S T A T E O F M A I N E

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF HAZARDOUS MATERIALS AND SOLID WASTE CONTROL

M E M O R A N D U M

TO: Mark Hyland, Division Director - Federal Facilities Unit
Office of the Commissioner

FROM: Dick Behr, Geologist - Division of Technical Services
Bureau of Hazardous Materials & Solid Waste Control

DATE: September 14, 1992

RE: Draft EE/CA Building 95 BNAS, August 1992

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Based on review of the Draft Engineering Evaluation/Cost Analysis, I offer the following summary and comments. Comments are preceded by the applicable page number.

SUMMARY

Building 95 and associated outbuildings were used for storage and preparation of pesticides until 1985. The investigation presented in the EE/CA was conducted to determine the type and extent of soil contamination and to propose remedial action alternatives aimed at reducing future human and ecological risk, if warranted. Several pesticides are present in soils surrounding Building 95. The concentration and mass of pesticides encountered are sufficient to cause both human and ecological risks. DDT is the most prevalent pesticide and poses the greatest risk. Consequently, treatment of about 1150 cy of the top 2 feet of soil is recommended. Of the three remedial action alternatives discussed, the third alternative, solvent extraction, followed by backfilling treated soils was chosen over installation of a soil cover or incineration and off-site disposal. Since solvent extraction is not considered the Best Demonstrated Available Treatment, a treatability variance is required. More information is needed to evaluate the variance request.

COMMENTS

Pg 1-6 Does the 50 ft of open joint tile represent a subsurface sewage disposal system? How far below ground surface is the open joint tile? What type of waste streams originated in Building 95? The waste water disposal lines from Building 31 should be shown on figure 1-2. Why do these waste water streams remain unconnected to the base sewer system? Are they still in use?

Pg 1-9 The site history should include a brief description of areas where pesticides were used and rationale for their use.

Pg 1-48 Have automobile emissions been considered a potential source of PAHs in soils surrounding Building 95? If kerosene was the primary PAH source, one would have expected SS5 to contain a variety of PAHs, yet no SVOCs were detected.

Pg 1-57 Figure 1-9 and 1-10 do not include units for concentration. This may apply to other figures.

Pg 1-74 Is the area on the east side of Building 31 considered an area of routine use? If so, describe the activities which occurred there.

Results of the TCLP analysis of SSXX5 is offered as evidence that pesticides are not "currently" leaching. However, the occurrence of significant pesticide concentrations in subsurface soils and the detection of pesticides in unfiltered groundwater samples indicate migration has occurred. This apparent contradiction must be clarified.

Pg 1-75 In addition to referencing Appendix B, a more thorough explanation of evidence supporting downward migration of carrier and pesticides is needed.

Pg 1-79 The occurrence of pesticides at depth is thought to result from cosolubility effect of the kerosene carrier. However, no SVOCs were detected at 3 ft or 15-16 ft, although pesticides were present. If this was the main transport mechanism, why are SVOCs absent at depth? Could aqueous phase contaminant transport be the primary transport mechanism?

Pg 1-80 The presence of pesticides in unfiltered groundwater and their absence in filtered samples make it premature to state groundwater is not impacted. Traditional monitoring wells are needed to properly characterize groundwater.

Pg 1-81 The concluded lack of correlation between PAH and pesticide distribution suggests kerosene's cosolubility effect may not be the only transport mechanism.

Pg 2-84 Does the estimated 1150 cy of soil for removal include area covered with asphalt?

Pg 2-85 Figures 2-1 and 2-2 reportedly delineate soils exceeding the Preliminary Remediation Goals at 0-1 ft and 1-2 ft bgs, respectively. However, field and laboratory data indicate contamination at 0-1 ft bgs may extend beyond LX3 and JX2. Consequently, additional confirmatory samples may be needed east of the unnamed road to firmly establish the eastern limits of soil removal (see modified Figure 2-1 attached).

DDT concentrations in laboratory samples from DX0 and HX0 were significantly above 500 ug/Kg, yet neither are within the area delineated on Figure 2-2. Therefore, Figure 2-2 requires modification and like the 0-1 ft soils, additional confirmatory samples are needed to establish the southern boundary of soil removal.

Pg 3-5 Would the open joint tile connected to the septic tank be removed and steam cleaned also?

Pg 3-12 Discussion of incineration technologies should include appropriate references.

Pg 3-22 Would both solvent extraction procedures be evaluated during the treatability study?

Pg 4-12 How much of the $408,000 estimated for solvent extraction will be used to conduct treatability studies?

Why are capital costs for debris disposal for alternatives 2 and 3 greater than alternative 1?

