

WM-64

UMTRA PROJECT - LAKEVIEW, OREGON
MILL AREA WINDBLOWN TAILINGS SUBCONTRACT
SUBCONTRACT DOCUMENTS LKV-4
FINAL DESIGN FOR REVIEW

With 5/12/86

9712120007 860512
PDR WASTE
WM-64 PDR

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UMTRA PROJECT
MILL AREA WINDBLOWN TAILINGS SUBCONTRACT
SUBCONTRACT DOCUMENTS LKV-4
LAKEVIEW, OREGON
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UMTRA PROJECT
MILL AREA WINDBLOWN TAILINGS SUBCONTRACT
SUBCONTRACT DOCUMENTS LKV-4
LAKEVIEW, OREGON
BID SCHEDULE

| Item No. | Spec. Section | Description | Unit | Approx. Quantity | Unit Price | Amount |
|-------------------------------|---------------|---|------|------------------|------------|--------|
| <u>300 - TAILINGS PILE</u> | | | | | | |
| 305 | 02200 | Excavation of Contaminated Material from Mill Site Windblown Areas and Placement in Stockpile | C.Y. | 5,500 | _____ | _____ |
| <u>700 - SITE RESTORATION</u> | | | | | | |
| 710 | 02200 | Placement of Uncontaminated Material as Backfill in the Excavated Mill Site Windblown Areas | L.S. | 100% | N/A | _____ |
| TOTAL (SUBCONTRACT PRICE) | | | | | \$ | _____ |

END OF BID SCHEDULE

Document No. 4005-LKV-S-01-00643-00
Issued for Review-Revision A
Bid Schedule

LKV-4

-1-

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UMTRA PROJECT
MILL AREA WINDBLOWN TAILINGS SUBCONTRACT
SUBCONTRACT DOCUMENTS LKV-4
LAKEVIEW, OREGON
SPECIAL CONDITIONS

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SC-1 DEFINITIONS

- A. Wherever used in the Subcontract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:
1. Access Control Area - Access control area shall include the areas occupied by and in the immediate vicinity of administration facilities including, but not limited to, Contractor's and Subcontractor's office trailers, access control trailer, sanitary facilities, decontamination pad and its contaminated water collection sump, equipment and materials lay-down and storage area, employee and service vehicle parking area, roadway connecting vehicular gate to decontamination pad.
 2. Addenda - Written and/or graphic instruments issued prior to opening of Bids which clarify, correct or change the bidding documents.
 3. Bid - The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 4. Bonds - Bid, performance and payment bonds.
 5. Change Order - A document signed by Subcontractor and Contractor authorizing an addition, deletion or revision in the Work, or an adjustment in the Subcontract Price or the Subcontract Time, modified in writing and issued on or after the Effective Date of the Agreement.
 - 5a. Subcontract Modification - A document issued to incorporate all Change Orders or to modify Subcontract when a substantive change is necessary.
 6. Contaminated Materials - Tailings and other materials having radioactive contamination levels greater than specified in the applicable US Environmental Protection Agency Standards. These standards are presented in the Federal Register, January 5, 1983, Section 192.12: "Standards for Remedial Actions at Inactive Uranium Processing Sites".
 7. Controlled Area - See Section SC-8, Paragraph A.7 of the Special Conditions.
 8. General Requirements - Division 1 of the Specifications.

9. Lower-Tier Subcontractor/Other Subcontractor - An individual, firm or corporation having a direct contract with the Subcontractor or an individual, firm or corporation having a direct contract with the Contractor for other work on the Project.
10. Notice of Award - The written notice by Contractor to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, Contractor will sign and deliver the Agreement.
11. Notice to Proceed - The written notice given by Contractor to Subcontractor fixing the date on which the Subcontract Time shall commence to elapse and on which Subcontractor shall start to perform Subcontractor's obligations under the Subcontract Documents.
12. Project - The total construction of which the Work to be provided under the Subcontract Documents may be the whole, or a part as indicated elsewhere in the Subcontract Documents.
13. Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Subcontractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Subcontractor to illustrate material or equipment for some portion of the Work.
14. Site Manager - The authorized representative of the Contractor who is assigned to the site or any part thereof.
15. Specifications - Those portions of the Subcontract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.
16. Subcontract Drawings - The drawings which show the character and scope of the Work to be performed and which are referred to in the Subcontract Documents.
17. Subcontract Price - The moneys payable by Contractor to Subcontractor under the Subcontract Documents as stated in the Agreement.

18. Subcontract Time - The number of days or the date stated in the Agreement for the completion of the Work.

19. Uncontaminated Materials - All materials having radioactive contamination levels less than specified in the applicable US Environmental Protection Agency Standards. These standards are presented in the Federal Register, January 5, 1983, Section 192.12: "Standards for Remedial Actions at Inactive Uranium Processing Sites".

20. Work - The entire completed construction required under the Subcontract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Subcontract Documents.

B. The other terms such as Contractor, Subcontractor, Government, DOE, Subcontract Administrator, Subcontract Documents, M-K and Site of Work are defined in Article GP-2 of the General Provisions.

SC-2 HOLIDAYS

A. The following days will be observed as holidays by M-K Ferguson Company, Inc., the Contractor:

New Year's Day
Martin Luther King Jr.'s Birthday
Presidents' Day
Memorial Day
Independence Day
Labor Day
Veterans Day
Thanksgiving Day
Christmas Day

B. Holidays occurring on Saturday or Sunday will be observed on Friday or Monday.

SC-3 CONSTRUCTION RESTRAINTS

Concurrent Work: M-K Ferguson Company, Inc. (Contractor) and other subcontractors may be engaged in work in the general areas covered by the Work under this Subcontract. Such personnel will have access to the areas and to the

utilities. The Subcontractor shall cooperate to best utilize the available areas, roadways and facilities. Coordination shall be through the Contractor.

SC-4 SITE LOCATION AND COORDINATION OF WORK

- A. The Work under the Subcontract involves operations at the Lakeview Mill Site (also referred to in the Subcontract Documents as Lakeview Processing Site, Lakeview Site, or Processing Site).
- B. The location of the site is specified in Specification Section 01000.
- C. The Subcontractor shall carefully coordinate all construction activities with the Site Manager to avoid conflicts and unnecessary delays in construction.

SC-5 LABOR, MATERIALS, EQUIPMENT AND TEMPORARY FACILITIES

- A. Unless otherwise specified in the General Requirements, Subcontractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.
- B. Pursuant to the provisions of Division 1 - General Requirements, during the construction period, the Subcontractor will be permitted on-site temporary storage of material at a location approved by the Site Manager.

SC-6 CLEANUP AND WASTE DISPOSAL

- A. Cleanup: The Subcontractor will be required to clean up the construction work areas and dispose of waste material. Cleanup of the construction work areas will be required on a daily basis. At the close of each day's work all small quantities of waste and debris resulting from construction activities shall be gathered up and disposed of as designated in paragraph B below. Waste and debris shall not be allowed to accumulate in such quantities as to create an unsightly appearance, a safety or fire hazard, nor shall it interfere in any way with free access to, and operation of existing facilities. All construction areas shall be thoroughly cleaned to the

satisfaction of the Contractor prior to final acceptance of the completed Subcontract.

- B. Waste Disposal: The Subcontractor shall provide suitable receptacles for all construction office waste material such as wrapping paper, discarded containers, scrap lumber, scrap metals, etc. Such waste shall be disposed of offsite as Subcontractor's property in a safe, acceptable manner, in accordance with the applicable laws and ordinances and as prescribed by authorities having jurisdiction. No waste material and debris shall be buried on the site. The Subcontractor shall be responsible for the location of dump for trash and debris, length of haul, and disposal costs.

SC-7 CONSTRUCTION HEALTH AND SAFETY

- A. Successful Bidder shall comply with the Construction Safety & Health Management Program (Document No. MK-UMTRA-4). This document is available upon request from the Contractor's office in Albuquerque, New Mexico for bidding purposes and will be issued to the successful Bidder after award.
- B. Electrical Precautions:
1. Personnel Ground Fault Protection: All electrical conductors used in construction, operating on single phase, 120 vac, 15 or 20 amperes circuits, shall be equipped with UL listed Ground Fault Circuit Interrupters set at five (5) milliamperes plus (+) or minus (-) one (1) milliampere. All portable electric tools and their usage shall be in compliance with applicable OSHA (29 CFR 1926) standards.
 2. Electrical Clearance Requirement: All electrical circuit connections shall be made on de-energized systems. Working clearance for energized systems shall be 3 feet for 0 to 150 volts and 4 feet for 151 to 600 volts. The work shall be performed by a qualified journeyman electrician or by an apprentice electrician under the direct supervision of a qualified journeyman electrician.
- C. Smoking, Drinking, Eating and Chewing Restrictions: No smoking will be permitted in the immediate vicinity of any flammable liquids, gases or highly combustible material, or in any area posted as a non-smoking area. No smoking, drinking, eating or chewing will be permitted in any controlled area.

- D. Ladders, Scaffolds, and Man Lifts: All man-lift equipment, ladders, and scaffolding shall be in compliance with applicable OSHA (29 CFR 1926) standards and be subject to inspection by the Contractor prior to and during its use.
- E. Notification of Occurrences: Subcontractors shall advise the Contractor immediately upon occurrence of any non-routine events, occurrences, incidents, or accidents, etc., particularly in situations such as lost time accidents and ambulance calls.
- F. Responsibility:
1. Subcontractor Safety Responsibility:
 - a. Each Subcontractor shall designate a qualified person to implement the Construction Safety and Health Management Program at the work site. The designated person shall have authority for actions and for control of work activity to prevent accidents.
 - b. Daily work area safety and health inspections are required and appropriate action shall be taken to correct noncompliance conditions.
 2. Contractor Safety Responsibility:
 - a. Contractor Safety Department personnel or designated representatives will make regular continuing inspections of all facilities and operations within the scope of the Subcontract. These inspections will include the facilities and operations of all Subcontractors, but do not in any way relieve Subcontractors of their responsibility for compliance with the provisions of the Construction Safety and Health Management Program.
 - b. Daily work area safety and health inspections will be made by Contractor personnel.
- G. Hazardous Materials Identification: If any of the materials are identified by the Site Manager to be hazardous, the Subcontractor will be notified immediately of the applicable standards to be complied with for personnel safety and health protection.
- H. Back Up Alarms: It is mandatory for all heavy equipment to have functioning audible back up alarms while in use on an UMTRA project.

