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**REMOVAL SITE EVALUATION GAS-FIRED BOILER RELOCATION -
JUNE 1994**

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REMOVAL SITE EVALUATION
GAS-FIRED BOILER RELOCATION

Fernald Environmental Management Project
U. S. Department of Energy

June 1994

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**REMOVAL SITE EVALUATION
GAS-FIRED BOILER RELOCATION**

INTRODUCTION

A nominal 75,000 lb/hr gas-fired boiler is located north of Plant 4 along Second Street. The boiler will be relocated to a new enclosure added to the existing Boilerhouse, Plant 10. Since natural gas is not currently supplied to the boilerhouse, a new natural gas line will be run from the vicinity of Plant 4 where the boiler is currently located. Additional piping and electrical connections will be made to make the unit functional. Movement of the boiler will reduce the manpower required to operate this boiler along with the coal fired boilers. Additionally, the movement improves safety by removing the boiler from its close proximity to vehicular traffic.

The waste anticipated to be generated consists of approximately 40 cubic meters of soil, 1 cubic meter of scrap metal, minor amounts of asbestos in the form of Transite siding from the existing boilerhouse and wood materials.

This Removal Site Evaluation (RSE) has been completed by the Department of Energy (DOE) under the authorities delegated by Executive Order 12580 under section 104 of CERCLA and is consistent with section 300.410 of the National Oil and Hazardous Substance Pollution Control Contingency Plan (NCP). This RSE addresses the existing conditions and the activities proposed to relocate a gas-fired boiler from a location north of Plant 4 to a new addition to the boilerhouse. This RSE has been completed to support the decision as to whether conditions warrant a removal action. Controls implemented to support this construction activity are also presented in this RSE to demonstrate that the proposed construction will not cause deterioration of the existing site conditions. See attachment #1 for the location of the proposed project.

SOURCE TERM

Consistent with 40 CFR 300.410(a), this RSE includes a removal preliminary assessment, which is based upon readily available information as described in 40 CFR 300.410(c).

While previous radiological surveys conducted in the vicinity of this project do not indicate elevated levels of contamination, other FEMP projects have indicated that low levels (slightly above background) of radioactive contamination may be present. Although the anticipated levels of contamination do not pose a significant threat to human health and the environment, all excess soil from this project will be placed in controlled stockpiles and managed in accordance with Removal Action 17. The project site will be monitored by Radiological Safety personnel to ensure that construction practices are appropriate for the contamination levels.

The natural gas for the operation of the boiler will be piped, from the point where it currently supplies the boiler, north to the boilerhouse. Along with this installation comes a slight increase in risk due to the potential for fire or explosion.

The transite material involved with the project contains asbestos. It could pose a hazard to people if damaged or improperly handled causing it to become friable

thus releasing asbestos fibers which are hazardous when inhaled. Asbestos abatement pertaining to this project is discussed in the next section.

EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

To manage the hazards and prevent the spread of radioactive contamination that may be present, this project will be controlled by Site Standard Operating Procedure SSOP-0044 *Management of Soil, Debris, and Waste From a Project* developed from the approved work plan for Removal Action 17 *Improved Storage of Soil and Debris*. The following additional controls, among others, will be implemented during the relocation of the boiler.

- Excess soil from this project will be stockpiled according to Removal Action 17 criteria. Soil containing greater than 100 pCi/g total uranium will be separated from the less contaminated soils and placed in an appropriate stockpile. Segregation will be confirmed by radiological monitoring. Excess soil containing greater-than-background levels of contamination as indicated on a hand-held beta/gamma frisker will be placed in the stockpile for soil containing greater than 100 pCi/g uranium as specified in Removal Action 17.
- Any work involving transite shall be performed in accordance with site procedures for asbestos, to prevent release of fibers. Removal of transite will be planned and supervised by AHERA certified "Asbestos Hazard Abatement Contractor/Supervisors" and certified asbestos workers. The waste shall be wrapped in plastic or bagged, and labeled asbestos. These controls will prevent the release of and mitigate the threat from asbestos during this project.
- The gas line will be designed and installed in accord with recognized industry standards for natural gas, i.e. - ANSI B31.3, "Power Piping" and ANSI Z223.1, "National Fuel Gas Code".
- Physical barriers will be positioned around the work area to prevent unauthorized access.
- Protective clothing and respiratory protection will be provided for workers as it is required.
- Runoff controls will be established, as required.

All work will be controlled by Radiation Work Permits and monitoring will verify containment of contamination within the work area.

ASSESSMENT OF THE NEED FOR REMOVAL ACTION

Consistent with Section 40 CFR 300.410 of the NCP, the Department of Energy shall determine the appropriateness of a removal action. Eight (8) factors to be considered in this determination are listed in 40 CFR 300.415 (b)(2). The following apply specifically to this construction project:

40 CFR 300.415(b)(2)(i)

Actual or potential exposure to hazardous substance, pollutants, or contaminants to nearby populations, animals, or food chain.

