard T-bar steel fence post or #4 or larger rebar. Wood stakes shall be made of untreated wood guaranteed to last in the ground at least two growing seasons. The bottom of wood stakes shall be pointed and the top 2 inches of all stakes shall be painted with yellow paint.
- C. Wrapping Materials: Wrapping materials shall be clean, new burlap, weighing seven or eight ounces per square yard, in strips 4 to 6 inches wide, or horticulturally approved waterproof wrapping paper 30-30-30 rating in 4-inch strips. Subcontractor shall provide, in writing, manufacturer's certification stating that the wrapping material meets Specification requirements.

PART 3 - EXECUTION

3.1 GENERAL

- A. Planting, watering, staking and maintaining the plants shall conform to the applicable provisions of the Colorado

Highway Specifications, Colorado Standard Plan M-214-1, and as specified in this Section. Work shall be done in accordance with good horticultural practices.

- B. Plants shall be protected at all times from drying out or other injuries. Broken and damaged roots shall be pruned before planting.
- C. Planting areas shall be graded to the lines and grades indicated on the Subcontract Drawings, or as approved by the Contractor.

3.2 EXCAVATION, PLANTING, BACKFILLING AND STAKING

- A. Excavation: Planting pits shall be circular in outline with vertical sides. Pits for trees shall be at least 12 inches greater in diameter than the earth ball or the root system of bare root trees. Pits for shrubs shall be at least 6 inches greater in diameter than the earth ball or the root system of bare root shrubs. Pits shall be dug so that the distance from the bottom of the ball or root system of a properly placed plant to the bottom of the pit shall be at least 6 inches for trees and shrubs.
- B. Planting:
 - 1. Plants of upright growth shall be set plumb and plants of prostrate type shall be set normal to the ground surface.
 - 2. The Contractor may require plants with a partially dry root system to be soaked in water for a period of eight hours before planting. Plants with dry roots, however, will be rejected completely.
- C. Backfilling:
 - 1. Backfill shall be thoroughly worked and watered-in to eliminate air pockets. The first watering shall be done immediately after the plant is placed. Backfilling of the planting pit shall be resumed after the water is absorbed. Roots and crown shall be properly covered with soil at this time. After the soil has settled, plants shall be in the proper position and at the proper depth. Saucers shall be prepared around each plant when required and to the dimensions shown on the planting details. A second thorough watering shall take place after saucers are prepared.

2. When saucers are required they shall be covered with a 4-inch thick layer of fresh moist wood chip mulch as indicated on the Standard Plans. The size of mulch shall be approximately 1/4 inch to 1/2 inch wide and 3 inches to 4 inches long. After completion of planting and before acceptance of the work, the Subcontractor shall again water thoroughly all plants installed under this Subcontract. Plants damaged by the Subcontractor's operations shall be replaced at his expense.

D. Staking: Each plant shall be staked with two stakes. Stakes shall conform to Article 2.3.B. Stakes shall be driven 2 feet into the ground with one stake on the side of the prevailing wind (generally the west side) and the other stake on the opposite side. Stakes shall be driven at least 1 foot outside each edge of the planting pit.

3.3 MAINTENANCE

A. Plants damaged by Subcontractor's operations shall be replaced and replanted at no extra cost to the Contractor. Subcontractor shall be responsible for the care and watering of all plants for a period of 90 days from the acceptance of planting work.

B. At the end of the 90-day maintenance period, dead plants will be replaced and replanted with live plants by the Subcontractor at no extra cost to the Contractor. Further maintenance will not be required.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. Measurement for payment for the following items of revegetation will be by the number of each type planted as shown on the Subcontract Drawings:

1. Cottonwood
2. Sandbar Willow
3. Autumn Olive
4. Skunk Bush

4.2 PAYMENT

Payment for the items of Article 4.1.A above will be by their applicable unit prices per each type quoted therefor in the Bid Schedule. Prices quoted shall include full compensation for furnishing all materials, equipment, tools, accessories, incidentals and for performing all work including, but not limited to, clearing, site preparation, planting, watering, maintaining, etc. complete as specified.

END OF SECTION 02936

TABLE 02936-A

<u>Tree Species</u>	<u>Plant Density</u>	<u>Plant Size</u>	<u>Planting Location</u>	<u>Planting Style</u>	<u>Total Number of Plants</u>
Cottonwood (Populus Deltoides)	289 plants per acre, or 8 plants per linear 100'	Trunk dia. 1" - 1-1/2"	At least 30'-100' from river bank	Staggered	809
Sand Bar Willow (Exigua)	3 rows of 10 plants per linear 100'	1 gallon	10' above, below and at high water mark	Staggered	909
Autumn Olive* (Angustifolia)	64 plants per acre, or 4 plants per linear 100'	5 gallons	In any open space left between high water mark and 30'-100' from river bank	Randomly spaced and intermixed	333
Skunk Bush (Rhus trilobata)	64 plants per acre, or 4 plants per linear 100'	1 gallon	In any open space left between high water mark and 30'-100' from river bank	Randomly spaced and intermixed	333

* Russian Olive (Elaegnus) can be substituted, though not preferred, at same specifications.

SECTION 02935

SEEDING

PART 1 - GENERAL

1.1 SCOPE

- A. This Specification Section covers seeding for the following:
1. Temporary Seeding: Temporary drainage ditches and disturbed exposed areas at the disposal site shall be covered by temporary cover of vegetation.
 2. Permanent Seeding: The final graded area at the processing site, disposal site, wetlands, and turnout at US Highway 50 shall be covered by permanent cover of vegetation.

1.2 MATERIAL STORAGE

- A. Seeds shall be stored in sealed waterproof containers in a cool, dry location and shall be kept out of direct sunlight until ready for use.
- B. Fertilizer shall be delivered and stored in waterproof containers showing the chemical analysis and name of manufacturer.
- C. Soil preparation materials such as manure or mountain peat shall be delivered and stockpiled in such a manner to avoid contamination or dilution by other materials.

PART 2 - MATERIALS

2.1 SEED MIX

- A. Temporary Cover:
1. One of the following seed mixes shall be used for temporary seeding of disturbed exposed areas during construction:

<u>Seed Species</u>	<u>Seeding Rate (Pounds of Pure Live Seed Per Acre)</u>
Luna Pubescent Wheatgrass	4.00
P-27 Siberian Wheatgrass	3.00
Rincon Fourwing Saltbush	1.00
Shadscale	<u>1.00</u>
Total	9.00

2. The seeding rates shown are for drill applied. These rates shall be increased by 100 percent if broadcasting method of application is used. Hydroseeding shall not be used.