The Subcontract work area is a radiologically controlled area. All work shall be governed by the essential requirements given in the following paragraphs:

A. Work Conditions:

1. Radiation/Contamination Areas: Radiation/contamination controlled areas shall be established on a case-by-case basis at the discretion of the Site Manager. Protective clothing for contamination control is provided to the Subcontractor at no charge on a loan basis. Clothing will be issued by Contractor personnel when required at the access control gate.
2. Radiation Dressing Requirements:
 - a. All controlled area protective clothing, when required, shall be put on and removed at the controlled area boundary. The Subcontractor shall ensure that removed items are properly stored and areas are maintained in proper order.
 - b. When required, protective clothing for contamination control could consist of coveralls, gloves, and rubber boots, shoecovers or any combination of the above. Personnel will be required to change out of the protective clothing upon leaving the controlled area.
3. Personnel Monitoring: All personnel will be required to self-monitor for radioactive contamination upon leaving the controlled area. Personnel will be instructed in self-monitoring procedures in accordance with paragraph 5 below defining Training Requirements.
4. Vehicles Monitoring: Vehicles, tools, equipment, and personnel working inside the controlled area will be monitored for radioactive contamination before leaving the area.
5. Training Requirements: In order to work in the controlled area, personnel shall be trained as Radiation Workers. The training course is approximately four hours long and is available to Subcontractor personnel at no cost for the instruction. Training in the proper use of respirators for performing specific tasks may be required for respirator training and

employee requirement, see Special Conditions, SC-7.B.2 and SC-7.B.4. A test will be given to all personnel at the conclusion of training to establish qualifications as a Radiation Worker. Personnel must pass this test to work within the radiation control area.

6. Radiation Exposure Limits and Restrictions:

- a. Radiation exposure on this Project is expected to be well within allowable radiation exposures. Whole body radiation exposure in rem shall be determined by Personal Thermoluminescent Dosimeters (TLD) issued to each radiation worker.
- b. Prior to working at the construction site each employee shall provide prior radiation exposure records as applicable.
- c. While working at the construction site each employee is required to wear TLD badges issued and collected daily.

7. Some areas on the construction site may have localized Health Physics restrictions. These are controlled by ribbons, signs, and tags. Such area restrictions shall be observed by the Subcontractor and applicable precautions taken.

B. Special Examinations:

1. All employees working in radiation control areas shall be required to submit a bioassay sample prior to starting work in the radiation control areas. All employees working in radiation control areas shall also be required to submit a bioassay sample upon termination or completion of the Subcontract. It is the Subcontractor's responsibility to ensure that each employee submits bioassay samples as required by the Subcontract.
2. The Subcontractor shall notify the Contractor of any personnel terminations or transfer within 8 working hours of termination or transfer. The Subcontractor shall also provide the Contractor with weekly lists of all Subcontractor or subtier employees employed by or for the Subcontractor who have been issued TLD radiation exposure badges. These weekly listings shall include full name, social security number, hire date, and termination/transfer date (if applicable), of all such employees.

- C. Health Physics (HP) Personnel: The Site Manager will monitor the construction work through HP personnel employed by him. The HP personnel will provide radiological surveillance over construction activities and advise supervision on matters concerning radiation safety as related to activities or conditions affecting the construction work.
- D. Warning Signals: The Subcontractor may depend on direct verbal information from the Contractor's personnel for warning signals. The Subcontractor's foreman and employees shall take action as directed. The Subcontractor's representative shall obtain the name, position, and agency of the messenger providing such direction.
- E. Disposition of Contaminated Equipment, Tools and Material:
1. The Subcontractor shall use his own equipment in performing the required work under this Subcontract. All tools, vehicles, equipment and material will be inspected for radioactive contamination by the Site Manager prior to removal from the construction area.
 2. Should the Subcontractor's tools, material, or equipment become contaminated, they will have to be decontaminated before removal from the area. If decontamination becomes necessary, the Site Manager will provide instructions for decontamination by the Subcontractor's employees. Decontamination may consist of steam cleaning, dry brushing, or washing with appropriate liquids. Decontamination required beyond these described will be handled under Article 4, "CHANGES" of the General Provisions.
 3. If decontamination proves impracticable or impossible, the tools, material, or equipment in question will be retained and an equitable adjustment for same will be negotiated with the Subcontractor provided that:
 - a. There is no fault or negligence of the Subcontractor contributing to the contamination;
 - b. The Subcontractor has followed all the specific instructions of the authorized HP personnel who have surveillance over the work;
 - c. Item or equipment confiscated from the Subcontractor is documented by a Confiscation Notice furnished to the Subcontract Administrator by the

Contractor and signed by HP personnel and the Site Manager;

- d. The Subcontractor allows reasonable time (a minimum of ten (10) working days, excluding weekends and holidays) in which to attempt decontamination of the item(s) in question. The reimbursement schedule will be as follows:
 - 1) Tools valued less than \$300.00 at 95% of replacement cost.
 - 2) Tools/Equipment \$300.00 and up: If less than one (1) year old or at top of depreciation schedule, at 75% of replacement cost; if at bottom of or off the depreciation schedule, at 50% of replacement cost.
- e. Failure to agree upon equitable adjustment shall constitute a dispute within the meaning of the "Disputes" article of the General Provisions (GP-7).
- f. In view of the foregoing, the Subcontractor is encouraged to plan his work so as to minimize the transfer of equipment into and out of the construction area.

SC-9 SUBMITTALS

See Section 01000

SC-10 QUALITY ASSURANCE

All work shall be performed to the requirements of the Contractor's Quality Assurance Program. This program meets the applicable requirements of 10 CFR 50 Appendix B and ANSI/ASME NQA-1-79. The program will be wholly administered by the Contractor. All Quality Records will be generated by and maintained by Contractor's personnel.

SC-11 ROAD CONSTRUCTION AND TRAFFIC CONTROL INCLUDING HAUL ROAD AND PUBLIC ROAD

- A. The Subcontractor shall post construction areas and road with traffic control signs or devices used for protection of workmen, the public and equipment. The signs or

devices shall conform to the American National Standards Institute D6.1-1978, Manual on Uniform Traffic Control Devices for Streets and Highways.

- B. Signs or traffic control devices shall be removed or covered as soon as they have served their purpose. It is particularly important to remove any markings on road surfaces which under conditions of poor visibility could cause a driver to turn off the road or into traffic moving in the opposite direction.
- C. Barricades for protection of employees shall conform to the portions of the American National Standards Institute D6.1-1978, Manual on Uniform Traffic Control Devices for Streets and Highways, relating to barricades.
- D. The Subcontractor shall be responsible for providing all necessary bonding required by the applicable city, county and state highway requirements.

SC-12 SUBCONTRACTOR LABOR AND EQUIPMENT RATES

- A. Subcontractor shall furnish to the Contractor in writing, within 15 calendar days after Notice of Award, a list of all equipment to be used on the Project. The list shall include as a minimum the following: make, model, type, year of manufacture, equipment no., and H.P. or capacity.
- B. The Subcontractor shall provide, at the same time, a list of all labor rates including fringes, overhead and profit used on the Project and a list of rental rates for the above referenced equipment for the following time periods: hourly, daily, weekly and monthly. Said rates shall be broken down as follows: rental, operating and maintenance, and operator. These rates shall not exceed 60% of the current edition of the Rental Rate Blue Book for Construction Equipment.
- C. The above rates will be used for changes or work which is not included in the original Subcontract.

SC-13 MODIFICATION PROPOSALS PRICE BREAKDOWN

The Subcontractor, in connection with any proposal he makes for a Subcontract modification, shall furnish a price breakdown, itemized as required by the Subcontract Administrator. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of

all material, labor, equipment, subcontract, and overhead costs, as well as profit, and shall cover all work involved in the modification, whether such work was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown and/or quotes from the Subcontractors. In addition, if the proposal includes a time extension, a justification therefore shall be furnished. The proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by the Subcontract Administrator.

SC-14 VARIATIONS IN QUANTITIES

- A. In all cases (except cancellation of one (1) or more line items) where the quantity of a unit priced line item in the Subcontract is an estimated quantity, and where the actual quantity of such line item varies by more than 10% above or 10% below the originally estimated quantity stated in the Subcontract, an adjustment shall be negotiated upon demand of either party for the quantities above or below the stated variation.
- B. The adjustment shall be as specified in Article GP-19 of the General Provisions.

SC-15 LAWS AND REGULATIONS

Subcontractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If Subcontractor observes that the Specifications or Subcontract Drawings are at variance therewith, Subcontractor shall give Contractor prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If Subcontractor performs any Work knowing or having reason to know that it is contrary to such laws, ordinances, rules and regulations, and without such notice to Contractor, Subcontractor shall bear all costs arising therefrom; however, it shall not be Subcontractor's primary responsibility to make certain that the Specifications and Subcontract Drawings are in accordance with such laws, ordinances, rules and regulations.

SC-16 CERTIFIED PAYROLLS

In addition to the copies of certified payrolls that are to be submitted each week to the Subcontract Administrator, one copy will also be submitted to the Site Manager.

SC-17 SUBCONTRACTOR'S LIABILITY

The Subcontractor has total liability for all of his own equipment, supplies, tools, etc., brought on the job site or used in the performance of his Subcontract.

SC-18 MEASUREMENT AND PAYMENT

Unless otherwise provided in the Subcontract Documents, no separate measurement or payment will be made for compliance with the provisions of the General Provisions, General Conditions and Special Conditions. Full compensation for such work will be considered to be included in the related items of Bid Schedule or incidental to the Subcontract.