Pg 4-18 Treatability data referred to in support of the solvent extraction technology must be referenced.

Pg A-1 Table A-2 does not contain information needed to justify a treatability variance. Further, it is not clear how a bench scale treatability study will yield clean-up levels. Clean-up levels based on human and ecological risk assessments have been determined (see Table 2-14).

A more detailed explanation of the requirements of a treatability variance and how they will be met is needed.

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attachment

pc: Marianne Hubert

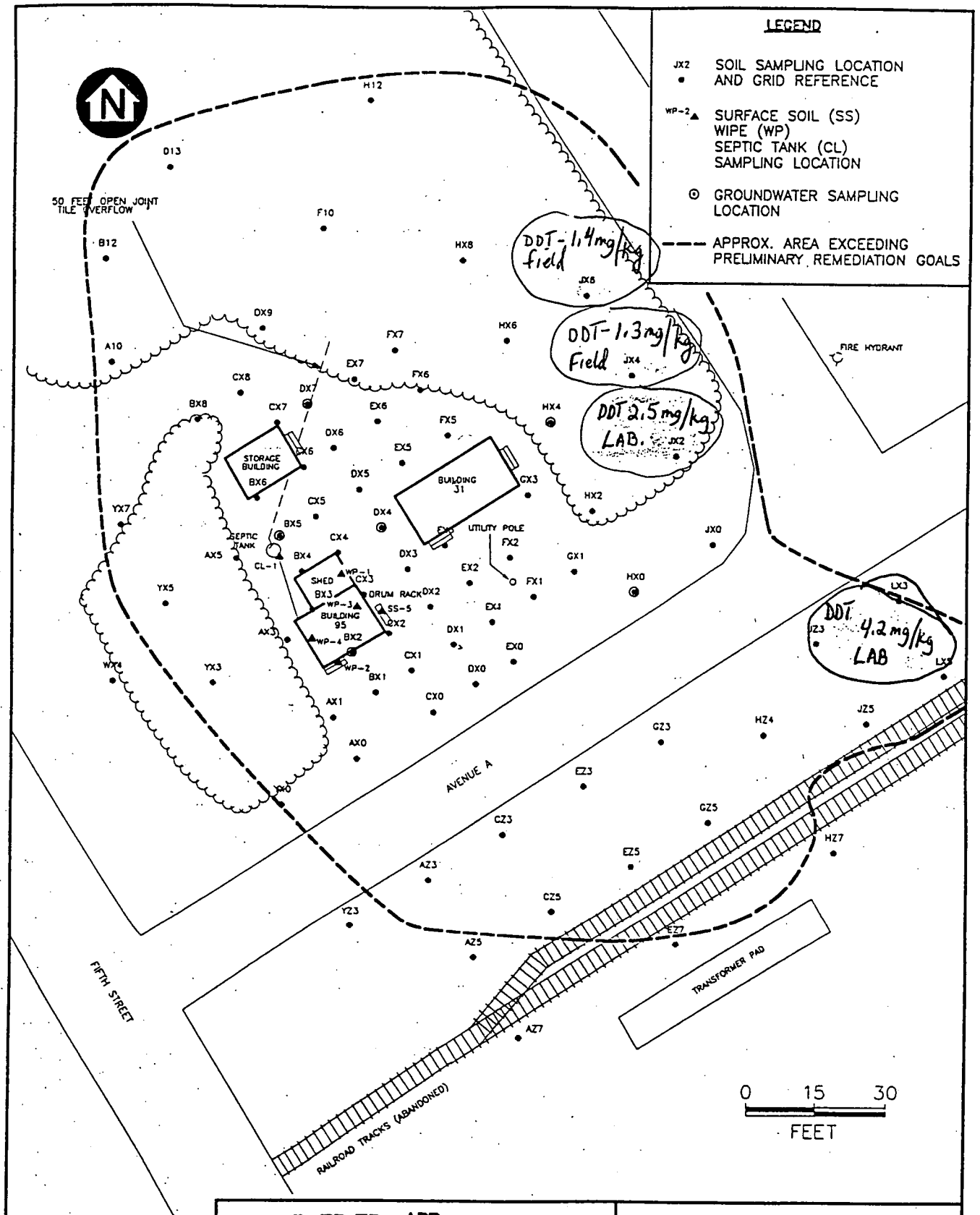

ABB Environmental Services Inc.
ASEA BROWN BOVERI

BUILDING 95 AREA
0'-1' BELOW GROUND SURFACE
EXCEEDING PRELIMINARY REMEDIATION GOALS

INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE

BUILDING 95 EE/CA

7122-02

FIGURE 2-1

FIG2-1