B. Permanent Cover:

1. Disposal Site:

- a. The following seed mixture shall be used for seeding of final grades:

<u>Seed Species</u>	<u>Seeding Rate (Pounds of Pure Live Seed Per Acre)</u>
Shadscale	1.0
Rincon Fourwing Saltbush	1.0
Castle Valley Clover Saltbush	1.0
Alkali Sacaton	0.25
Sand Dropseed	0.10
Paloma Indian Ricegrass	<u>3.00</u>
Total	6.35

- b. The seeding rates shown are for drill applied. These rates shall be increased by 100 percent if broadcasting method of application is used. Hydroseeding shall not be used.

2. Processing Site Except Wetlands:

- a. The following seed mixture shall be used for seeding of final grades:

<u>Seed Species</u>	<u>Seeding Rate (Pounds of Pure Live Seed Per Acre)</u>
Streambank Wheatgrass	2.0
Western Wheatgrass	1.5
Galleta	0.7
Indian Ricegrass	0.7
Lemmons Alkaligrass	0.7
Battlebrush Squirreltail	0.3
Alkalai Sacaton	0.3
Needle-N-Thread	<u>0.3</u>
Total	6.5

- b. The seeding rates shown are for drill applied. These rates shall be increased by 100 percent if broadcasting method of application is used. Hydroseeding shall not be used.

3. Wetlands:

- a. The following seed mixture shall be used for seeding of final grades:

<u>Seed Species</u>	<u>Seeding Rate (Pounds of Pure Live Seed Per Acre)</u>
Streambank Wheatgrass	5.0
Western Wheatgrass	1.5
Galleta	0.7
Indian Ricegrass	0.7
Lemmons Alkaligrass	0.7
Saltgrass	0.3
Alkalai Sacaton	0.8
Reed Canarygrass	<u>0.3</u>
Total	10.0

- b. The seeding rates shown are for drill applied. These rates shall be increased by 100 percent if broadcasting method of application is used. Hydroseeding shall not be used.

2.2 ACCEPTANCE OF SEED

Final acceptance of seed will be made by the Contractor based on the following: Seed shall be furnished separately or in mixture in standard sealed containers with (1) seed name; (2) lot number; (3) net weight; (4) percentages of purity and of germination; and (5) percentage of maximum weed seed content clearly marked for each kind of seed. The Subcontractor shall furnish the Contractor duplicate copies of a statement by the vendor, certifying that each lot of seed has been tested by a recognized laboratory for seed testing within 30 days of date of delivery. This statement shall include: (1) name and address of laboratory, (2) date of test, (3) lot number for each kind of seed, and (4) results of tests as to name, percentages of purity and of germination, and percentage of weed content, for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed.

2.3 FERTILIZER

Fertilizer shall be a standard commercial grade and provide the minimum percentage of available nutrients specified. Fertilizer shall be furnished in new, clean, and sealed containers with the name, weight, and guaranteed analysis of contents clearly marked.

2.4 MULCH

Mulch shall be native or locally grown hay consisting of grass or grass and alfalfa. Mulch shall be in an air-dry condition and suitable for placing with mulch blower equipment. Final acceptance of mulch will be by the Contractor.

2.5 WATER

Water used in the planting or care of vegetation shall be free of concentrations of oils, acids, alkalies, salts, or any substance that are injurious to plant life.

PART 3 - EXECUTION

3.1 PREPARATION

A. Timing:

1. Temporary Seeding: All exposed surfaces not covered by riprap shall be seeded as soon as practical after

completion or shutdowns, but not later than 20 days thereafter, using the seed mix specified in Article 2.1.A, mulched, or provided with other forms of surface protection approved by the Contractor. Erosion protection of these exposed areas shall be completed as soon as practical after the completion of surface-disturbing activities, but no later than 20 days thereafter.

2. Permanent Seeding: All final grades not covered by gravel or riprap shall be seeded using the seed mixes specified in Article 2.1.B above. Seeding materials shall not be applied during windy weather, when the ground is excessively wet or frozen, or when snow is present. Seeding shall be completed during the period between September 1 and November 15.
- B. Grading and Seedbed Preparation: Before applying seed for permanent cover of a given area, stockpiled topsoil and select fill shall be put in place evenly and the area shall be graded as shown on the Subcontract Drawings, with surfaces sloping gradually towards drainage courses, with no enclosed low spots where water can accumulate. Areas to be seeded that have been damaged by erosion, compaction or other causes shall be restored prior to seeding.
 - C. Topsoil shall be a sandy loam, clay loam, loam, silt loam or sandy clay loam. It shall not have a mixture of subsoil and shall contain no slag, cinders, stones, lumps of soil, sticks, roots, trash or other extraneous materials larger than 1 inch in any dimension. Topsoil will consist of the first 2 inches from stripping operations.
 - D. Soil preparation will consist of the addition of good quality organic matter and nutrients (by means of commercial fertilizers), and tilling to a depth of 4 to 6 inches.
 - E. Good quality organic matter will be applied to the soil at the rate of 3 cubic yards per 1,000 square feet of area (2.3 cubic meters/90 square meters). Canadian/Michigan sphagnum peat moss is preferred, however, manure or mountain peat can be used. Manure shall be well composted and not from a feedlot. Manures or mountain peat shall be shredded.
 - F. If mountain peat or barnyard manure is used, a soluble salt test will be done. Materials with a salt reading (EC-mmhos/cm) above 3 shall not be used.

- G. Phosphorous will be tilled into the soil (unless otherwise shown by soil test) at a rate per 1,000 square feet as follows:

Superphosphate (0-18-0) - 20 to 30 lbs.

or

Treble Superphosphate (0-46-0) - 10 to 15 lbs.

3.2 APPLICATION

- A. Seed shall be applied by either a rangeland drill or by broadcasting at the rates specified. The rangeland drill shall have drill spacing of 12 inches and seed depth of 1/2 to 1 inch. The soil shall be compacted following seeding.
- B. Mulch shall be applied to seeded areas as soon as practical at a rate of 1.5 tons per acre. The purpose of the mulch is to promote growth and provide temporary stabilization. Mulch shall be secured into the soil with a crimping disk implement or by other suitable equipment as approved by the Contractor. Mulching shall not be done in the presence of free surface water.

3.3 CARE DURING CONSTRUCTION

The Subcontractor shall be responsible for protecting and caring for areas seeded before final acceptance of the work. The Subcontractor shall repair any damage to seeded areas caused by construction operations without additional compensation.

3.4 PLANT ESTABLISHMENT

Since seed applied in the late fall is intended to germinate the following spring, the Subcontractor shall be responsible for seeded areas 180 days following seeding. If satisfactory growth is not established by the end of this period, reseeding by the Subcontractor will be required at no cost to the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement for payment for the following items of seeding will be by the acres of surfaces actually seeded and ap-

proved. Quantities shall be computed from measurements and surveys of the seeded planes:

1. Temporary seeding for disposal site.
 2. Permanent seeding for disposal site.
 3. Permanent seeding for processing site.
 4. Permanent seeding for turnout at US Highway 50.
 5. Permanent seeding for wetlands.
- B. Separate measurement for payment will not be made for any incidental work and services, including, but not limited to, loosening the surface, applying lime and fertilizer, mulching, and watering related to seeding of cuts and fill areas.