END OF SPECIAL CONDITIONS

SECTION 01000
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE

- A. This Specification Section describes the general requirements for the following:

1. Project Description and Location
2. Scope of Work
3. Measurement of Quantities
4. Layout of Work and Surveys
5. Submittals

1.2 LOCATION

- A. General: The Work under the Subcontract shall be performed at the Lakeview processing site.
- B. Project Location: The Lakeview processing site is located in south-central Oregon, in Lake County. The closest town is Lakeview, one mile to the southeast. Klamath Falls is approximately 96 miles west of the site. The site is approximately 16 miles north of the California-Oregon border. The total designated site covers an area of 258 acres

1.3 SCOPE OF WORK

- A. General:

1. The Work required to be performed under this Subcontract consists of excavation of contaminated materials from mill site windblown areas and backfilling with uncontaminated materials. The Work shall conform to the details shown on the Subcontract Drawings and as specified herein and Specification Section 02200.

2. The Work includes furnishing all plant, labor, tools, equipment, materials, transportation, and services, and performing all operations necessary for and properly incidental to the construction as shown and noted on the Subcontract Drawings and as specified in these Specifications.

B. The above description of the Work is for general information only, and in no way limits the responsibility of the Subcontractor for constructing the Work in strict accordance with the Subcontract Drawings and Specifications listed in the Table of Contents.

1.4 OTHER SUBCONTRACTS

A. Other subcontracts awarded by the Contractor will be in progress during the work of this Subcontract. The Contractor or his authorized representative will be responsible for coordinating all activities between the subcontractors in accordance with the requirements of Section SC-3 of the Special Conditions. Other subcontracts to be awarded by the Contractor are:

- o Main Construction Subcontract, No. LKV-1
- o Fencing Subcontract, No. LKV-2
- o Uncontaminated Wood Chips Subcontract, No. LKV-3

1.5 SUBCONTRACT DRAWINGS

A. A list of Subcontract Drawings and Titles is given in the Table of Contents of these Subcontract Documents under "Subcontract Drawings".

B. Where "as shown," "as detailed," "as noted," or words of like meaning are used in the Subcontract Documents, it shall be understood that reference is being made to the Subcontract Drawings unless otherwise specified.

1.6 TIME OF COMPLETION

A. The Subcontractor shall commence Work under this Subcontract on a date to be specified in a written "Notice to Proceed" issued by the Contractor, and shall complete the Work within 60 calendar days.

- B. Termination for default, damages for delay and time extensions are specified in Article GP-6 of General Provisions.

1.7 CODES AND STANDARDS

- A. Pursuant to Section GC-3 of the General Conditions, any material, method, or procedure specified by reference to the number, symbol, or title of a specific specification or standard, such as a Commercial Standard, American National Standard, Federal or State Specification, Industry or Government Code, a trade association code or standard, or other similar standard, shall comply with the requirements in the latest revision thereof and any amendments or supplements thereto in effect on the date of these Subcontract Documents, except as limited to type, class or grade, or modified in such reference.
- B. The code, specification or standard referred to, except as modified in these Specifications, shall have full force and effect as though printed in these Specifications. These Specifications and standards are not furnished to bidders since manufacturers and trades involved are assumed to be familiar with their requirements. The Contractor will furnish, upon request, information as to how copies of the specifications and standards referred to may be obtained.

1.8 MANUFACTURERS' SPECIFICATIONS AND INSTRUCTIONS

- A. Pursuant to Section GC-4 of the General Conditions, and unless otherwise indicated or specified, all manufactured materials, products, processes, equipment, or the like shall be installed or applied in accordance with the manufacturers' instructions, directions, or specifications. Said installation or application shall be in accordance with printed instructions furnished by the manufacturer of the material or equipment concerned for use under conditions similar to those at the jobsite. Two copies of such instructions shall be furnished to the Contractor and his acceptance thereof obtained before work is begun.
- B. Any deviation from the manufacturers' printed recommendations shall be explained and acknowledged as correct for the circumstances, in writing by the particular manufacturer. Subcontractor will be held responsible for all installations contrary to the manufacturers' recommendations. If any item of material or equipment is found to

be installed not in accordance with the manufacturer's recommendations, Subcontractor shall make all changes necessary to achieve such compliance.

1.9 WORK QUALITY

- A. Shop and field work shall be performed by mechanics and workers skilled and experienced in the fabrication and installation of the work involved. All work on this Project shall be performed in accordance with the best practices of the various trades involved and in accordance with the Subcontract Drawings, reviewed shop drawings, and these Specifications.
- B. All Work shall be erected and installed plumb, level, square and true, or true to indicated angle, and in proper alignment and relationship to the work of other trades. All finished work shall be free from defects and damage.
- C. The Contractor reserves the right to reject any materials and work quality which are not considered to be up to the highest standards of the various trades involved. Such inferior material or work quality shall be repaired or replaced, as directed, at no additional cost to the Contractor.

1.10 FIELD MEASUREMENT AND TEMPLATES

Subcontractor shall secure all field measurements required for proper and accurate fabrication and installation of the work included in this Subcontract. Exact measurements are the Subcontractor's responsibility. Subcontractor shall also furnish or obtain all templates, patterns, and setting instructions required for the installation of all Work. All dimensions shall be verified by the Subcontractor in the field.

1.11 ACCESS TO WORK

- A. Pursuant to the requirements of Article GP-11 of the General Provisions, the authorized representatives of the following agencies will also have the right of access to inspect the Work covered by these Subcontract Documents during the performance of this Subcontract:
 - 1. United States Department of Energy (DOE)
 - 2. United States Nuclear Regulatory Commission (NRC)

- 3. State of Oregon
- 4. Lake County

1.12 MEASUREMENT OF QUANTITIES

- A. The number of units and quantities contained in the Bid Schedule are approximate only, and final payment will be made for the actual number of units and quantities which are incorporated in or made necessary by the Work included in this Subcontract.
- B. In the event that work and/or materials or equipment are required to be furnished to a greater or lesser extent than is indicated by the Subcontract Drawings and Specifications, such work and/or materials or equipment shall be furnished in greater or lesser quantities, and the adjustment in unit price shall be made as specified in Section SC-14 of the Special Conditions.

1.13 LAYOUT OF WORK AND SURVEYS

The Subcontractor shall perform all surveys for layout, for performance of the Work, and for measurement for payment, and shall reduce the field notes and make all necessary calculations and drawings necessary to carry out such work.

1.14 SUBMITTALS

- A. The requirements specified in this Section shall be supplemental to requirements specified in General Provisions, General Conditions, and any other requirements specified in individual Sections.
- B. All submittals shall be in English language.
- C. The Subcontractor shall submit all technical submittals including, but not limited to, schedules and reports, design calculations and design drawings etc. to the Site Manager. A copy of the submittal, marked information only, shall be sent to the Contractor's Subcontract Administrator by the Subcontractor. These submittals shall be numerically serialized by the Subcontractor. The submittal serial numbers shall be consecutive and not a part of another correspondence tracking system. The Site Manager will review the submittal and clearly label as follows and return to the Subcontractor:

Submittal Review Status:

- ☐ Approved
- ☐ Approved as Noted
- ☐ Revise and Resubmit
- ☐ Rejected

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

PART 4 - MEASUREMENT AND PAYMENT

(Not Used)

END OF SECTION 01000

Document No. 4005 LKV-S-01-00645-00

Issued for Review-Revision A

General Requirements

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SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.1 SCOPE

- A. This Specification Section describes the requirements for the earthwork related to the construction of the following features:
 - 1. Excavation of contaminated materials from mill site windblown areas and placement in stockpile.
 - 2. Placement of uncontaminated material as backfill in the excavated mill site windblown areas.
- B. During the course of the Work of this Subcontract, Contractor's Health Physics personnel will conduct tests at the excavations to make a determination whether the extent of contaminated material excavated is complete. If more materials are found to be contaminated, they shall be excavated by the Subcontractor and placed in the stockpile for final disposal by others.

1.2 DEFINITIONS

- A. Excavation: Excavation is defined as excavation required to reach the lines and grades indicated on the Subcontract Drawings or specified herein. It shall include excavation of topsoil, silt, clay, sand, gravel, talus, soft or disintegrated rock, boulders or detached pieces of solid rock; and shall also include removal and reshaping of mill tailings deposits and other contaminated material. During the excavation operation, tests to determine any radioactive contamination of the excavated material will be performed by the Contractor. Contaminated materials excavation shall include excavation of all contaminated materials from the mill site windblown areas.
- B. Satisfactory Materials: Satisfactory materials for use as fill or backfill shall consist of any uncontaminated material classified by ASTM D2487 as gravels, sands, silts and clays free from roots and other organic matter, trash, debris, frozen materials, and large stones.

- C. Unsatisfactory Materials: Unsatisfactory materials shall be materials that do not comply with the requirements for satisfactory materials, and materials classified by ASTM D2487 as PT, OH, and OL, except as noted hereinbefore.
- D. Percent Maximum Density: Percent maximum density is a percentage of the maximum density obtained by the test procedure presented in ASTM D698.
- E. Topsoil: Topsoil is the existing surface soil stripped to the depth indicated and consisting of natural, friable soil representative of productive soils in the vicinity. Topsoil shall be free of any admixture of subsoil, foreign matter, objects larger than 1 inch in any dimension, toxic substances, and any material or substance that may be harmful to plant growth.

1.3 APPLICABLE PUBLICATIONS

- A. The Publications listed below form a part of this Specification to the extent referenced. The Publications are referred to in the text by the basic designation only:

1. American Society for Testing and Materials (ASTM):

| | |
|---------------|--|
| ASTM D698-78 | Test Methods for Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5 lb. (2.49-kg) Rammer and 12-in. (305-mm) Drop |
| ASTM D1556-82 | Test Method for Density of Soil in Place by the Sand-Cone Method |
| ASTM D2167-84 | Test Method for Density and Unit Weight of Soil In-Place by the Rubber-Balloon Method |
| ASTM D2216-80 | Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures |
| ASTM D2487-83 | Test Method for Classification of Soils for Engineering Purposes |
| ASTM D2922-81 | Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth) |

1.4 QUALITY ASSURANCE

- A. The Contractor will take soil samples and perform moisture-density, gradation and other tests to ascertain that the Work is being performed in compliance with these Specifications. Samples may be taken at the place of excavation, stockpiles, or on the backfill itself. The Contractor will conduct the density and other tests on the fill and related laboratory testing as frequently as the Contractor considers necessary. The Subcontractor shall remove surface material and render assistance as necessary to enable sampling and testing.
- B. Methods of Sampling and Testing:
 - 1. In-Place Density: ASTM D1556, D2167, or D2922
 - 2. Moisture Content: ASTM D2216
 - 3. Laboratory Moisture-Density Relations: ASTM D698
 - 4. Soil Classification: ASTM D2487
- C. Suitability of Materials: The suitability of all materials for foundations and backfill will be determined by the Contractor.

