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Department of Energy
Oak Ridge Operations
P. O. Box E
Oak Ridge, Tennessee 37831

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[redacted]
Vice President & General Manager
Seaway Industrial Park Development Co., Inc.
4825 River Road
Tonawanda, NY 14150

Dear [redacted]:

CHARACTERIZATION PLANNING FOR AREA A

Bechtel National, Inc. (BNI), at the request of the DOE, has completed the initial planning phase for characterization of 'Area A' as designated in previous radiologic surveys. This characterization is intended to gain enough information to perform an analysis of potential radiological exposure pathways to the general public. This study is necessary to determine if there is a need for remedial action on this area. This letter summarizes the planned characterization efforts.

Surface Investigations

Since surface investigation was conducted in the summer of 1986, additional surface surveys will be limited in scope. A minimal number of surface soil samples will be collected to quantify radionuclide concentrations in areas where contamination is exposed.

Additionally, exposure rate measurements will be collected to document potential dose rates for inclusion in the pathway analysis.

Subsurface Investigation

To support the analysis of exposure pathways, information is required on the subsurface configurations and concentrations of radioactive contamination. To gain this understanding, boreholes will be drilled on 100 foot, staggered grid intersections. This will require approximately 85 holes to cover the suspected contamination zone historically referred to as Area A. Of the 85 boreholes, 20 will extend to natural (undisturbed) soil (approximately 45 feet). The holes will be systematically spaced over the affected area and are

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designed to insure that all major subsurface deposits are located. The depths of the remaining 65 holes will be adjusted to extend through the contaminated layers. For budgeting purposes, this depth has been assumed to be 20 feet. Boreholes will be backfilled.

To allow determination of radionuclide concentrations via laboratory analysis, continuous samples will be collected from the surface to the maximum drilled depth. The samples will be composited over a one-foot depth and analyzed for U-238 and Ra-226 concentrations.

For a quick field determination of depths of contamination, boreholes will be gamma logged where possible. This serves three purposes: 1) assures that the shallow holes extend completely through the measurable contamination, 2) narrows initial ranges where soil samples need to be analyzed, and 3) allows real-time modification of field activities in the event of discovery of unknown contamination.

Documentation

The findings of this survey will be reported in a letter report describing the general methodology used and results collected. In addition, the findings will be used to formulate the pathways analysis study which will form the basis for a decision concerning the need for remedial action.

The field work is anticipated to take approximately 5 weeks. The projected schedule is attached for your review. If you have any additional questions concerning these plans, please contact [redacted] at (615) 576-4451.

Sincerely,

ORIGINAL SIGNED BY:
[redacted]

[redacted], Director
Technical Services Division

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[redacted]

bcc w/encl.:
[redacted], NE-23, GTN
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[redacted] BNI
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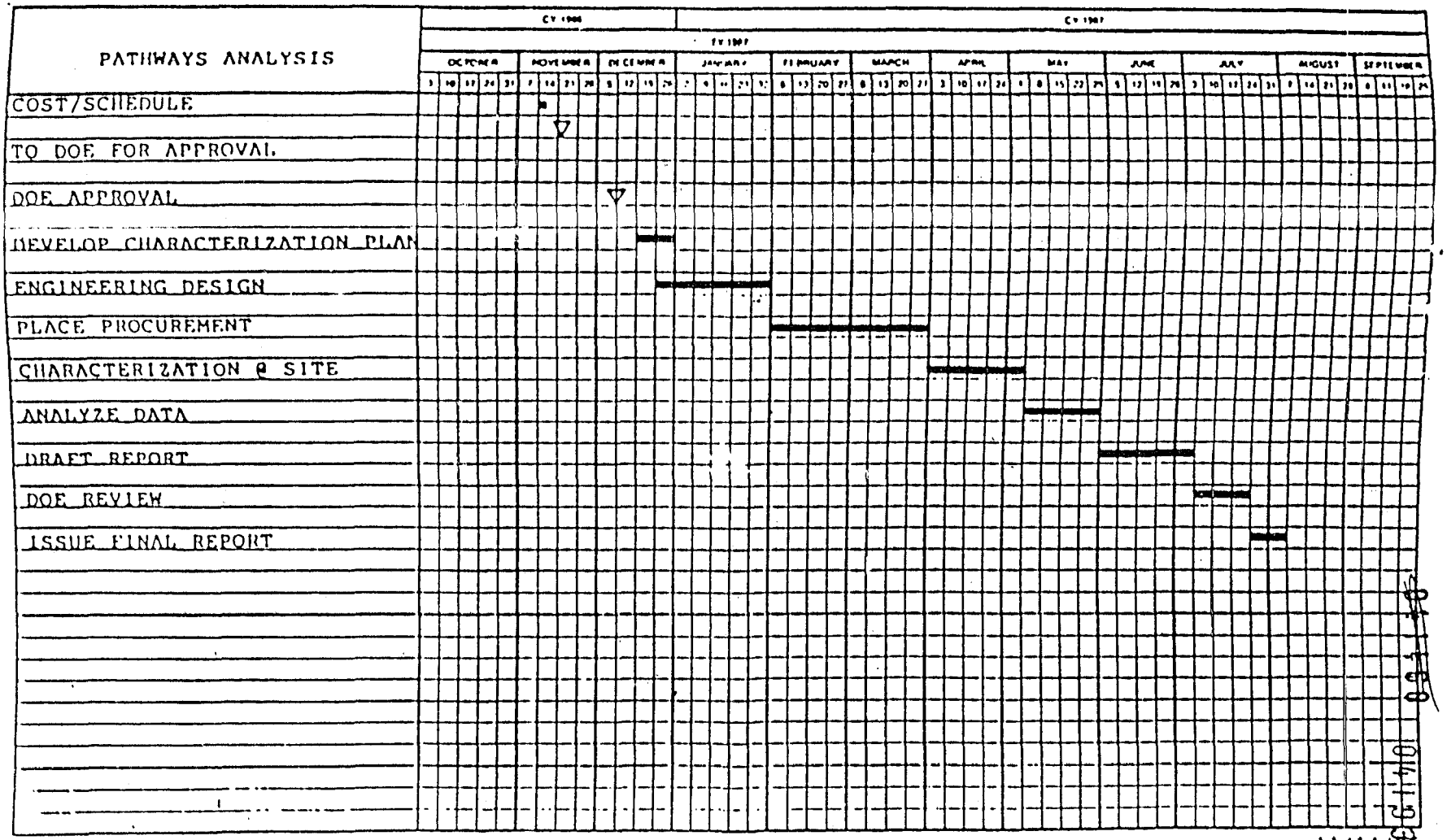
123 - SEAWAY (AREA "A")



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