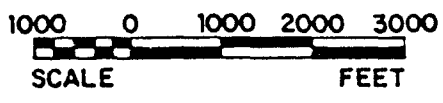
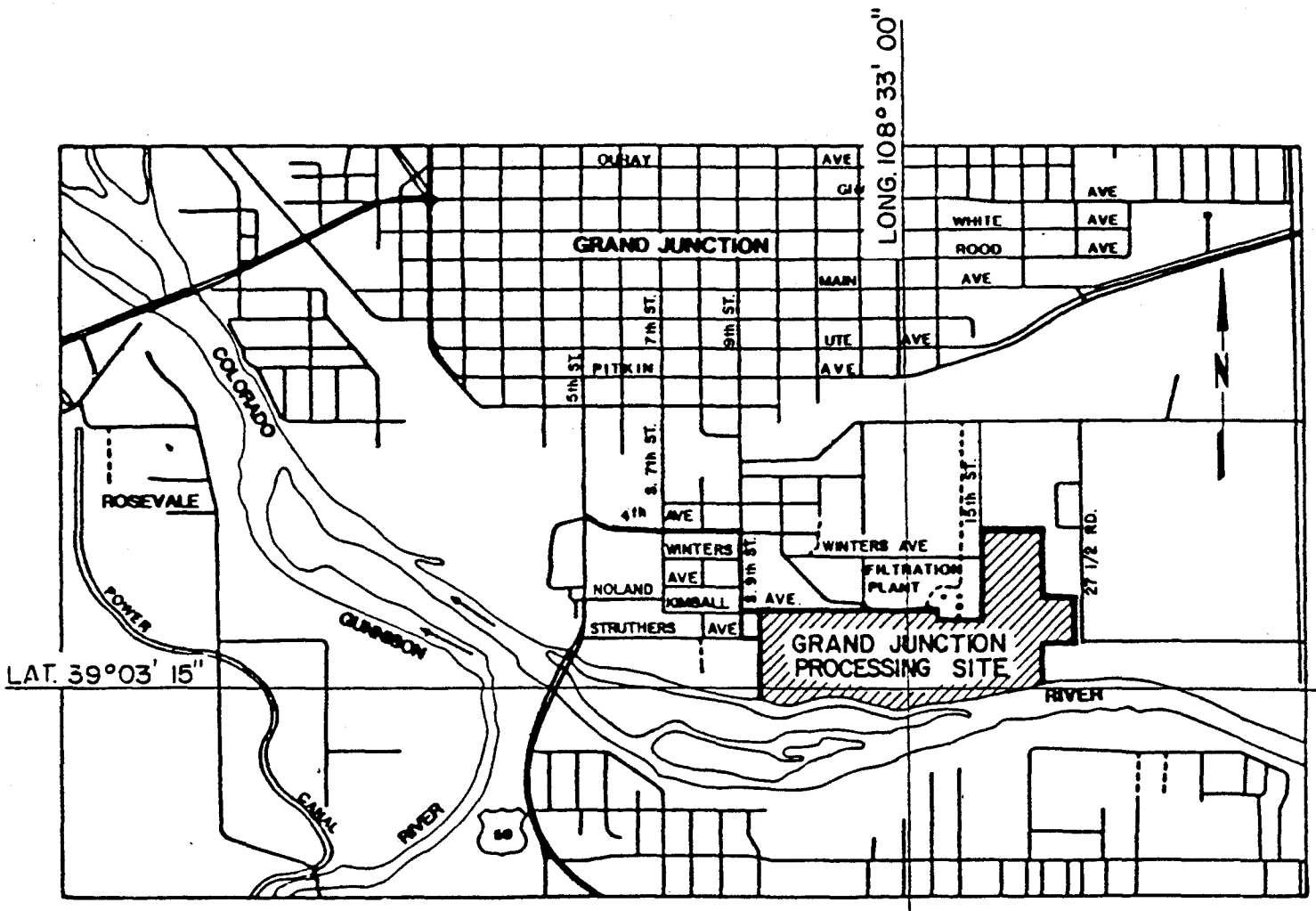
4.2 PAYMENT

Payment for seeding items specified in Article 4.1.A above will be by the applicable unit prices per acre quoted therefor in the Bid Schedule. The prices quoted shall include full compensation for furnishing all materials, tools, equipment, incidentals, labor, and for performing all work specified herein for complete work.

END OF SECTION 02935

ITEM 9: Permits and approvals

ISSUING AGENCY	TYPE APPROVALS	IDENTIFICATION NO.	DATE OF APPLICATION	DATE OF APPROVAL	DATE OF DENIAL
1. U.S. Fish and Wildlife Service	Threatened or Endangered Species Consultation	SE/SLC:6-5-86-F-026	12/3/87	9/10/86	---
2. Colorado Department of Health	Air Pollutant Emission Notice and Permit (Phase I)		6/2/86		
3. Colorado Department of Health	Air Pollutant Emission Notice & Permit (Phase II)				
4. Colorado Department of Health	Pollutant Discharge Elimination System (CPDES) Permit				
5. Colorado Historic Society	Cultural Resource Clearance				
6. Mesa County Board of Commissioners/Planning Department	Conditional Use Permit	C 11-88	1/19/88	3/29/88	---
7. Mesa County Engineering Department	Floodplain Use Permit				
8. City of Grand Junction, Planning Department	Floodplain Permit				



PURPOSE: CLEANUP OF ABANDONED URANIUM MILL TAILINGS (UMTRA PROJECT SITE)

VICINITY MAP

MK-FERGUSON CO.
PO BOX 9136
ALBUQUERQUE, NM 87119

PROPOSED EXCAVATION, FILL AND REVEGETATION

IN: COLORADO RIVER
AT: GRAND JUNCTION
COUNTY OF: MESA STATE: COLORADO
APPLICATION BY: MK-FERGUSON CO.
SHEET 1 OF 4 DATE 5 MAY 1988

ENGINEERS
AND
CONSTRUCTORS



MK-FERGUSON COMPANY
A MORRISON KNUDSEN COMPANY

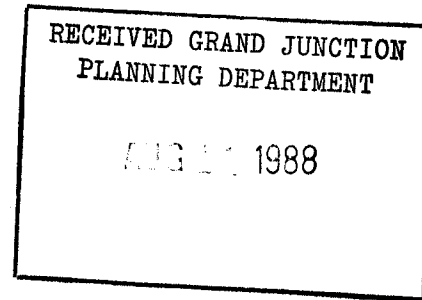
HEADQUARTERS OFFICE
ONE ERIEVIEW PLAZA
CLEVELAND, OHIO U.S.A. 44114
PHONE: (216) 523-5600/TELEX: 985542