1.5 PROTECTION

- A. The Subcontractor shall protect the following:
 - 1. Trees, shrubs, structures and other features remaining as a portion of final grading or permanent construction.
 - 2. Bench marks and monuments, existing structures, fences, walks, pavings, curbs, etc. from equipment and vehicular traffic.
 - 3. Above and below ground utilities.
 - 4. Excavations from cave-in by shoring, bracing, sheet-piling, underpinning or by other methods.
 - 5. Bottoms of excavations and soil adjacent to and beneath foundations from frost.
 - 6. Perimeter of excavation top to prevent surface water runoff into excavation.

PART 2 - PRODUCTS

2.1 BACKFILL MATERIALS

C. Uncontaminated Backfill Materials:

1. General: The materials shall conform to the following requirements:
 - a. Satisfactory material with maximum particle size not greater than 6 inches.
 - b. Uncontaminated fill material shall not contain more than 5 percent organic material, by volume, or other deleterious substances.
2. General backfill materials shall be obtained from existing stockpile or from other onsite areas as directed by the Contractor.
3. Roadway backfill material shall conform to the material existing under the roadway.

PART 3 - EXECUTION

3.1 DUST CONTROL

- A. Dust control shall consist of furnishing water supply, required equipment, additives, accessories and incidentals, and applying water during the completion of the Subcontract, as required by the Contractor.
- B. Water shall be applied in the amounts, at the locations and for the purposes designated in this Specification, and as required by the Contractor.
- C. Water shall be applied by means of pressure-type distributors or pipe lines equipped with a spray system or hoses with nozzles that will insure a uniform application of water.
- D. All equipment used for the application of water shall be equipped with a positive means of shut-off.
- E. Unless otherwise permitted by the Contractor, at least one mobile unit shall be available for applying water on the project at all times.

- F. The Subcontractor may use chemical additives in water. If such additives are used, furnishing and applying the additives shall be at the Subcontractor's expense.
- G. The right is reserved by the Contractor to prohibit the use of a particular type of additive, to designate the locations where a particular type of additive may not be used, or to limit the amount of a particular type of additive to be used at certain locations, all if the Contractor has reasonable grounds for believing that such use will be in any way detrimental to the Work.

3.2 EXCAVATION

A. Preparation:

1. Required lines, levels, contours and datum shall be identified before the start of excavation.
2. The Subcontractor shall verify the existing above-ground and underground utilities, identify them, and notify the Contractor immediately of his finding, if any, for appropriate action.

B. General:

1. At all times during excavation, the Subcontractor shall conduct his operations in such a manner as to prevent free standing water and contamination of uncontaminated materials.
2. The Subcontractor shall perform required excavation to the lines and grades indicated on the Subcontract Drawings or as directed by the Contractor. Excavated material from the excavation site shall be removed and disposed of in the designated stockpile areas, as approved. In order to avoid contamination of uncontaminated material, the contaminated and uncontaminated materials shall be kept separated during excavation, stockpiling, and placement.
3. Adequate working space for safety of personnel shall be provided within the limits of the excavation.
4. Except as otherwise noted, care shall be exercised to preserve the material below and beyond the lines of all excavation. Where excavation is carried below grade, the Subcontractor shall backfill to the required grade or to indicated invert grade, as specified, and compacted to match the existing conditions.

5. Excavation for the convenience of the Subcontractor shall conform to the limits approved by the Contractor and shall be at no additional expense to the Contractor.

C. Disposal of Excavated Materials:

1. All contaminated materials excavated from the mill site windblown areas shall be disposed of in a stockpile shown on the Subcontract Drawings for later removal by others.
2. All operations in the stockpile area throughout the Work shall be in strict conformity with the requirements of this Section.
3. Contaminated material in the stockpile areas shall be placed by spreading with a bulldozer and track walking. Lift thickness before consolidation shall not exceed one foot. Consolidation shall be accomplished by routing of hauling and spreading equipment units.

3.3 BACKFILL

A. General Requirements:

1. Backfill materials shall be placed and compacted to the lines and grades shown on the Subcontract Drawings or as required by the Contractor.
2. Before commencement of backfill operations, the Subcontractor shall confirm with the Contractor that all contaminated material requiring excavation has been removed.
3. If any portion of the materials does not meet the specified requirements, the Subcontractor shall remove such material and replace it with fill materials meeting the specification at no cost to the Contractor.
4. Backfill materials shall be maintained in a manner satisfactory to the Contractor until the final completion and acceptance of the work. This shall include all measures to prevent erosion or contamination during construction, including contamination by radioactive material. In particular, no surface of tailings material shall be left exposed during seasonal or other shutdowns.

B. Placing Requirements:

1. Prior to placement of backfill materials, the in-place density of the top 6 inches of the area receiving the backfill shall be at least 90 percent of maximum dry density as determined by ASTM D698. If necessary, the surface shall be plowed, harrowed, materials mixed, materials added or removed and compacted to obtain the specified densities.
2. No materials shall be placed on any portion of the subgrade or against or upon any structure until consent to place such backfill has been obtained from the Contractor.
3. Backfill materials may require moisture conditioning (wetting or drying) prior to compaction.
4. Backfill materials shall be placed in continuous and approximately horizontal layers for their full length and width unless otherwise specified or specifically permitted by the Contractor.
5. The method of dumping and spreading the materials shall ensure uniform distribution of the material.
6. The loose thickness of each layer of materials shall not be greater than that required to achieve the required compaction, and in no case shall exceed 10 inches.
7. The Subcontractor shall place material to a grade of 2 percent or steeper to preclude the ponding of water. No fill shall be placed on any area where ponding has been allowed to occur. Where ponding has occurred and the fill material is required to be placed, the water shall be removed and permission for placing of materials shall be obtained prior to placing of materials.
8. Materials shall not be placed on frozen subgrade or embankment material foundations, nor shall frozen material be used as fill.

C. Compaction Requirements:

1. Each layer of backfill materials shall be compacted to a minimum of 90 percent of maximum dry density as determined by ASTM D698, except in roadways where compaction shall be carried out by at least four passes of heavy roller equipment.

2. During compaction the moisture content of backfill material shall be maintained to achieve specified density. Uniform moisture distribution shall be obtained by disking, blading, or other methods approved by the Contractor prior to compaction of a layer.
3. If the surface of the prepared foundation or the rolled surface of any layer of backfill is too dry or too smooth to bond properly with the layer of material to be placed thereon, it shall be scarified and moistened by sprinkling to the acceptable moisture content prior to placement of the next layer of fill.
4. If the rolled surface of any layer of the backfill in place is too wet for proper compaction of the layer of fill material to be placed thereon, it shall be removed, allowed to dry or worked with harrow, scarifier, or other suitable equipment to reduce the water content to the required amount, and then re-compacted before the next succeeding layer of fill is placed.
5. Backfill placed at densities lower than the specified minimum density or at moisture contents outside the acceptable range of moisture content shall be reworked to meet the density and moisture requirements or removed and replaced by acceptable fill compacted to meet these requirements.

3.4 FIELD QUALITY CONTROL

- A. General: The Contractor will take samples and perform tests throughout the construction period, and the Sub-contractor shall cooperate in providing access for the Contractor to areas where testing is to be performed and shall schedule his placing to avoid interference with the testing operations.
- B. Tests: The Contractor will perform tests on compacted backfill, as required.
- C. The placing and consolidation of the materials in stockpile will be subject to the approval of the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement for payment for the excavation of contaminated material from the mill site windblown areas and placement

in stockpile will be by the cubic yards of materials excavated. The quantities for payment will be computed from the lines and dimensions shown on the Subcontract Drawings, or by average end area method from surveys conducted before and after excavation work as shown on the Subcontract Drawings, or by the methods determined by the Contractor.

- B. Measurement for payment for the placement of uncontaminated material as backfill in the excavated mill site windblown areas will be by the lump sum.
- C. No separate measurement for payment will be made for any other work required under the Subcontract, and such work will be considered incidental to the related item of work.
- D. Overexcavation: Overexcavation for the Subcontractor's convenience or due to error or lack of control by the Subcontractor will not be measured for payment and, instead, shall be backfilled with compacted uncontaminated material fill at the Subcontractor's expense. Overexcavation required and accepted by the Contractor shall be included in measurement for payment.

4.2 PAYMENT

- A. Payment for excavation of contaminated material from the mill site windblown areas and placement in stockpile will be by the price per cubic yard quoted therefor in the Bid Schedule. The price quoted shall include full compensation for excavating, transporting, placing and compacting the material in the stockpile shown on the Subcontract Drawings.
- B. Payment for placement of uncontaminated material as backfill in excavated mill site windblown areas will be by the lump sum price quoted therefor in the Bid Schedule. The price quoted shall include full compensation for hauling material from the stockpile and placing in final locations including all grading, shaping, compacting or consolidating.
- C. No separate payment will be made for any other work required under the Subcontract. All costs for such work will be considered to be included in the price quoted for the related item of work.