40 CFR 300.415(b)(2)(v)

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

40 CFR 300.415(b)(2)(vi)

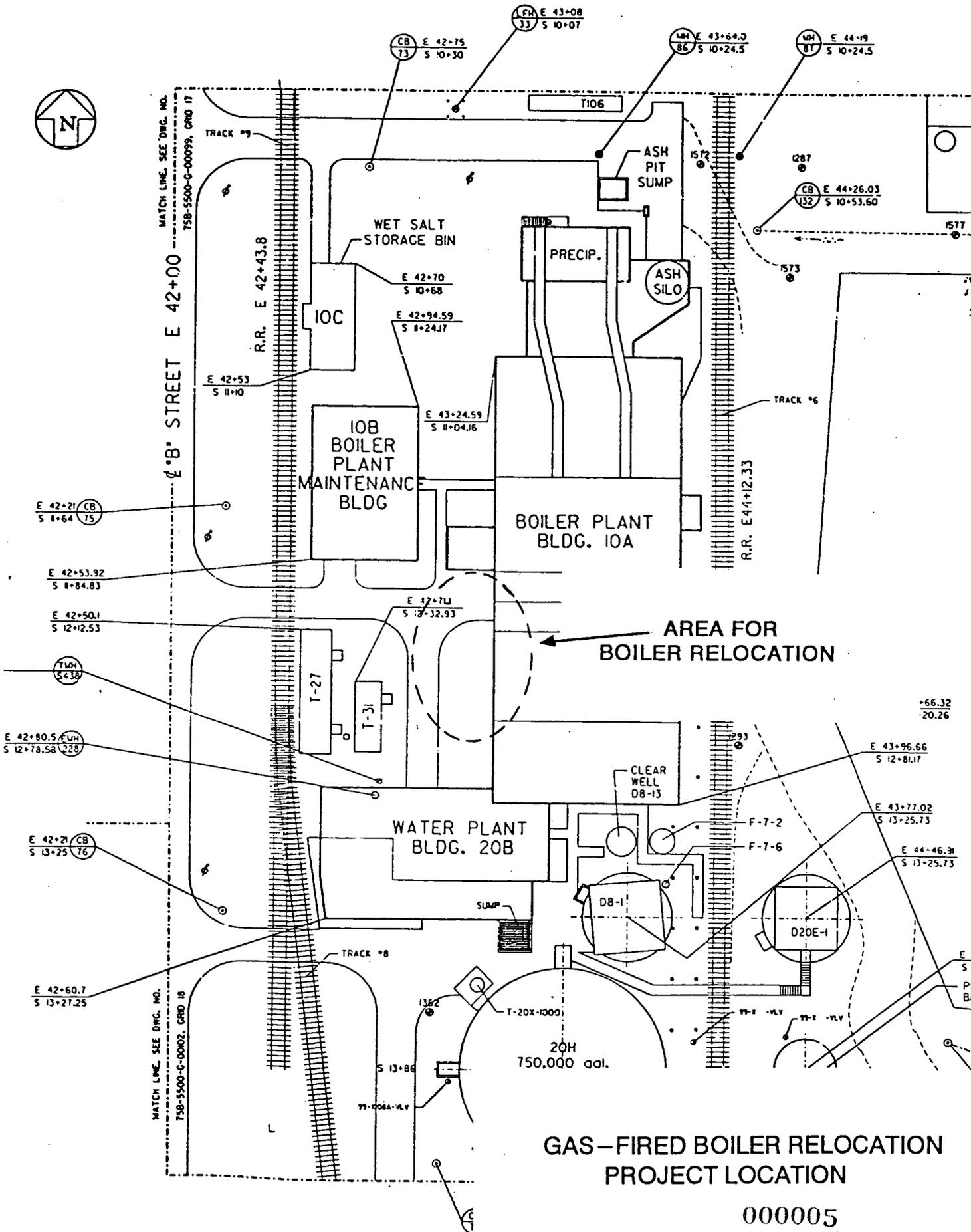
Threat of fire or explosion.

Removal Action 17 requires placement on and covering of contaminated soils with heavy, nonpermeable tarpaulins. The tarpaulins will prevent the spread or release of contamination and resultant exposure to humans, animals or the food chain.

As discussed earlier, the threat from and potential of a release or migration of uranium from this project site is low. Thus, while the above criteria can be applied to this project, it does not constitute the need for a removal action.

APPROPRIATENESS OF A RELEASE

Based on the evaluation of all the above factors, it has been determined that a removal action will not be necessary and that this project should be continued as a construction activity in support of the CERCLA remediation process and waste management. Furthermore, the controls planned in conjunction with this construction activity and management procedures established in accordance with Removal Action 17 are adequate to mitigate any hazards created by contamination at this site and to prevent deterioration of existing site conditions.



MATCH LINE, SEE DWG. NO. 75B-5500-C-00099, CRD 17

TRACK #5
R.R. E 42+43.8

MATCH LINE, SEE DWG. NO. 75B-5500-C-00002, CRD 18

TRACK #6
R.R. E 41+12.33

AREA FOR
BOILER RELOCATION

**GAS-FIRED BOILER RELOCATION
PROJECT LOCATION**

000005

E 42+21 CB S 8+64 75

E 42+53.92 S 8+84.83

E 42+50.1 S 12+12.53

TMH S 43.8

E 42+80.5 LMH S 12+78.58 228

E 42+21 CB S 13+25 76

E 42+60.7 S 13+27.25

CB E 42+75 S 10+30 73

LFM E 43+08 S 10+07 33

MM E 43+64.0 S 10+24.5 86

MH E 44+19 S 10+24.5 81

E 42+70 S 10+68

E 42+94.59 S 1+24.17

E 43+24.59 S 11+04.16

E 42+71.1 S 12+32.93

+66.32
-20.26

E 43+96.66 S 12+81.17

E 43+77.02 S 13+25.73

E 44+46.91 S 13+25.73

S 13+88

20H
750,000 gal.

E S
P S
B S