REPLY TO: MK-FERGUSON COMPANY
REMEDIAL ACTIONS
CONTRACTOR-UMTRA PROJECT
P.O. BOX 9136
ALBUQUERQUE, NEW MEXICO U.S.A. 87119

CERTIFIED - RETURN RECEIPT REQUESTED
P 805 711 550

August 9, 1988

Mr. Karl Metzner
Planning Department
City of Grand Junction
599 White Avenue, Room 60
Grand Junction, CO 81501



SUBJECT: UMTRA Project - Grand Junction
Floodplain Permit

Dear Mr. Metzner:

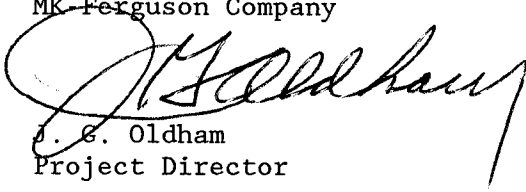
Further to your conversation of July 28, 1988 with Brian Halton of our San Francisco office, it is our understanding that the copy of a U.S. Corps of Engineers Dredge and Fill Permit application sent to your office is acceptable as application for a City of Grand Junction Floodplain Permit.

Please find enclosed our check in the amount of \$100 for payment of the Floodplain Permit fee. We would appreciate receipt of the permit at your earliest convenience.

If you should have any questions, please contact Mr. J. E. Williams, Construction Engineering Manager, at (505) 766-3093.

Sincerely,

MK-Ferguson Company


J. E. Oldham
Project Director

JGO/MDT/kja

Enclosure: Check for \$100

cc: J. D'Antonio - DOE/UMTRA (w/o enclosure)
E. Damler - DOE/UMTRA (w/o enclosure)
B. Glover - TAC (w/o enclosure)
K. Agogino - TAC (w/o enclosure)
D. Hotovec - CDH (w/o enclosure)
S. Schweissing - Mesa County Engineering Dept. (w/o enclosure)
M. Teas - Mesa County Planning Dept. (w/o enclosure)

1438K

ITEM Z*
FLOOD HAZARD REPORT

EXHIBIT C**

PROCESSING SITE

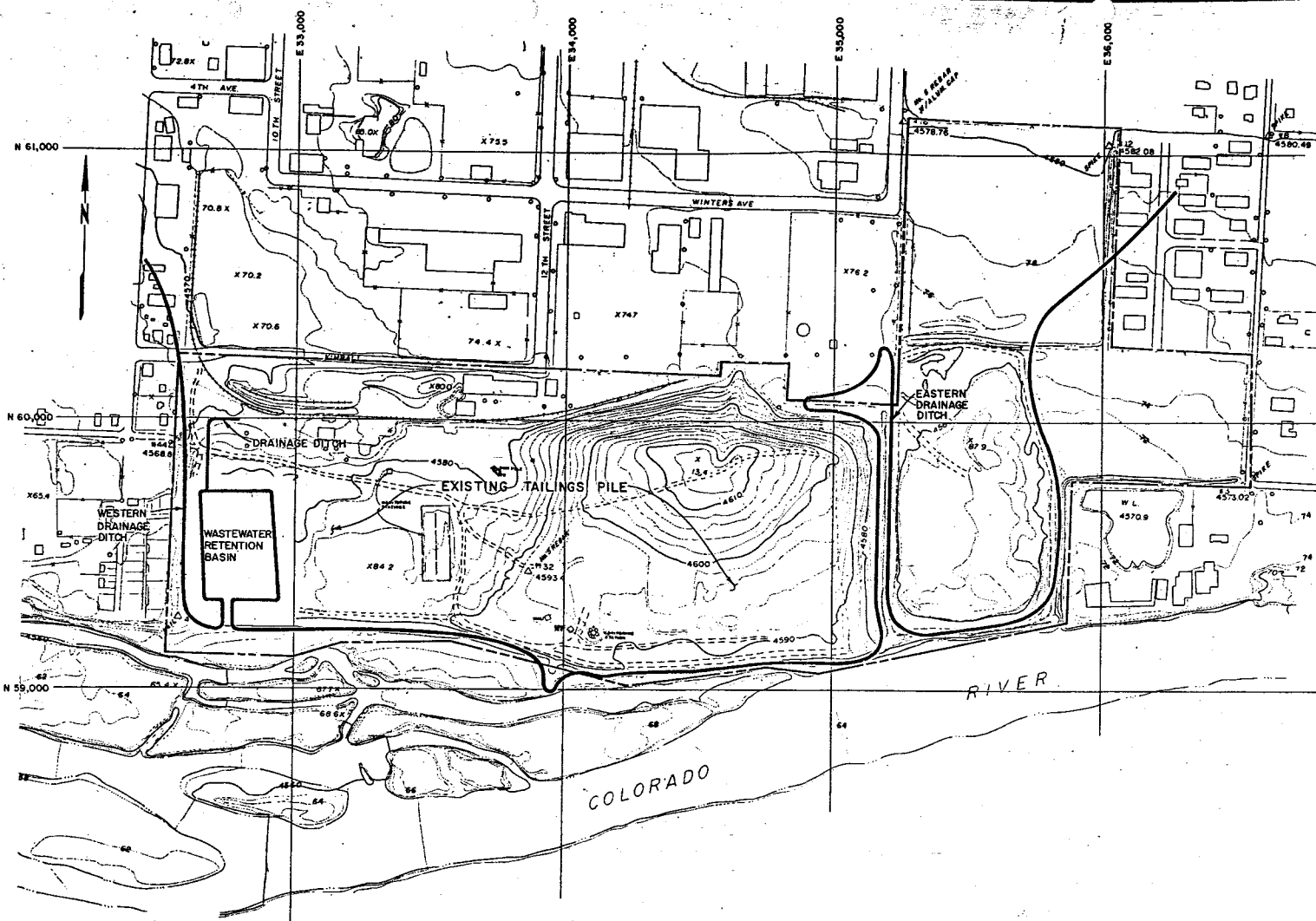
A Federal Emergency Management Agency (FEMA) flood insurance rate map of Grand Junction, effective January 6, 1983, depicts the 100 year flood level as 4570' at the west end and 4574' at the east end of the processing site. Except for the drainage ditch between the ponds and tailings pile, the entire site is currently above the 100-year flood event. At the end of Phase IA activities the only change in the 100-year flood boundary will be at the retention basin. The emergency spillway elevation is 4569'. Thus according to the FEMA map, the 100-year flood water will inundate the retention basin to the 4570' elevation and extend up the drainage ditch a distance of 400 feet from the retention basin (see Figure Z-1).

At the end of Phase II activities, the 100-year floodwaters would cover the area once occupied by the tailings pile and retention basin as shown on Figure Z-2.