END OF SECTION 02200

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SUBCONTRACT

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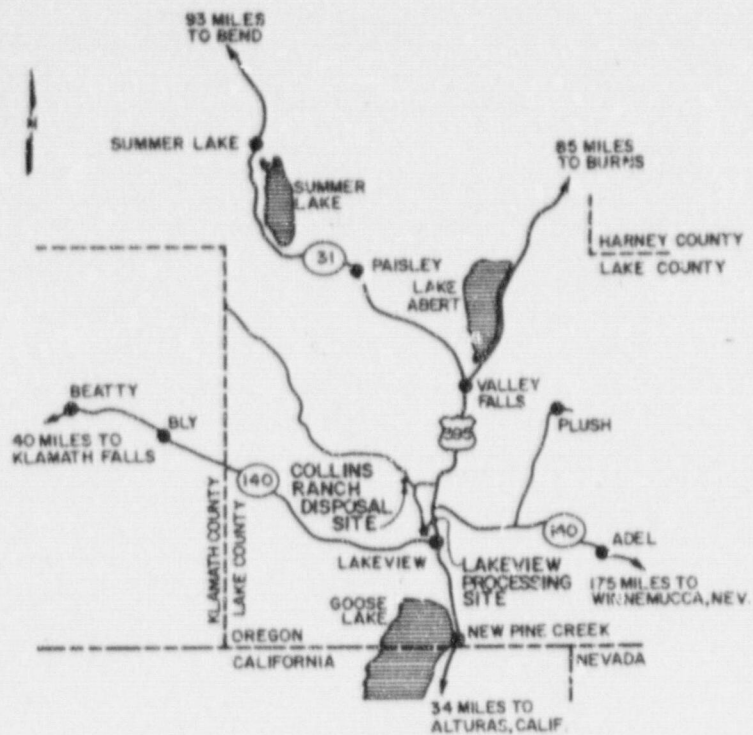
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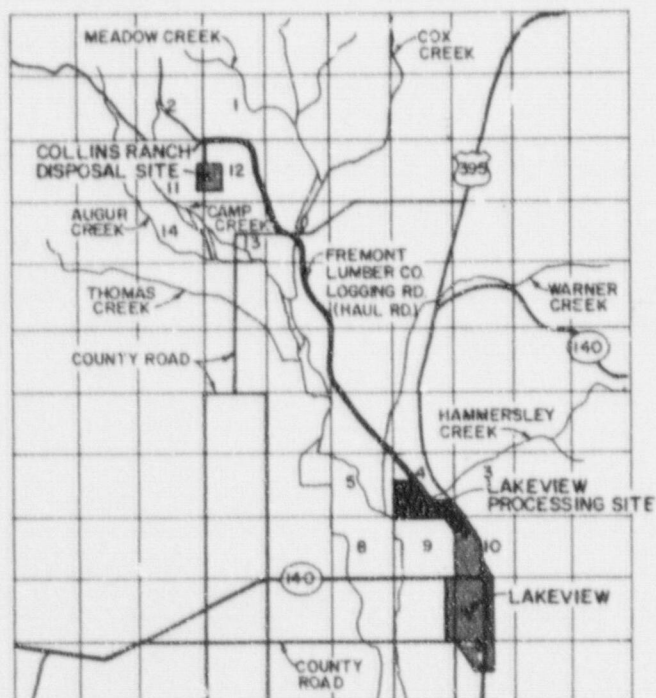
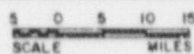
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| FINAL REVIEW | | |
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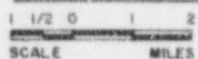
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| U. S. DEPARTMENT OF ENERGY ALBUQUERQUE, NEW MEXICO | | | |
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| CHECKED <i>J. R. GORDON</i> | | TITLE SHEET | |
| INSTALLER <i>E. J. J.</i> | | | |
| RECOMMENDED <i>E. J. J.</i> | | | |
| APPROVED <i>E. J. J.</i> | DATE | DOE PROJECT ENGINEER | DATE |
|  MORRISON-KNUDSEN ENGINEERS, INC. <small>A MEMBER OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS</small> LIMITRA PROJECT 860 HORNARD ST. SAN FRANCISCO, CA 94109 | | PROJECT NO. DE-AC04-83AL18796 | |
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LOCATION MAP



VICINITY MAP



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LIST OF DRAWINGS

| DRAWING NO. | DRAWING TITLE |
|----------------|---|
| LKV-GE-10-1351 | TITLE SHEET |
| LKV-GE-10-1352 | VICINITY MAP, LOCATION MAP & LIST OF DRAWINGS |
| LKV-PS-10-1353 | LAKEVIEW PROCESSING SITE, SITE PLAN |
| LKV-PS-10-1354 | LAKEVIEW PROCESSING SITE, CONSTRUCTION FACILITIES AND SITE DRAINAGE |
| LKV-PS-10-1355 | LAKEVIEW PROCESSING SITE, TAILINGS MATERIAL EXCAVATION PLAN |

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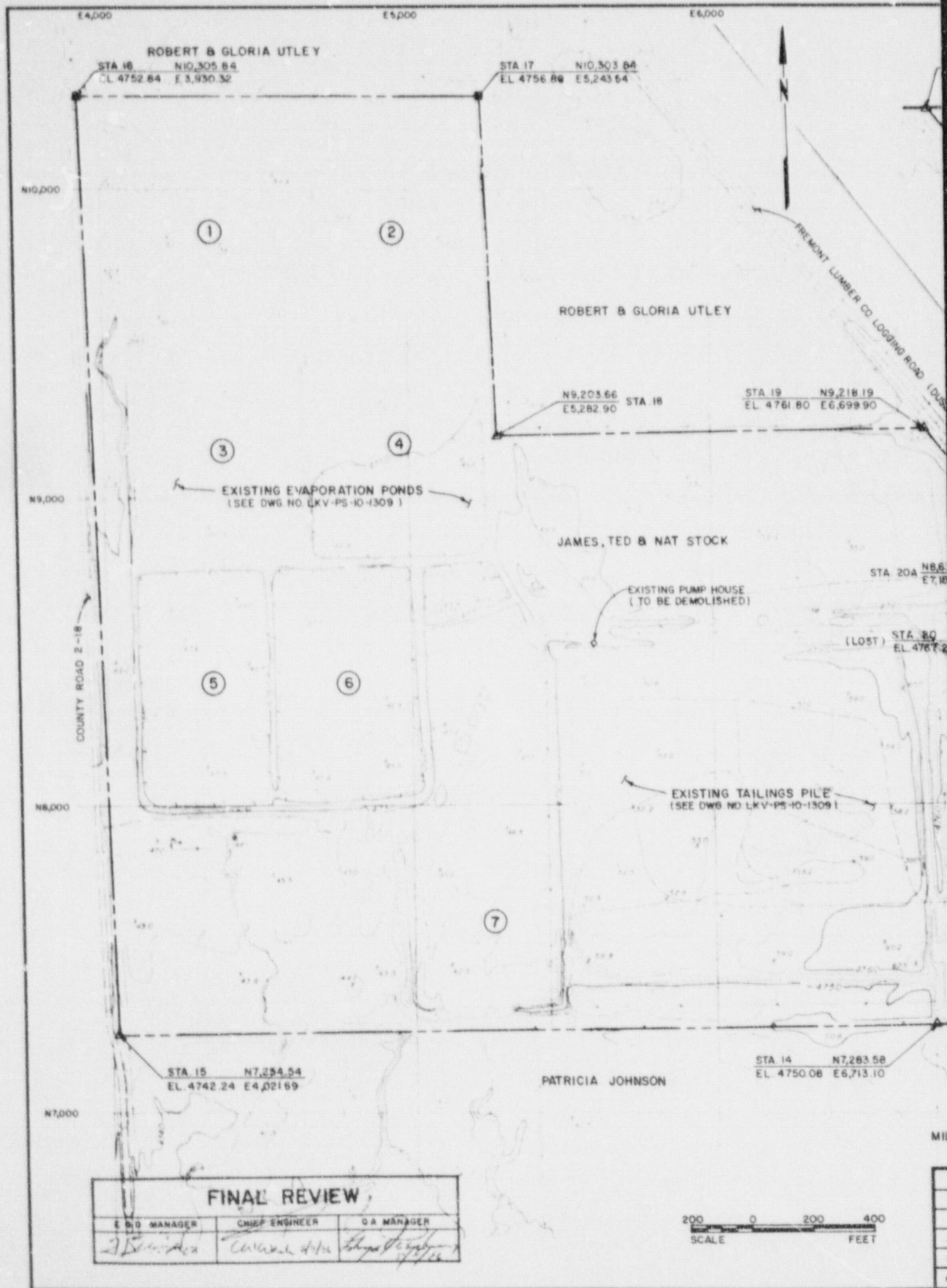
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REA WINDBLOWN TAILINGS SUBCONTRACT LKV-4

| FINAL REVIEW | | |
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| E & D MANAGER | CHIEF ENGINEER | QA MANAGER |
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| DESIGNED | | DRAWN | | RBC | |
| CHECKED | | E. J. [Signature] | | [Signature] | |
| RECHECKED | | E. J. [Signature] | | [Signature] | |
| APPROVED | | DATE | | DOE PROJECT ENGINEER DATE | |
| <p align="center">U. S. DEPARTMENT OF ENERGY ALBUQUERQUE, NEW MEXICO</p> <p align="center">LAKEVIEW SITE LAKEVIEW, OREGON</p> <p align="center">VICINITY MAP, LOCATION MAP & LIST OF DRAWINGS</p> | | | | | |
| <p>MORRISON-KNUDSEN ENGINEERS, INC. INCORPORATED 150 HORTON ST. SAN FRANCISCO, CA 94108</p> | | | | <p>PROJECT NO. DE-AC04-83AL18796</p> | |
| <p>DRAWING NO. LKV-GE-10-1352</p> | | | | <p>REV 8</p> | |

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| ISSUED FOR FINAL REVIEW | WYL | SM | | | | | | | |
| ISSUED FOR PRELIMINARY REVIEW | WYL | SM | | | | | | | |
| REVISIONS | BY | OK | E & D | CHIEF | DOE | | | | |



NOTES:

1. FOR HORIZONTAL AND VERTICAL CONTROL, THE SUBCONTRACTOR SHALL USE POINTS MARKED THUSLY (CONCRETE MONUMENTS WITH BRASS CAP). SUBCONTRACTOR MAY USE OTHER CONTROL POINTS AFTER VERIFICATION BY SURVEY.
2. TOPOGRAPHIC FEATURES, GRID SYSTEM, PROPERTY CORNERS AND PROPERTY OWNERSHIP ARE TAKEN FROM THE RECORD OF SURVEY BY ANDERSON'S LAND SURVEYING, LAKEVIEW, OREGON, JULY-AUGUST 1982.
3. GRID SYSTEM IS BASED ON OREGON COORDINATE SYSTEM, SOUTH ZONE. FOR TRUE COORDINATES, ADD 190,000 NORTH AND 2,030,000 EAST.

