UTAH COPPER DIVISION
INTEROFFICE LETTER

TO B. P. Ream

DATE October 6, 1976

FROM P. Grubaugh

SUBJECT Revegetation Projects - Progress Report

OCT 1976
MINES
PLANT SUPT.

1. Aerial Seeding of Dumps

1.1 On March 26, 1976 a helicopter aerially seeded twenty acres of "P" Midas dump. Seven hundred and fifty pounds (750 lbs.) of mixed-pretreated seeds were scattered on both ripped and unripped areas of the dump.

1.2 During the second week of May a plant inventory was taken of the aerially seeded area for background information about the frequency, growth stages, and abundance of the seeds. The aerially seeded plants were few in number and showed slow progress. Most of the seeds did not germinate from the spring planting. The majority of the plants located in this area have spread through natural revegetative processes. Recent observations indicate that the foliage in this area is about 98% natural vegetation.

2. Evaporation Ponds

2.1 During the past several years there have been dust storms at the evaporation ponds that have caused complaints from residents in the area. In order to alleviate the problem, approximately 200 trees were planted near the evaporation ponds to form a wind row to screen the loose iron salts that blow. The majority of these trees were doing well as of October 1, 1976.

2.2 An attempt was made this past spring to grow grasses on the evaporation ponds to aid further in deterring dust from blowing. About 400 pounds of a variety of grasses (primarily sweetclover and alfalfa) were planted in the two worst areas at the evaporation ponds. These areas had been plowed and harrowed in preparation for the seeding. Some grasses grew for as long as 5 weeks, and up to 6" in height, but then died. The roots atrophied, probably from the highly acidic nature of the soils, as well as lack of water.

2.3 Approximately 5,000 tons of organic lime were dumped in four different areas at the evaporation ponds. In the two northernmost ponds, a grader ripped and graded the majority of the lime

into the soil. This fall wheat, alfalfa, and sweetclover will be planted in these ponds. In the two other areas where lime was dumped, less extensive preparation was done; i.e., only grading, but a variety of grasses will also be planted.

2.4 This spring, pit water was bypassed to the evaporation ponds. Along the ditchbank where the pit water flows, a variety of shrubs and trees were planted. The majority of these plants appear to be healthy.

3. West Mountain Security and Visitor's Center

3.1 Adjacent to the West Mountain security guard station a flower bed was planted. In the spring, daffodils were planted along with various junipers and pyracantha. For the summer, red, white and blue petunias were planted in the shape of the flag and the figure "76". This flower display bloomed most of the summer. South of the security building, pyracanthas and Russian olives were planted along the roadside.

3.2 This fall random planting of shrubs from the KCC greenhouse in the foothills next to the security building will be undertaken. Hybrid Douglas fir and hybrid oak will be interspersed with the shrubs in the area.

3.3 During the aerial seeding of the dumps, the site for the new visitor's center was the area where seed was loaded into the hopper that was carried by the helicopter. At that time grass seed was distributed throughout the levelled area where the visitor's center will be, and the grass has established itself. The planting of hybrid Douglas fir is also planned for fall in several locations in that area.

4. Castro Mud Slide Area

This past spring the area in Butterfield Canyon, damaged by a mud slide several years ago, was graded, ripped and terraced to achieve the look of the natural topography. The material consists of typical dump material from the Castro dump. Islands of shrubs and grass were planted where topsoil had been dumped. A small number of the shrubs are still there, and the grass is sparse. This fall more shrubs will be planted along with the planting of grass in the entire damaged area.

5. Midas Test Plots

5.1 On "O" Midas dump, two 1-acre test plots were planted with forty different kinds of flora. One plot that was formerly an area used to train truck drivers was graded and ripped. Approximately 1,000 plants were planted in this plot. The other test plot was an area formerly under leach. One hundred tons of lime added to this plot increased the pH from 2.3 to 5.2. About 1,500 plants were placed in this plot. Both test areas included sections that were irrigated and sections that were not irrigated, and plants were introduced to both.

5.2 Observations throughout the summer indicated a survival rate of about 50%. The survival rate in irrigated areas was not significantly higher than in non-irrigated areas. Certain species survived better than others in both areas, and some species had a 100% fatality rate in both areas.

6. This fall, the U. S. Forest Service will help to make a complete evaluation of the test area.

P. Grubaugh

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