DISPOSAL SITE

There is no flood hazard at the Cheney Reservoir disposal site. The minimum elevation of 5240' for this site, is several hundred feet above the 100-year flood boundary for the Gunnison River.

* Source: Mesa County Conditional Use Permit Application
** Including Figures Z-1 and Z-2.



- NOTES:**
1. THE FLOOD BOUNDARIES SHOWN ARE EXTRAPOLATED FROM THE FLOOD INSURANCE RATE MAP SHOWING A FLOOD BOUNDARY IMMEDIATELY WEST OF THE MAIN TAILINGS PILE AND ALONG THE RIVER CHANNEL SOUTH OF THE SITE. NO FLOOD INSURANCE RATE MAP OF THE SITE IS AVAILABLE AT THIS TIME.
 2. THE WATER LEVEL ELEVATIONS ESTIMATED WERE EXTRAPOLATED FROM THE EXISTING 100-YR. FLOOD ELEVATIONS ALONG THE PRESENT SHORELINE OF THE COLORADO RIVER TO THE 100-YR. FLOOD LEVEL WITHIN THE RETENTION BASIN.

- LEGEND:**
- EXISTING SITE FEATURES & CONTOURS
 - CONSTRUCTION GRID COORDINATE
 - SITE BOUNDARY
 - EXISTING 100-YEAR FLOOD BOUNDARY



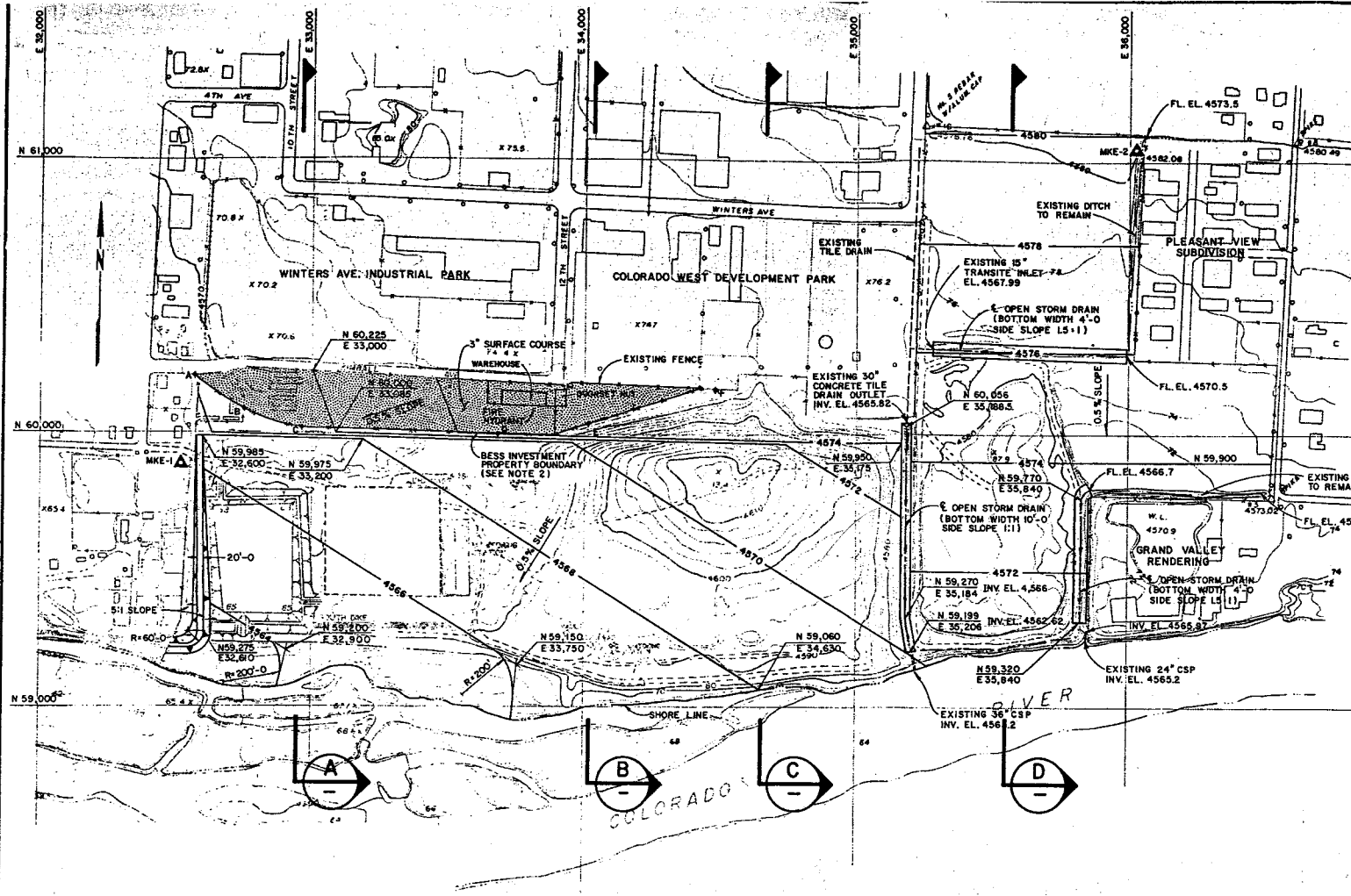
△											
△											
△											
△											
NO.	DATE	REVISIONS			BY	CR	EAD	CHEF	TAC	DOE	

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

GRAND JUNCTION PROCESSING SITE
GRAND JUNCTION, COLORADO

FEMA
100-YR. FLOOD BOUNDARIES
AT END OF PHASE I-A

DESIGNED	GRAND		
CHECKED	RBC		
INSPECTED			
RECOMMENDED			
APPROVED	DATE	DOE PROJECT ENGINEER	DATE
MORRISON-KNUDSEN ENGINEERS, INC. A CORPORATION OF AMERICA LMTRA PROJECT 80 HORNARD ST. SAN FRANCISCO, CA 94105		PROJECT NO.	DE-AC04-83AL18796
		DRAWING NO.	FIGURE Z-1
		REV.	



NOTES:

- THIS TOPOGRAPHIC BASE MAP WAS FURNISHED BY JACOBS ENGINEERING DATED FEBRUARY 1985 AND DOES NOT REFLECT RECENT CHANGES IN THE PONDS AREA WHERE ADDITIONAL CONTAMINATED MATERIALS ARE BEING DEPOSITED.
- THE BESS INVESTMENT PROPERTY WILL BE ENCLOSED AS SHOWN WITH A WOVEN WIRE FENCE AND 3" SURFACE COURSE WILL BE PLACED OVER THE ENTIRE PROPERTY.
- SURVEY DATA FOR NEW WOVEN WIRE FENCE:

POINT	NORTH	EAST
A	60,199.98	32,574.84
B	60,073.99	32,755.90
C	60,008.68	32,954.38
D	59,986.27	33,664.69
E	60,028.94	34,014.43
F	60,161.32	34,484.77

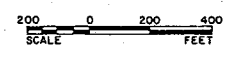
CURVE BC:	CURVE DE:
Δ = 32°48'37"	Δ = 17°31'36"
R = 369.93	R = 1,156.28
L = 211.84'	L = 353.70'
Ch = 208.96'	Ch = 352.33'
S75°42'44"E	N81°07'09"E
- SEE NOTE 5, DWG. NO. GRJ-PS-10-0203.