REFERENCE DRAWINGS:

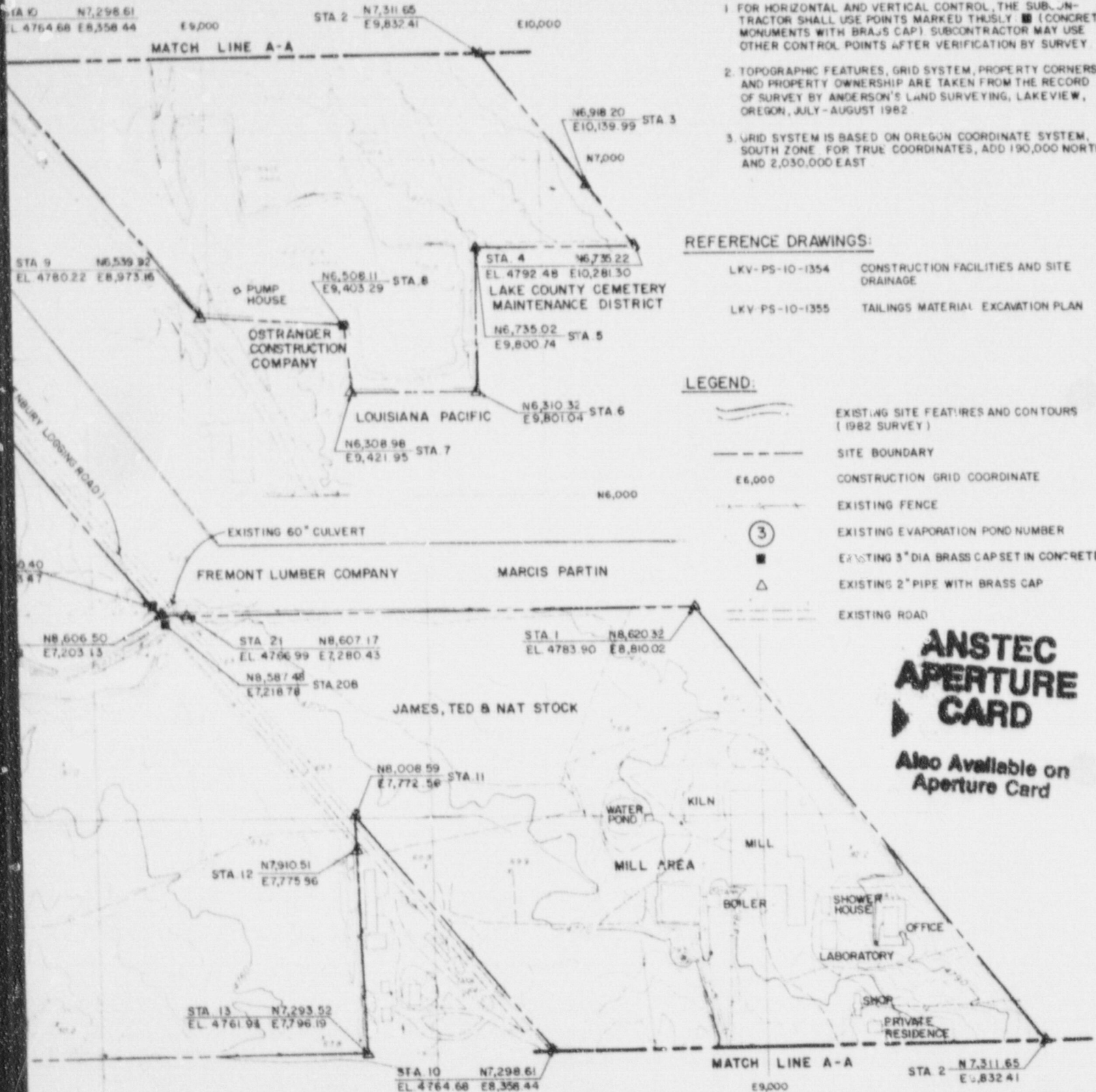
- | | |
|----------------|---|
| LKV-PS-10-1354 | CONSTRUCTION FACILITIES AND SITE DRAINAGE |
| LKV-PS-10-1355 | TAILINGS MATERIAL EXCAVATION PLAN |

LEGEND:

- | | |
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| | EXISTING SITE FEATURES AND CONTOURS (1982 SURVEY) |
| | SITE BOUNDARY |
| | CONSTRUCTION GRID COORDINATE |
| | EXISTING FENCE |
| | EXISTING EVAPORATION POND NUMBER |
| | EXISTING 3" DIA BRASS CAP SET IN CONCRETE |
| | EXISTING 2" PIPE WITH BRASS CAP |
| | EXISTING ROAD |

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9712120007-03

AREA WINDBLOWN TAILINGS SUBCONTRACT LKV-4

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

LAKEVIEW SITE
LAKEVIEW, OREGON
LAKEVIEW PROCESSING SITE

SITE PLAN

DESIGNED
DRAWN
CHECKED
INSPICED
RECOMMENDED
APPROVED

DATE

DOE PROJECT ENGINEER DATE



MORRISON-KNUDSEN ENGINEERS, INC.
A MORRISON-KNUDSEN COMPANY
UMTRA PROJECT
180 HOWARD ST. SAN FRANCISCO, CA 94104

PROJECT NO.

DE-AC04-83AL18796

DRAWING NO.

LKV-PS-10-1353

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DATE REVISIONS

BY CK E&D MGR CHIEF ENG DOE APP



FINAL REVIEW

| ENGINEER | CHIEF ENGINEER | QA MANAGER |
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| <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> |

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EL. 4764.68 E8,358.44

19,000

STA 2 N7,311.65
E9,832.41

E10,000

MATCH LINE A-A

STA 9 N6,539.92
EL. 4780.22 E8,973.16

PUMP HOUSE

STA 8 N6,508.11
E9,403.29

OSTRANGER
CONSTRUCTION
COMPANY

STA 4 N6,735.22
EL. 4792.48 E10,281.30
LAKE COUNTY CEMETERY
MAINTENANCE DISTRICT

STA 5 N6,735.02
E9,800.74

LOUISIANA PACIFIC

STA 6 N6,310.32
E9,801.04

STA 7 N6,308.98
E9,421.95

N6,000

EXISTING 60" CULVERT

FREMONT LUMBER COMPANY

MARCIS PARTIN

N8,606.50
E7,203.13

STA 21 N8,607.17
EL. 4766.99 E7,280.43

STA 20B N8,587.48
E7,218.78

STA 1 N8,620.32
EL. 4783.90 E8,810.02

JAMES, TED & NAT STOCK

STA 11 N8,008.59
E7,772.58

STA 12 N7,910.51
E7,775.86

STA 13 N7,293.52
EL. 4731.98 E7,796.19

STA 10 N7,298.61
EL. 4764.68 E8,358.44

NOTES:

1. FOR HORIZONTAL AND VERTICAL CONTROL, THE SUBCONTRACTOR SHALL USE POINTS MARKED THUSLY: (CONCRETE MONUMENTS WITH BRASS CAP). SUBCONTRACTOR MAY USE OTHER CONTROL POINTS AFTER VERIFICATION BY SURVEY.
2. TOPOGRAPHIC FEATURES, GRID SYSTEM, PROPERTY CORNERS AND PROPERTY OWNERSHIP ARE TAKEN FROM THE RECORD OF SURVEY BY ANDERSON'S LAND SURVEYING, LAKEVIEW, OREGON, JULY - AUGUST 1982.
3. GRID SYSTEM IS BASED ON OREGON COORDINATE SYSTEM, SOUTH ZONE. FOR TRUE COORDINATES, ADD 190,000 NORTH AND 2,030,000 EAST.

REFERENCE DRAWINGS:

- LKV-PS-10-1354 CONSTRUCTION FACILITIES AND SITE DRAINAGE
LKV-PS-10-1355 TAILINGS MATERIAL EXCAVATION PLAN

LEGEND:

- EXISTING SITE FEATURES AND CONTOURS (1982 SURVEY)
- SITE BOUNDARY
- CONSTRUCTION GRID COORDINATE
- EXISTING FENCE
- EXISTING EVAPORATION POND NUMBER 3
- EXISTING 3" DIA BRASS CAP SET IN CONCRETE
- EXISTING 2" PIPE WITH BRASS CAP
- EXISTING ROAD

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AREA WINDBLOWN TAILINGS SUBCONTRACT LKV-4

