Atlas Minerals

Division of Atlas Corporation

P.O. Box 1207 Moab, Utah 84532

June 24, 1977

United States Nuclear Regulatory
Commission
Washington, D.C. 20555

Attention: Leland C. Rouse, Chief
Fuel Processing & Fabrication Branch
Division of Fuel Cycle and
Material Safety

Gentlemen:

Atlas Minerals is hereby requesting that Source Material License SUA-917, Docket No. 40-3453, be amended to incorporate the enclosed tailings pond design modifications and changes in operating controls. Modifications to the embankment system will begin immediately and be complete within 90 days. A qualified geotechnical engineer will inspect the construction of the embankment modifications on a weekly basis.

Further, operation of the resin-in-pulp circuit will be discontinued and there will be no discharge of tailings effluent to the Colorado River.

Very truly yours,

William P. Badger
General Superintendent

WPB:mb

Enclosure

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DESIGN CRITERIA FOR IMPROVEMENTS
OF TAILINGS DISPOSAL SYSTEM AT
ATLAS MINERALS MILLING OPERATIONS,
MOAB, UTAH

The design criteria for the improvements of tailings pond is to include (1) modifications of the embankment section along the western edge of the tailings pond; (2) construction of an overburden fill to be placed at the seepage area located along the north embankment toe; and (3) a freeboard requirement for the entire embankment perimeter and a minimum crest-to-pond-water-edge distance at all embankment areas other than the western embankment area.

Western Embankment Section

Along the western embankment area of the tailings pond the design criteria for improvements are shown on Figure 1 and include the following:

1. A minimum freeboard requirement of 6 feet must be met at all locations.

2. A 2-foot minimum cover of rip-rap material is required for wave-erosion protection over the entire upstream slope. The material will consist of well-graded river run gravel with pieces of a maximum size of one foot.

3. A crest width of 20 feet must exist at all embankment sections.

4. Beach sand tailings will be placed against the upstream slope and along the natural ground surface adjacent to the existing toe of embankment slope with the dimensions as shown on Figure 1. The tailings fill material will have particle sizes such that there will be no greater than 7% by weight passing the No. 200 sieve.

5. Filter material of river run gravel with gradation sizing designed in accordance with U.S. Corp of Engineers criteria. The dimensions of placement will be as shown on Figure 1.

6. Overburden material will be placed over the beach sand with minimum cover of 8 feet. The overburden will be of natural near-site sand and silt and will be placed to the dimensions shown on Figure 1. The fill should be placed in 12 inch lifts (loose state) and compacted to a dry density of at least 90% of the maximum density as determined by the AASHTO T-99 method of compaction.

Seep Area at North Embankment Area

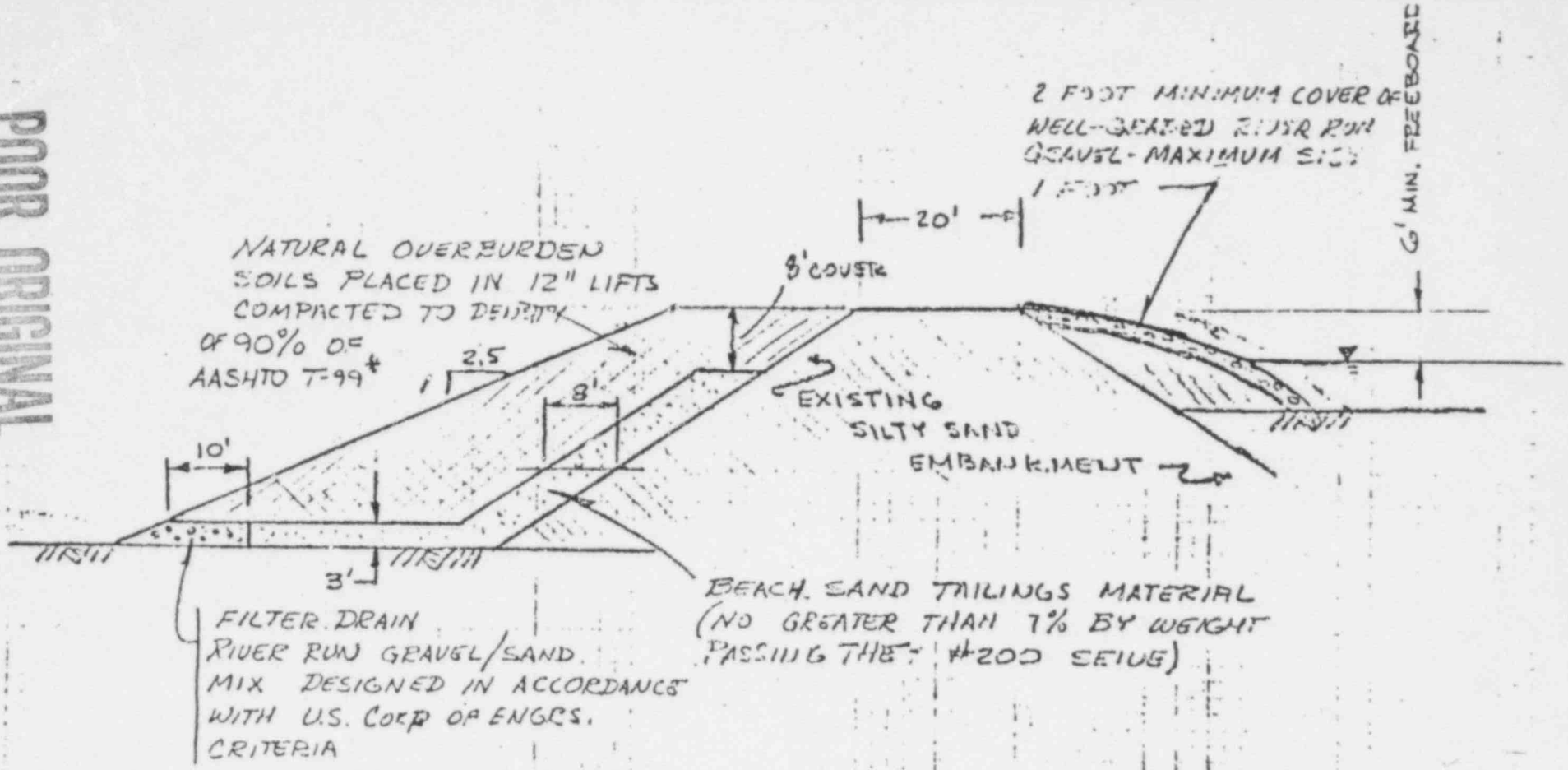
Construction of an overburden fill will be placed over the seepage area located at the north embankment toe. The construction requirements and dimensions are shown on Figure 2 and include the following:

1. An overburden fill of well-graded river run gravel will be placed over the seep area a distance of at least 50 feet in all directions from the seep. The minimum fill thickness of 5 feet will be met over the above stated area. The maximum particle size of the material will be one foot.

2. A perforated drain pipe will be placed as shown on Figure 2 and drained by pipe to a sump pumpback system located near the downstream toe of slope.

Operational Requirements for Ponded Liquids

The operational requirements for the ponded liquids will be such that a minimum freeboard of 6 feet must be maintained at all locations along the embankment crest. Along the embankment other than the west embankment area a minimum distance of 150 feet from the crest-of-the-embankment to the edge-of-water must be maintained. The rip-rap material along the western embankment must extend at least 50 feet into the beach areas on either side of the water retention embankment.



AASHTO T-99 METHOD OF COMPACTION

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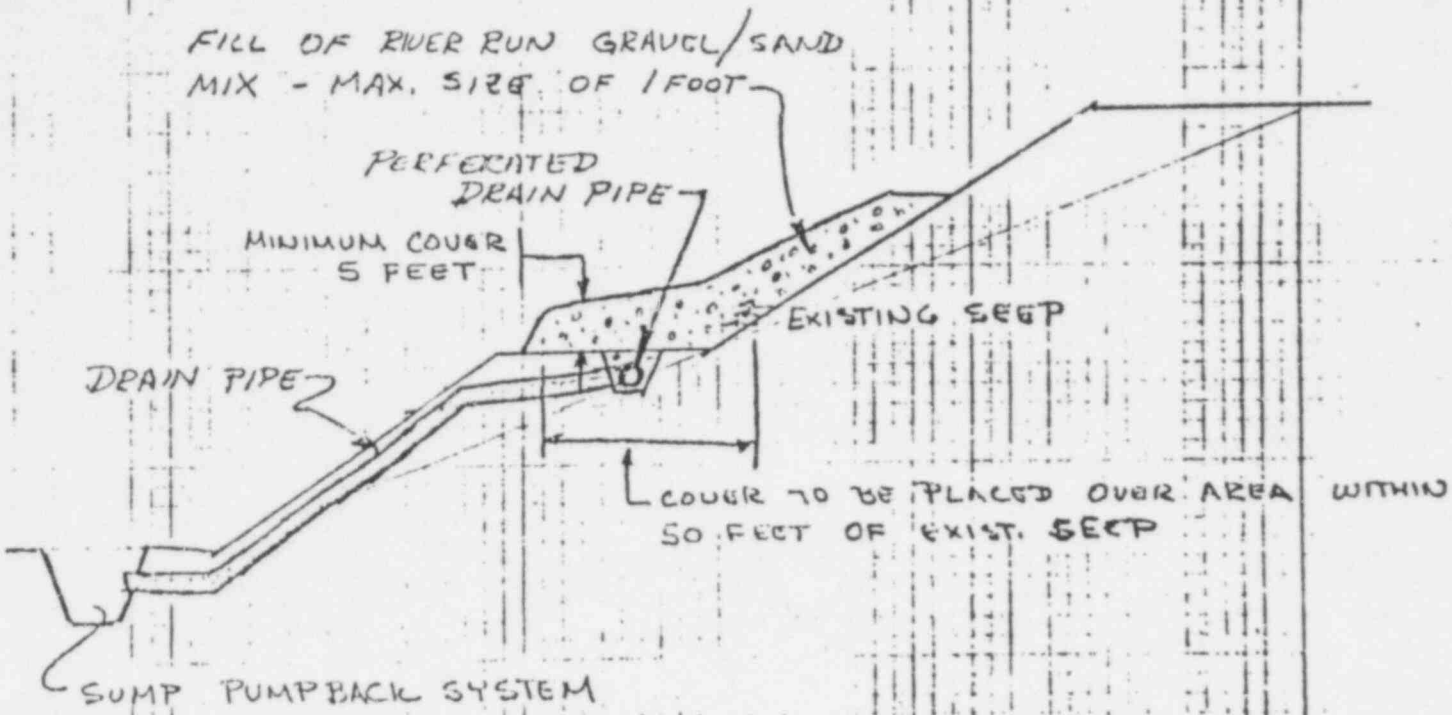
TYPICAL SECTION - WEST EMBANKMENT AREA

Figure 1



OVERBURDEN CONSTRUCTION TO BE PLACED AT SEEP - NORTH EMBANKMENT AREA

Figure 2