REFERENCE DRAWINGS:

- GRJ-PS-10-0211 CONTAMINATED MATERIAL EXCAVATION PLAN SHEET 1 OF 2
- GRJ-PS-10-0212 CONTAMINATED MATERIAL EXCAVATION PLAN SHEET 2 OF 2

LEGEND:

- 4610 EXISTING SITE FEATURES AND CONTOURS
- N 61,000 CONSTRUCTION GRID COORDINATE
- SITE BOUNDARY
- EXCAVATION
- EMBANKMENT
- FENCE AND GATE TO REMAIN
- 4568 ELEVATION CONTOUR OF FINAL GRADE
- SHORE LINE
- MKE-1 EXISTING PERMANENT SURVEY MONUMENT
- NEW WOVEN WIRE FENCE



ALL SURVEY WORK SHALL COMPLY WITH THE REQUIREMENTS OF C.O.S. 1-1-100

NO.	DATE	REVISIONS	BY	CHK.	S&D	CHKP	TAC	DOE
1	7-15-88	ISSUED FOR CONSTRUCTION						
2								
3								

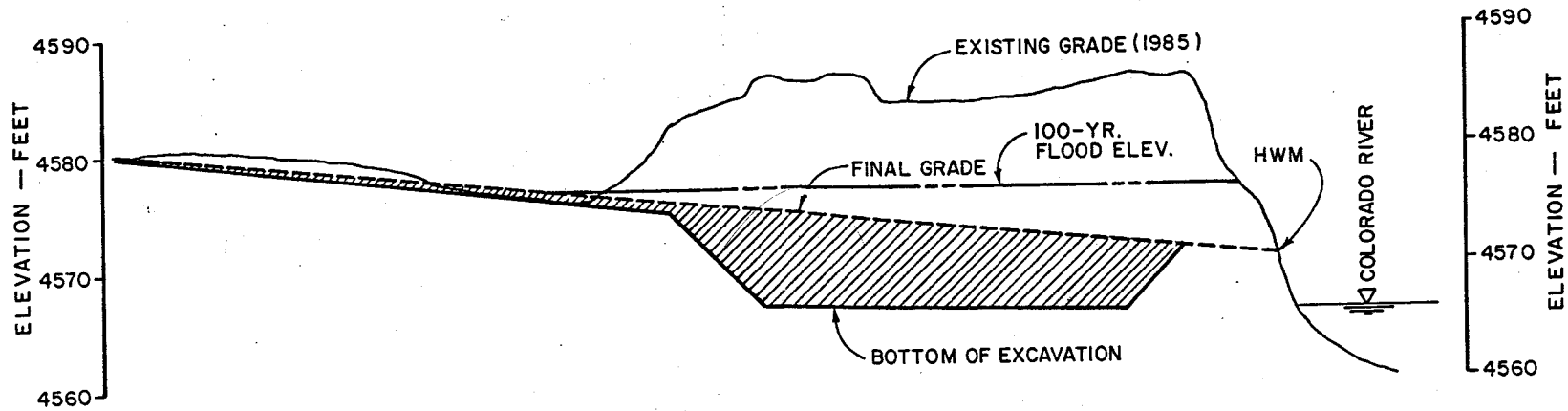
U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

GRAND JUNCTION PROCESSING SITE
GRAND JUNCTION, COLORADO
PHASE II CONSTRUCTION

FINAL GRADING PLAN

DESIGNED BY C. J. H. 2	DRWING BY AMC	CHECKED BY M. J. S. 2	INSPECTED BY G. C. H. 2	APPROVED BY F. J. FELIX	DATE 7/15/88	DATE 7/15/88	DATE 7/15/88
				PROJECT NO. DE-AC04-83AL18796		DRAWING NO. GRJ-PS-10-0213	

EXHIBIT A



SECTION D

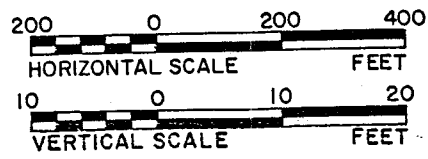


EXHIBIT B

U. S. DEPARTMENT OF ENERGY ALBUQUERQUE, NEW MEXICO			
GRAND JUNCTION SITE GRAND JUNCTION, COLORADO			
PROPOSED EXCAVATION AND FILL			
DESIGNED	DATE	DOE PROJECT ENGINEER	DATE
CHECKED			
INSPECTED			
RECOMMENDED			
APPROVED	DATE		
MORRISON-KNUDSEN ENGINEERS, INC. A MEMBER OF CH2M HILL UNTRA PROJECT <small>180 SOUTH ST., SAN FRANCISCO, CA 94108</small>		PROJECT NO. DE-AC04-83AL18796	DATE
		DRAWING NO.	REV.

CITY OF GRAND JUNCTION FLOODPLAIN PERMIT

APPLICANT DEPARTMENT OF ENERGY

MAILING ADDRESS 1/0 MK-Ferguson Co P.O. Box 9136

ALBUQUERQUE, N.M., 87119

TELEPHONE (H) _____ (W) (505) 766-3093

OWNER (IF DIFFERENT THAN APPLICANT) _____

MAILING ADDRESS _____

TELEPHONE (H) _____ (W) _____

COMMON LOCATION OF THE PROJECT SITE URANIUM MILL TAILINGS PILE
Street Address

MESA COUNTY ASSESSOR'S TAX PARCEL NUMBER _____

BRIEF DESCRIPTION OF THE PROPOSED USE OF THE SITE OPEN SPACE

RIVER, STATION 387+60

ELEVATION OF THE 100 YEAR FLOOD EVENT 4571

DETERMINED FROM: CORPS OF ENGINEERS, FLOOD HAZARD STUDY
NOVEMBER, 1976

HUD FLOOD INSURANCE STUDY, JANUARY, 1978

ENGINEER MK FERGUSON MO

MAILING ADDRESS P.O. Box 9136

ALBUQUERQUE, N.M. 87119

TELEPHONE (H) _____ (W) (505) 766-3093

TO BE COMPLETED BY STAFF

FEE \$100

DATE RECEIVED 8/11/88 RECEIPT NO. 2550 FILE NO. 30-88

REQUIRED DOCUMENTS: _____

CORPS PERMIT APPLICATION

REVIEW SHEET SUMMARY

FILE NO. 30-88 TITLE/HEADING Floodplain Permit DUE DATE 8/30/88

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES Location: Uranium mill tailings site

Petitioner: Dept. of Energy c/o MK-Ferguson Company

PETITIONER ADDRESS P.O. Box 9136 Albuquerque, NM 87119

ENGINEER MK-Ferguson Company P.O. Box 9136 Albuquerque, NM 87119

DATE REC. AGENCY COMMENTS

NOTE: WRITTEN RESPONSE BY THE PETITIONER TO THE REVIEW COMMENTS IS REQUIRED
A MINIMUM OF 48 HOURS PRIOR TO THE FIRST SCHEDULED PUBLIC HEARING.