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

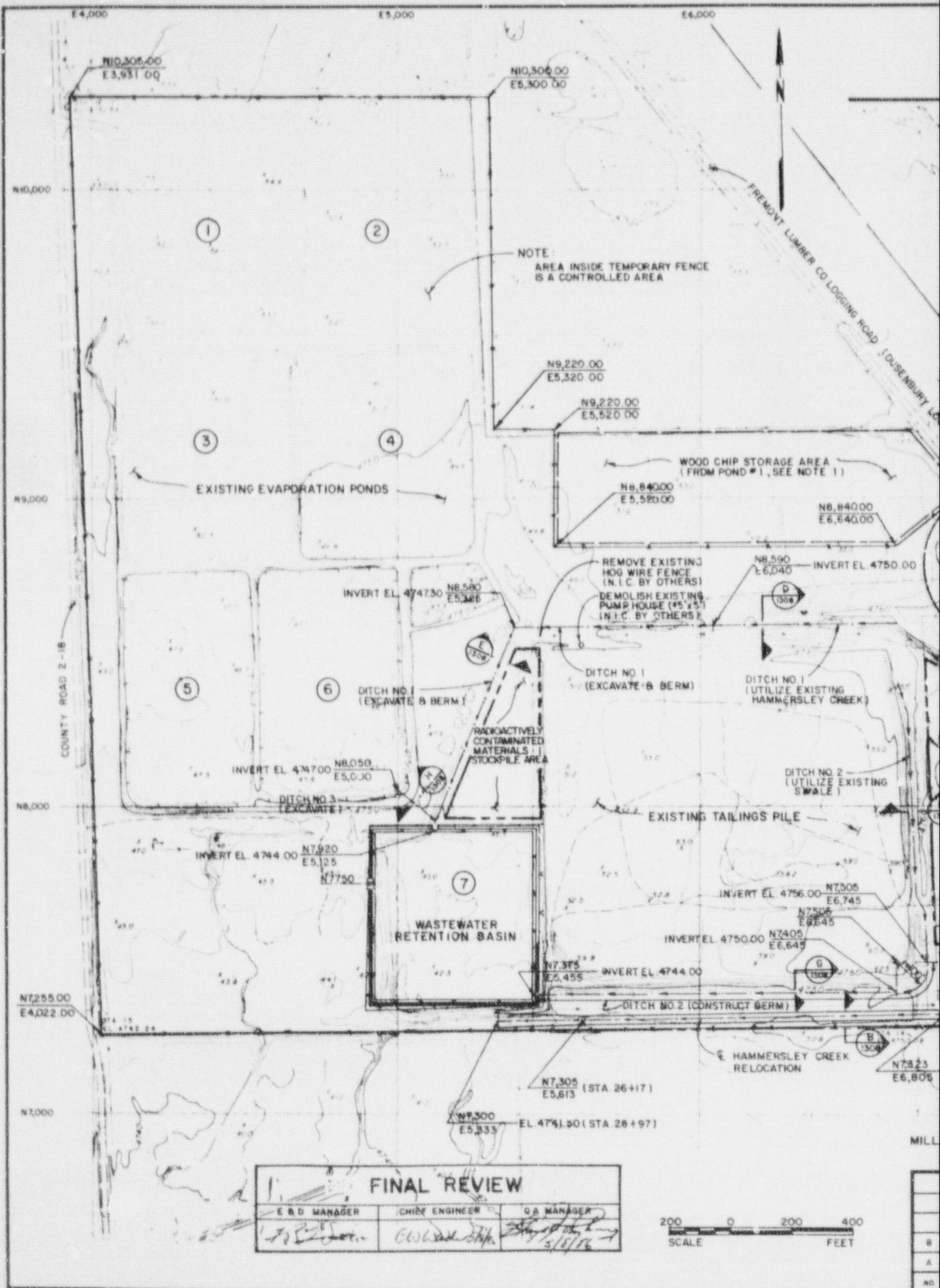
LAKEVIEW SITE
LAKEVIEW, OREGON
LAKEVIEW PROCESSING SITE

SITE PLAN

| | | | | | | | | | |
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| DESIGNED | | DRAWN | | DATE | | DOE PROJECT ENGINEER | | DATE | |
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| APPROVED | | | | | | | | | |
| BY | | CR | | E.S.D. | | CHIEF | | DOE | |
| DATE | | REVISIONS | | BY | | CR | | E.S.D. | |
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| PROJECT NO. | | DE-AC04-83AL18796 | |
| DRAWING NO. | | LKV-PS-10-1353 | |
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MORRISON-KNUDSEN ENGINEERS, INC.
A PROFESSIONAL ENGINEERING COMPANY
UNITRA PROJECT
180 HOWARD ST. SAN FRANCISCO, CA 94103



1. ALL NON-RADIOACTIVELY CONTAMINATED WOOD CHIPS FROM POND NO. 1 SHALL BE PLACED WITHIN THE AREA INDICATED WITH STABLE SLOPES NO STEEPER THAN 2(H) TO 1(V). MAXIMUM HEIGHT OF THE PILE SHALL BE 15 FEET. (N.I.C. BY OTHERS)
2. ALL RADIOACTIVELY CONTAMINATED MATERIALS EXCAVATED FROM THE RETENTION BASIN AND THE REROUTED HAMMERSLEY CREEK SHALL BE PLACED WITHIN THE AREA INDICATED TO THE NORTH OF POND NO. 7 WITH STABLE SLOPES NO STEEPER THAN 2(H) TO 1(V). MAXIMUM HEIGHT OF THE PILE SHALL BE 15 FEET. (N.I.C. BY OTHERS)
3. THE SUBCONTRACTOR SHALL ESTABLISH THE DRAINAGE PATTERN WITHIN ALL WORK AREAS. ALL RUNOFF FROM CONTAMINATED AREAS OF THE SITE SHALL BE DIRECTED TO THE TEMPORARY DRAINAGE DITCHES AND INTO THE RETENTION BASIN. (N.I.C. BY OTHERS)
4. SUBCONTRACTOR SHALL IMPROVE EXISTING SWALES TO PROVIDE TEMPORARY DRAINAGE DITCHES SURROUNDING THE EXISTING TAILINGS PILE. DITCHES SHALL DRAIN INTO THE RETENTION BASIN DURING RELOCATION OF THE EXISTING TAILINGS. (N.I.C. BY OTHERS)
5. SUBCONTRACTOR SHALL PROTECT AND MAINTAIN VEHICLE CROSSINGS OF CONSTRUCTION DRAINAGE DITCHES.
6. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR HANDLING CONTAMINATED WATER AT THE EXISTING TAILINGS PILE DURING RELOCATION OF THE EXISTING TAILINGS. (N.I.C. BY OTHERS)
7. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR HANDLING CONTAMINATED WASH WATER AND PONDED WATER.
8. THE WORK UNDER THIS SUBCONTRACT INCLUDES EXCAVATION AND BACKFILL OF WINDBLOWN TAILINGS AREAS IN THE MILL-SITE ONLY. ALL OTHER WORK SHOWN HEREON IS FOR INFORMATION ONLY.

LKV-PS-10-1353 SITE PLAN
LKV-PS-10-1355 TAILINGS MATERIAL EXCAVATION PLAN

EXISTING SITE FEATURES & CONTOURS
(1982 SURVEY)
SITE BOUNDARY
EXISTING FENCE

EXISTING EVAPORATION POND NUMBER

TEMPORARY CHAIN-LINK FENCE AND GATE

CONSTRUCTION GRID COORDINATE

£ OF TEMPORARY DRAINAGE DITCH

EXCAVATION

STORAGE AREA

EXISTING ROAD

TEMPORARY WIRE FENCE

**ANSTEC
APERTURE
CARD**

**Also Available on
Aperture Card**

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

LAKEVIEW SITE
LAKEVIEW, OREGON
LAKEVIEW PROCESSING SITE
CONSTRUCTION FACILITIES
AND SITE DRAINAGE

| | | |
|------|----------------------|------|
| DATE | DOE PROJECT ENGINEER | DATE |
|------|----------------------|------|

 MORRISON-KNUDSEN ENGINEERS, INC.
A WATKINS-CORRIGAN COMPANY
UMTRA PROJECT
800 HOWARD ST. SAN FRANCISCO, CA 94103

PROJECT NO.
DE-ACO4-83AL18796

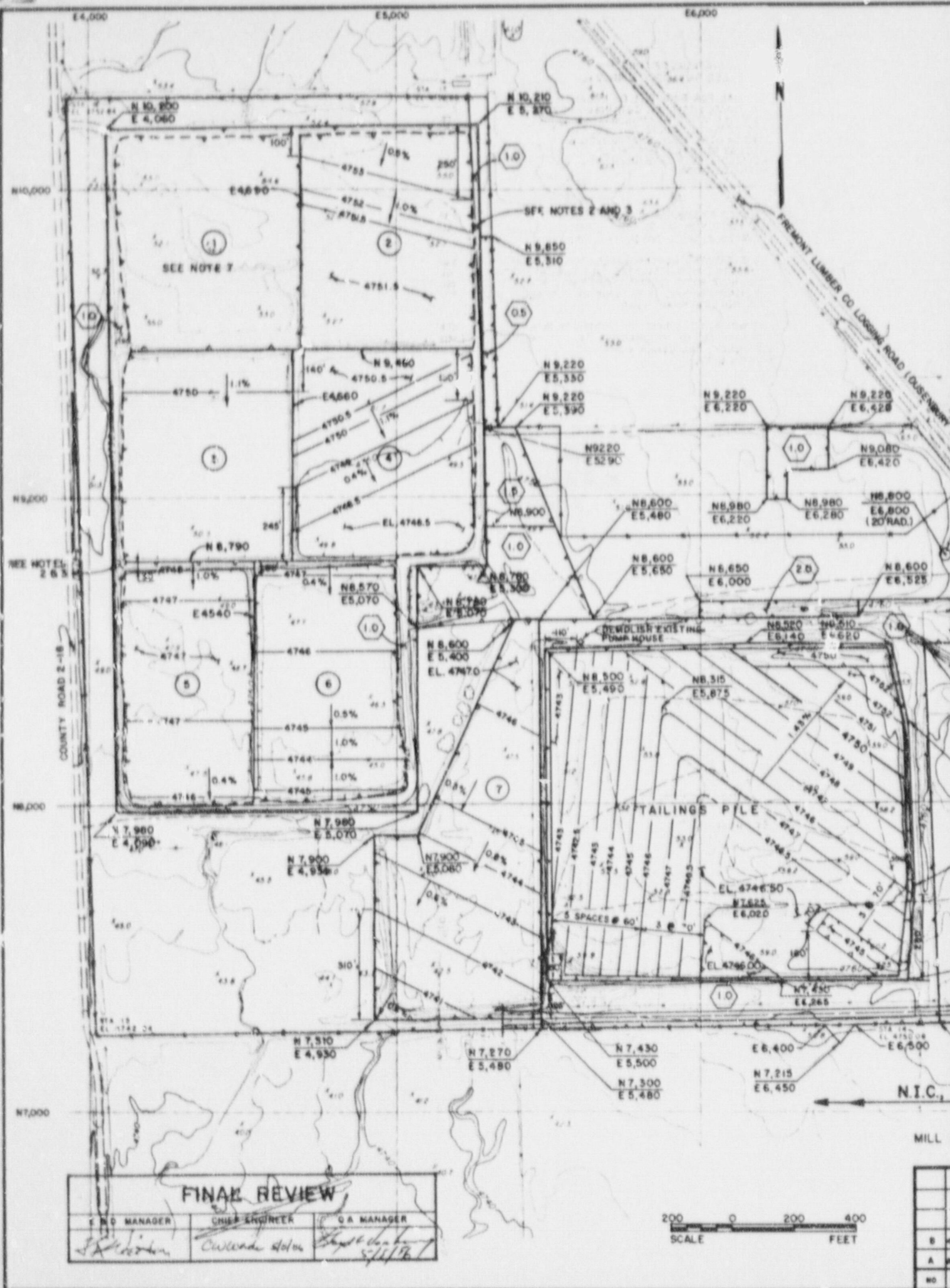
DRAWING NO. LKV-PS-10-1354

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E9,000 E10,000
 MATCH LINE A-A
 N7,000
 N6,000
 N9,023
 E6,860
 ACCESS CONTROL, MONITORING
 AND STAGING AREA
 CONTRACTOR'S OFFICE FACILITIES
 N8,645.00
 E7,170.00
 N8,506
 E7,203 EL. 4761.00 (STA 9+00) BOTTOM CREEK
 AT EXISTING CULVERT
 N8,452
 E7,330
 N8,478
 E7,130 (STA 11+50)
 HAMMERSLEY CREEK
 RELOCATION
 N7,523
 E6,802
 N7,497
 E7,000 (STA 11+40)
 N7,286.00
 E6,845.00
 (STA 14+24)
 9712120007-05
 E7,000

| AREA WINDBLOWN TAILINGS SUBCONTRACT LKV-4 E8,000 | | | | | |
|--|-------------------------------|-----|-----|------------|--------------------------|
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| 44645 | ISSUED FOR PRELIMINARY REVIEW | MYL | EHL | | |
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9712120007-05



| FINAL REVIEW | | |
|--------------------|--------------------|--------------------|
| PROJECT MANAGER | CHIEF ENGINEER | QA MANAGER |
| <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> |
| | | 5/11/76 |

200 0 200 400
SCALE FEET

| | |
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| NO | |

NOTES: (CONT'D.)

