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1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

September 2, 1981

Mr. John Abbott
Kaiser Steel Corporation
P.O. Box D
Sunnyside, Utah 84539

RE: Production Sampling Requirements
Sunnyside Mines
ACT/007/007
Carbon County, Utah

Dear John:

As per your request of August 26, 1981, the following clarification of production sampling requirements should suffice:

1. For baseline data and range sites (when a reference area is not to be used), production measurements for all community types is needed. For woody plants, measure only the current year's growth. Sample adequacy should meet 90% confidence level with a 10% change in the mean (.1d) with the exception of shrublands (where shrubs contribute over 30% of the total cover) when 80% confidence with a 10% change in the mean should be met. It should also be demonstrated that the year of sampling was a "normal" climatological year.

2. For reference areas (or baseline data when a reference area is used), production measurements are not critical until the time of comparison with the revegetated areas and does not need to meet statistical adequacy until that time. However, a statement of productivity should be supplied (preferably the Soil Conservation Service). Reference areas should be in fair range condition or better.

Mr. John Abbott
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As mentioned in your letter, the formula is acceptable to the Division of Oil, Gas and Mining.

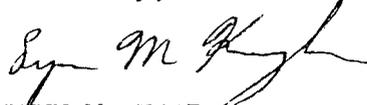
$$\frac{t^2 s^2}{d^2}$$

where t = the t-value for a 2-tailed t-test,
s = the sample standard deviation,
d = the change in the mean (.1 x sample mean).

(Note: As per the formula used by Wyo., DEQ, the 2 in the numerator has been omitted.)

If you have any other questions, or if further clarification is needed, feel free to contact me.

Sincerely,



LYNN M. KUNZLER
RECLAMATION BIOLOGIST

LMK/te

cc: O.S.M., Region V
Susan Linner