

LRC-VIII-31
COMPARATIVE EVALUATION OF PRODUCTIVITY
OF PRIME AND NONPRIME SOILS

CONTRACTOR: North Dakota State University Land Reclamation
Research Center

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PARTICIPANTS

<u>Sponsor</u>	<u>Cost Share</u>
North Dakota Lignite Industry	\$5,000
NDSU/LRRC	55,758
ND Industrial Commission	<u>49,483</u>
Total	\$110,241

Project Schedule – 1 Year

Contract Date - 1/3/92
Start Date – 1/1/92
Completion Date – 12/31/92

Project Deliverables

Status Report – 5/31/92 ✓
Status Report – 8/31/92 ✓
Final Report – 12/31/92 ✓

OBJECTIVE / STATEMENT OF WORK

The objective of this program is to compare the productivity of reclaimed prime and nonprime topsoil material in different topographic positions and to determine whether the separate handling of prime or nonprime topsoil is necessary. This is the first year of a proposal of three year's study. Three separate tasks are proposed for this year:

- Task 1 Monitor plant yield on existing sites with a five-year history.

- Task 2 Establish two new sites and monitor plant yield on these sites. In addition, the soils on these sites will be monitored for sodium absorption ratio, electrical conductivity, saturation percentage, soil moisture, texture, bulk density, hydraulic conductivity, and water holding capacity.

- Task 3 Compilation of the data obtained in task 1 and 2.

STATUS

Plant yield and soil parameters were monitored at the existing sites and the two new sites. This is the first year of a three-year program. The project is proceeding as planned. A goal of this program is to generate information, which can be used to remove the segregation requirement of prime and nonprime topsoils. If this project is successful it could result in substantial savings for the mining industry.