- ALL EXCAVATIONS OF CONTAMINATED MATERIAL SHALL BE BACKFILLED TO ORIGINAL GROUND ELEVATION.
- MATERIAL FOR BACKFILL OF EXCAVATIONS EXCEPT WITHIN HAUL ROAD, SHALL BE OBTAINED FROM THE TEMPORARY STOCKPILE AREA FOR UNCONTAMINATED MATERIAL LOCATED EAST OF THE TAILINGS PILE 3 (SEE DWG NO LKV-PS-10-1354) OR FROM OTHER AREAS APPROVED BY THE CONTRACTOR. ROADWAY BACKFILL MATERIALS, IF REQUIRED, SHALL BE PROVIDED BY THE SUBCONTRACTOR AND SHALL BE SIMILAR TO THE EXISTING.
- REQUIRED EXCAVATION LIMITS SHOWN FOR THE MAIN TAILINGS PILE AND EVAPORATION PONDS INCLUDE MATERIALS CONTAINING ELEVATED ARSENIC CONCENTRATIONS.
- ALL EXCAVATED CONTAMINATED MATERIALS SHALL BE PLACED WITHIN THE AREA INDICATED TO THE NORTH OF EVAPORATION POND NO. 7 WITH STABLE SLOPES NOT STEEPER THAN 2(H) TO (1)V. MAXIMUM HEIGHT OF THIS PILE SHALL BE 15 FEET, SEE DWG. NO. LKV-PS-10-1354.
- THE WORK UNDER THIS SUBCONTRACT INCLUDES EXCAVATION AND BACKFILL OF WINDBLOWN TAILINGS AREAS IN THE MILL SITE ONLY. ALL OTHER WORK SHOWN HEREON IS FOR INFORMATION ONLY.

NOTES:

- ALL EXCAVATED CUT SLOPES SHALL BE 2(H) TO (1)V MAXIMUM.
 - EXISTING DIKES SURROUNDING EVAPORATION POND NO. 1 THROUGH 6 SHALL NOT BE DISTURBED DURING EXCAVATION AND UNTIL FINAL GRADING IS COMPLETE TO THE MAXIMUM EXTENT PRACTICABLE WITHIN THOSE AREAS, EXCEPT AS REQUIRED FOR EQUIPMENT ACCESS AND DIVERSION OF WATER TO RETENTION BASIN (DWG. NO. LKV-PS-10-1306). THIS SHALL NOT APPLY TO DIKES BETWEEN ADJACENT PONDS (N.I.C., BY OTHERS).
 - EQUIPMENT ACCESS SHALL BE PROVIDED TO EVAPORATION PONDS SUCH THAT SURROUNDING DIKES (SEE NOTE 1) ARE NOT LOWERED AT ANY POINT. (N.I.C., BY OTHERS).
 - FINAL EXCAVATION LIMITS IN ALL AREAS WILL BE DETERMINED BY THE CONTRACTOR ACCORDING TO THE SPECIFICATIONS.
 - THE CONTRACTOR WILL VERIFY THE NEED FOR EXCAVATION OF CONTAMINATED MATERIAL IN THE TRAVELED WAY OF THE FREMONT LUMBER COMPANY LOGGING ROAD IN THE AREAS INDICATED. NO EXCAVATION SHALL BE MADE THERE UNLESS DIRECTED BY THE CONTRACTOR.
- (NOTES CONTINUED ON LEFT SIDE.)

REFERENCE DRAWINGS:

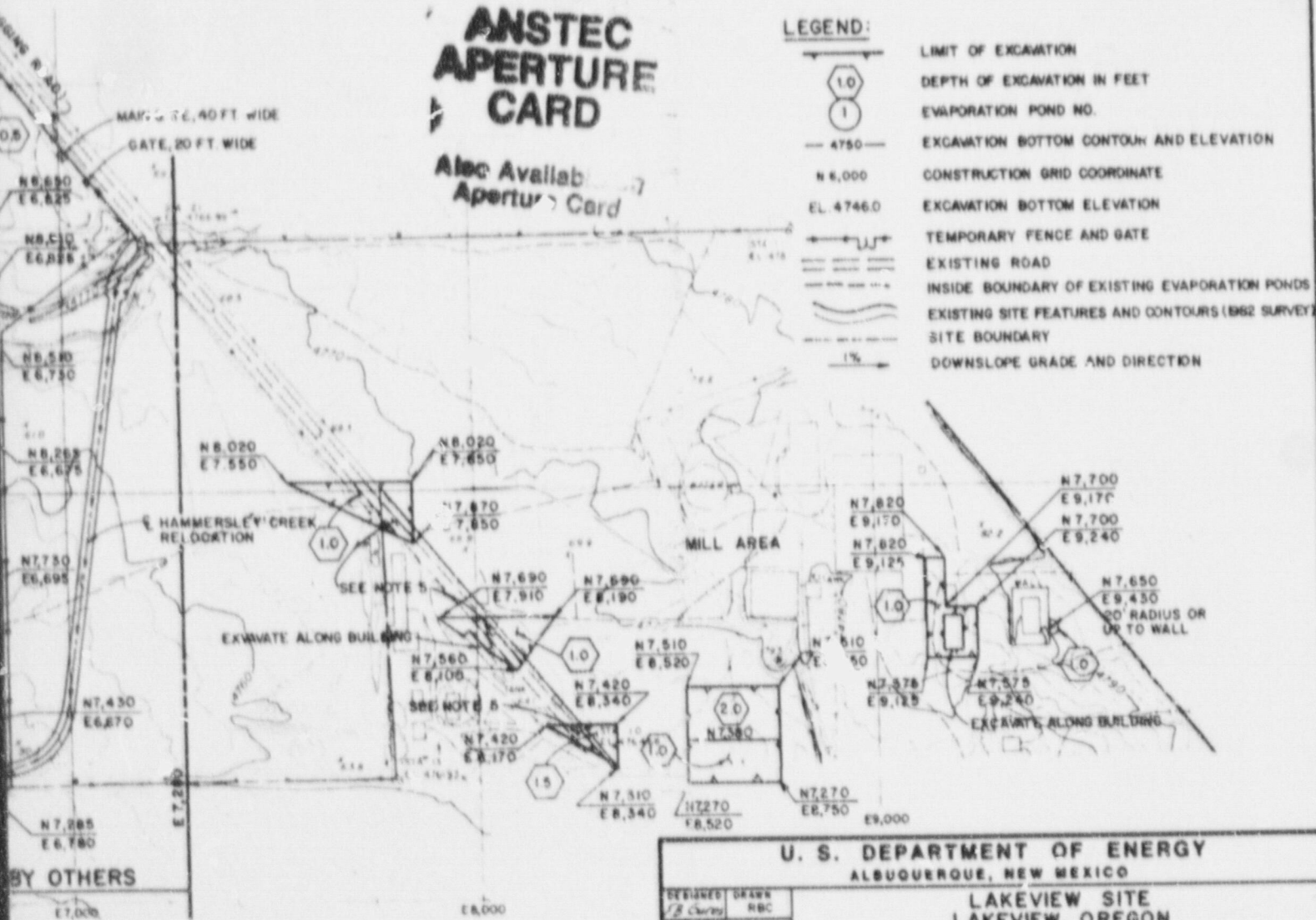
LKV-PS-10-1353 SITE PLAN
LKV-PS-10-1354 CONSTRUCTION FACILITIES AND SITE DRAINAGE

LEGEND:

- LIMIT OF EXCAVATION
- DEPTH OF EXCAVATION IN FEET
- EVAPORATION POND NO.
- EXCAVATION BOTTOM CONTOUR AND ELEVATION
- CONSTRUCTION GRID COORDINATE
- EXCAVATION BOTTOM ELEVATION
- TEMPORARY FENCE AND GATE
- EXISTING ROAD
- INSIDE BOUNDARY OF EXISTING EVAPORATION PONDS
- EXISTING SITE FEATURES AND CONTOURS (1962 SURVEY)
- SITE BOUNDARY
- DOWNSLOPE GRADE AND DIRECTION

ANSTEC APERTURE CARD

Also Available
Aperture Card



U. S. DEPARTMENT OF ENERGY ALBUQUERQUE, NEW MEXICO

LAKEVIEW SITE
LAKEVIEW, OREGON
LAKEVIEW PROCESSING SITE

TAILINGS MATERIAL EXCAVATION PLAN

DESIGNED
CHECKED
APPROVED
DATE

DATE PROJECT ENGINEER DATE

MORRISON-KNUDSEN ENGINEERS, INC.
ULTRA PROJECT
300 HAYWARD ST. SAN FRANCISCO, CA 94102

PROJECT NO.
DE-AC04-P3AL18796
DRAWING NO.
LKV-PS-10-1355

9712120007-06

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| DATE | REVISIONS | |

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