8/25/88 Parks Dept. None.

8/16/88 Engineering Plans make no provision for a flood control dike which will be required along the entire length of the property, known formerly as the Climax Uranium Company Mill Site. Minimum requirements shall include a dike designed to protect all properties north of the river from a 100-year flood. The design and location of the dike should be coordinated with the Corps of Engineers' 205 Flood Study which is currently in progress.

8/30/88 Planning Sheet one of four shows the State-owned temporary repository site included as part of the project. However, sheets two through four, and the cover letter to Grady McNure, do not show or mention the State repository. The floodplain permit should include the repository and a final site plan and cross-sections should be provided for this area.

The new 100-year floodplain boundary needs to be shown on the final site plan.

The revegetation plan is acceptable if it includes the State repository site. Sheet three of four should be expanded to include that site.

The current uranium mill tailings pile acts as a constriction to 100-year flows. Removal of this constriction has the potential of increasing flood impacts on upstream or downstream users. Prior to issuing a permit we will require a hydrological study that certifies that there will be no adverse impacts on other properties. If adverse impacts are identified, a mitigation plan will be required. The study must be conducted and signed by a qualified hydrologist or hydrological engineer.

The Corps of Engineers is engaged in a 205 Flood Control Study for an area that includes the tailings pile. The results of this study may influence the final site development plan. We will forward information as it becomes available from the Corps.

ENGINEERS
AND
CONSTRUCTORS



MK-FERGUSON COMPANY
A MORRISON KNUDSEN COMPANY

HEADQUARTERS OFFICE
ONE ERIEVIEW PLAZA
CLEVELAND, OHIO U.S.A. 44114
PHONE: (216) 523-5600/TELEX: 985542

REPLY TO: MK-FERGUSON COMPANY
REMEDIAL ACTIONS
CONTRACTOR-UMTRA PROJECT
P.O. BOX 9136
ALBUQUERQUE, NEW MEXICO U.S.A. 87119

CERTIFIED - RETURN RECEIPT REQUESTED
P 805 711 573

October 24, 1988

Mr. Karl G. Metzner
Director of Planning
Grand Junction Planning Department
250 North Fifth Street
Grand Junction, Colorado 81501-2668

SUBJECT: UMTRA Project
Grand Junction Floodplain Permit

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT.

OCT 25 1988

Dear Mr. Metzner:

This confirms receipt of your letter to Mr. J. E. Williams of September 21, 1988, and your subsequent conversation of October 3, 1988, on the subject topic with Don Sanders of Morrison-Knudsen Engineers' San Francisco office.

The following are our responses to the review comments enclosed with your letter.

- o Flood Control Dike: MK-Ferguson Company will coordinate with the U.S. Army Corps of Engineers (Corps) to determine the design and location of a flood protection berm. The final site grading plan will be modified as required to conform with the findings of the Corps' on-going 205 Flood Study at Grand Junction. Because the Corps' flood protection designs are not yet fully developed, we understand from your conversation with Mr. Sanders that the issuance of the city's floodplain permit will not be made contingent on our providing designs for a 100-year flood.
- o State Repository: Exhibit A shows the final grading plan of the project area including the State Repository. Exhibit B shows a cross-section of the State Repository.
- o Revegetation Plan: The State Repository will be reseeded as specified in the 404 application filed with the Corps. It should be noted that only a small portion of the State Repository contains Corps-defined wetlands.

1880K

Mr. Karl G. Metzner

Page 2

October 24, 1988

- o Hydrological Study/Floodplain Boundary: Exhibit C discusses the predicted changes in the 100-year flood levels in the vicinity of the project site at the end of Phase IA and at the conclusion of the remedial action (Phase II). Exhibit C was developed by Morrison-Knudsen Engineers, Inc. to satisfy the requirements of Item Z - Flood Hazard Report - of the Mesa County Conditional Use Permit application. The 100-year flood levels are based on the January 6, 1983, Federal Emergency Management Agency (FEMA) flood insurance rate map of Grand Junction. Although not depicted on Figure Z-1 to Exhibit C, the existing 100-year flood boundary is nearly identical to the flood boundary depicted at the end of Phase IA. The only difference is the extension of floodwaters into the proposed retention basin and along the project drainage ditch leading into the retention basin.

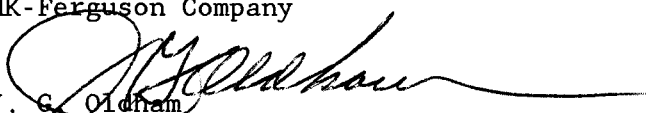
As shown in Figure Z-2 to Exhibit C, the removal of tailings and the regrading of the project site will have the effect of moving the 100-year flood boundary inland but still within the boundaries of the project site. The 100-year flood boundary beyond the project site, either upstream or downstream, will not be affected by the UMTRA Project.

We trust that these responses adequately address the issues raised in your review of our application. We look forward to early receipt of the city's permit.

If you have any further questions, please feel free to call Mr. Jim Williams, Construction Engineering Manager, at (505) 766-3093.

Sincerely,

MK-Ferguson Company


J. G. Oldham
Project Director

JGO/TPJ/kja

Enclosures: Exhibit A - Final Grading Plan
Exhibit B - Proposed Excavation and Fill
Exhibit C - Flood Hazard Report
Attached Figures Z-1 and Z-2

cc: J. D'Antonio - DOE/UMTRA (w/o enc.)
F. Bosiljevac - DOE/UMTRA (w/o enc.)
E. Damler - DOE/UMTRA (w/enc.)
B. Glover - TAC (w/enc.)
K. Agogino - TAC (w/o enc.)
D. Hotovec - CDH (w/enc.)
S. Schweissing - Mesa County Eng. Dept. (w/enc.)
M. Teas - Mesa County Planning Dept. (w/enc.)

1880K

ENGINEERS
AND
CONSTRUCTORS

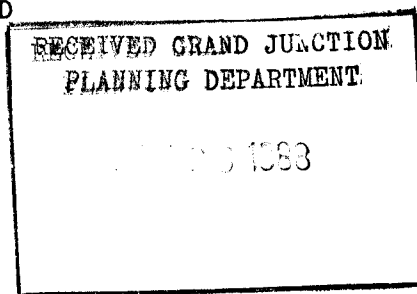


MK-FERGUSON COMPANY
A MORRISON KNUDSEN COMPANY

HEADQUARTERS OFFICE
ONE ERIEVIEW PLAZA
CLEVELAND, OHIO U.S.A. 44114
PHONE: (216) 523-5600/TELEX: 985542

REPLY TO: MK-FERGUSON COMPANY
REMEDIAL ACTIONS
CONTRACTOR-UMTRA PROJECT
P.O. BOX 9136
ALBUQUERQUE, NEW MEXICO U.S.A. 87119

CERTIFIED - RETURN RECEIPT REQUESTED
P 805 711 574



October 24, 1988

Mr. Ken Jacobson
Corps of Engineers
764 Horizon Drive
Room 211
Grand Junction, Colorado 81506-8719

SUBJECT: UMTRA Project - Grand Junction
Dredge and Fill Permit Application (#9978)

REFERENCE: Letter from Art Champ, Corps of Engineers, to J. G. Oldham
dated October 15, 1988

Dear Mr. Jacobson:

The following are MK-Ferguson Company's comments on the draft permit transmitted by the referenced letter:

1. On Page 2, General Condition #5 refers to other conditioned water quality certifications, which become special conditions to this permit. We enclose a copy of the Colorado Department of Health's Section 401 Water Quality Certification #2009, which contains a list of general conditions. These should be attached to your permit.
2. On Page 4, Special Conditions: We feel that Special Conditions b, c, d, g and i should be deleted from the permit either because they govern activities that are beyond the scope of the Corps' Dredge and Fill Permit program as defined by Section 404 of the Clean Water Act, or they govern activities at locations where there will be no fill in regulated wetlands or navigable water.

1882K

Mr. Ken Jacobson
Page 2
October 24, 1988

In particular, Special Conditions c and d pertain to radon control and the long-term stability of the tailings embankment at the Cheney Reservoir Disposal Site; these items have no relevance to the activities at the Processing Site which are the subject of this permit. In addition, Special Conditions b (dust emissions), g (noise), and i (site access control) concern matters whose enforcement is not, we suggest, the role of the Corps under this permit, even as applied to the Processing Site. Please note that MK-Ferguson Company and its subcontractors will be required to attend to all these matters by contractual provisions and other permits issued by other authorities.

Because of these comments, we have not returned the copies of the draft permit sent by the referenced letter.

If you have any questions, please contact Mr. Jim Williams, Construction Engineering Manager, at (505) 766-3093.

Sincerely,

MK-Ferguson Company



J. G. Oldham
Project Director

JGO/TPJ/kja

Enclosure: CDH letter to MK-Ferguson Company dated October 6, 1988

cc: J. D'Antonio - DOE/UMTRA (w/o enc.)
E. Damler - DOE/UMTRA (w/enc.)
K. Agogino - TAC (w/enc.)
B. Glover - TAC (w/enc.)
A. Champ - Corps of Engineers (w/enc.)
D. Hotovec - CDH (w/enc.)
S. Schweissing - Mesa County Eng. Dept. (w/enc.)
M. Teas - Mesa County Planning Dept. (w/enc.)
K. Metzner - Grand Junction Planning Dept. (w/enc.)

General Conditions

1. Before a federal licensee or permittee commences any project in a watercourse, which project may adversely affect water quality, it shall make reasonable efforts to notify local health departments and owners of water supply intakes within five miles downstream from the site of the project before commencing work.
2. Construction operations in watercourses and water bodies shall be restricted to areas specified in the application for the federal license or permit.
3. Permanent erosion and sediment control measures shall be installed at the earliest practicable time consistent with good construction practices and shall be maintained as necessary throughout the operation of the project. One of the first construction activities shall be the placement of permanent and temporary erosion and sediment control measures around the perimeter of the project or the initial work areas to protect the project water resources.
4. Temporary erosion and sediment control measures shall be coordinated with permanent measures to assure economical, effective, and continuous control throughout the construction phase and during the operation of the project.
5. Work should be carried out diligently and completed as soon as possible.
6. The use of chemicals such as soil stabilizers, dust palliatives, sterilants, growth inhibitors, fertilizers, deicing salts, etc., during construction and operation should be limited to the best estimate of optimum application rates. All reasonable measures shall be taken to avoid excess application and introduction of chemicals into the waters as a result.
7. Measures shall be taken to prevent spilled fuels or lubricants, from entering the watercourse.
8. Whenever practicable, operations shall be conducted during low flow periods, during periods when spawning is not occurring and during periods when recreational use is relatively low.
9. Solids, sludges, dredged or stockpiled materials or other potential sources of pollutants, shall be disposed of or controlled in a manner so as to prevent such materials from entering watercourses. Should such materials enter the watercourse, downstream users within 5 miles shall be notified, as well as the Colorado Department of Health and local health departments.
10. Materials used during construction or operation or removed from sediment traps shall not be stockpiled or disposed of in a manner which makes them readily susceptible to being washed into any watercourse by runoff or high water.
11. Measures shall be taken to prevent the entrance of wet concrete into the watercourse when placed in forms and/or from washing of trucks.

12. Fill material shall be clean as practicable.
13. Structural fill or bank protection shall consist of materials, which are placed and maintained so as to withstand predictable high flows in the watercourse. Hazardous areas should be clearly marked or made inaccessible to the public.
14. Concrete slabs which may be unstable are not authorized for use as riprap. Broken concrete chunks are authorized but shall be free of protruding reinforcing materials.
15. Areas disturbed by a project and which are suitable for vegetation shall be seeded or revegetated to prevent subsequent soil erosion.
16. Discharges of dredged or fill material in excess of that necessary to complete the project shall not be permitted.
17. Discharges to waters of the State not included in the application and not certified in accordance therewith are not included within the terms of this 401 certification.



Grand Junction Planning Department
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(303) 244-1430

October 31, 1988

Mr. J.G. Oldham
Project Director
MK-Ferguson Company
P.O. Box 9136
Albuquerque, NM 87119

CERTIFIED

RE: File #30-88, UMTRA Floodplain Permit

Dear Mr. Oldham:

We have reviewed the information and accompanying material with your letter of October 24, 1988, and find that this information adequately addresses the review comments on your floodplain permit application.

In accordance with the information provided with the application and response to review comments, you may consider this letter as official approval of your Grand Junction Floodplain Permit application.

As I stated before, we will forward information on the Corps of Engineers 205 Study as soon as it becomes available.

Please let me know if I can be of additional assistance.

Sincerely,

Karl G. Metzner
Director of Planning

KGM/tt

xc: File #30-88