

983

G-000-202.1

**REMOVAL SITE EVALUATION GUARD POSTS
FOR SAMPLING WELLS OCTOBER 1990**

10/01/90

DOE-FMPC/WMCO

5

ENCLOSURE

REMOVAL SITE EVALUATION

GUARD POSTS FOR SAMPLING WELLS

Feed Materials Production Center

U. S. Department of Energy

October, 1990

REMOVAL SITE EVALUATION
GUARD POSTS FOR SAMPLING WELLS PROJECT

INTRODUCTION

Sampling Wells were installed in various locations throughout the FMPC site and at off site locations for use in the Remedial Investigation/Feasibility Study program. The wells are used to monitor the ground water and for placement of piezometers. Steel pipes are used to line the wells, and the pipes are four to six inches in diameter. The well pipes extend at least a foot above the surface of the ground.

The "Guard Posts for Sampling Wells" project will concentrate on approximately one hundred six (106) well locations. However, this evaluation concentrates on four (4) locations which have the potential for a removal action.

This project has been developed as a result of an audit conducted by the DOE Environmental, Health and Safety Assessment Team. The audit indicated the need for protection to prevent damage to the wells that could be caused by vehicular traffic or farm equipment. The Guard Posts are to be I-beams driven into the ground or concrete flooring, extending approximately four feet above the surface. Production area installations may require removal of several cubic feet of rubble from well sites surrounded by concrete flooring.

This Removal Site Evaluation (RSE) has been completed by the DOE under 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 Contingency Plan (NCP). This RSE addresses removal of rubble and soil as required for placement of posts to protect sampling wells. This evaluation has been completed to support the decision as to whether the project conditions warrant a removal action.

SOURCE TERM

In accordance with Site Policy and Procedure #FMPC-720, "Control of Construction Waste", site characterization was performed and historical records relative to the project work areas were reviewed. As part of the site characterization activities, subsurface core sampling was performed at the proposed excavation areas. The analytical results from the analysis of these samples are presented in table one for radiological contaminants of concern in the 'Evaluation of the Magnitude of the Potential Threat' section.

Samples have also been taken to determine the chemical contaminants of concern. The results of these samples are pending and will be submitted as an addendum to the RSE at a later date. A map showing the locations of the production area wells are shown in figure one (1).

The samples used for the radiological analysis were taken from below the concrete flooring which surrounds the production area wells. It is assumed that the activity level of the concrete to be removed is no greater than that of the soil surrounding it. As indicated by these analytical results, the soil at these locations contains above background activity levels of Uranium as defined in FMPC-720.

REMOVAL SITE EVALUATION
GUARD POSTS FOR SAMPLING WELLS PROJECT

EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

On the basis of the above referenced data, the Guard Posts for Sampling Wells project involves the removal of materials with above background activity levels of total Uranium. The potential threat posed by these activity levels of Uranium is the potential exposure as a result of suspension of particles in the atmosphere and the potential migration of the contaminants through wind erosion during the removal of the rubble and the installation of the Guard Posts.

Guard Posts for Sampling Wells Project Sampling Data Table				
Location	Sample #	Total U (pci/gm)	Category (I, II, *LLW)	Maximum Concentration
1177	16465	28.67	< I	35 pci/gm (4)
1178	16485	22.67	< I	35 pci/gm (34)
1179	16507	1277.33	LLW	>100 pci/gm (1916)
1199	16947	666.67	LLW	>100 pci/gm(>1000)

* - Low Level Waste, () - ppm.

ASSESSMENT OF THE NEED FOR REMOVAL ACTION

Consistent with Section 40 CFR of the National Contingency Plan (NCP), the Department of Energy shall determine the appropriateness of a removal action. Eight factors to be considered in this determination are listed in the NCP, 40 CFR 300.415 (b) (2). The following apply specifically to the concentration of total uranium occurring in the rubble to be excavated:

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) (viii)

Other situations or factors that may pose threats to public health or welfare or the environment.

These factors are considered appropriate as a result of the concentration of uranium in the construction rubble north and south of plant #2. Construction activities have a potential to cause these concentrations to migrate or be carried to areas which are uncontaminated.

Based on the sampling data presented herein, two of the eight factors listed in the NCP may be applicable to the "Guard Posts for Sampling Wells" project

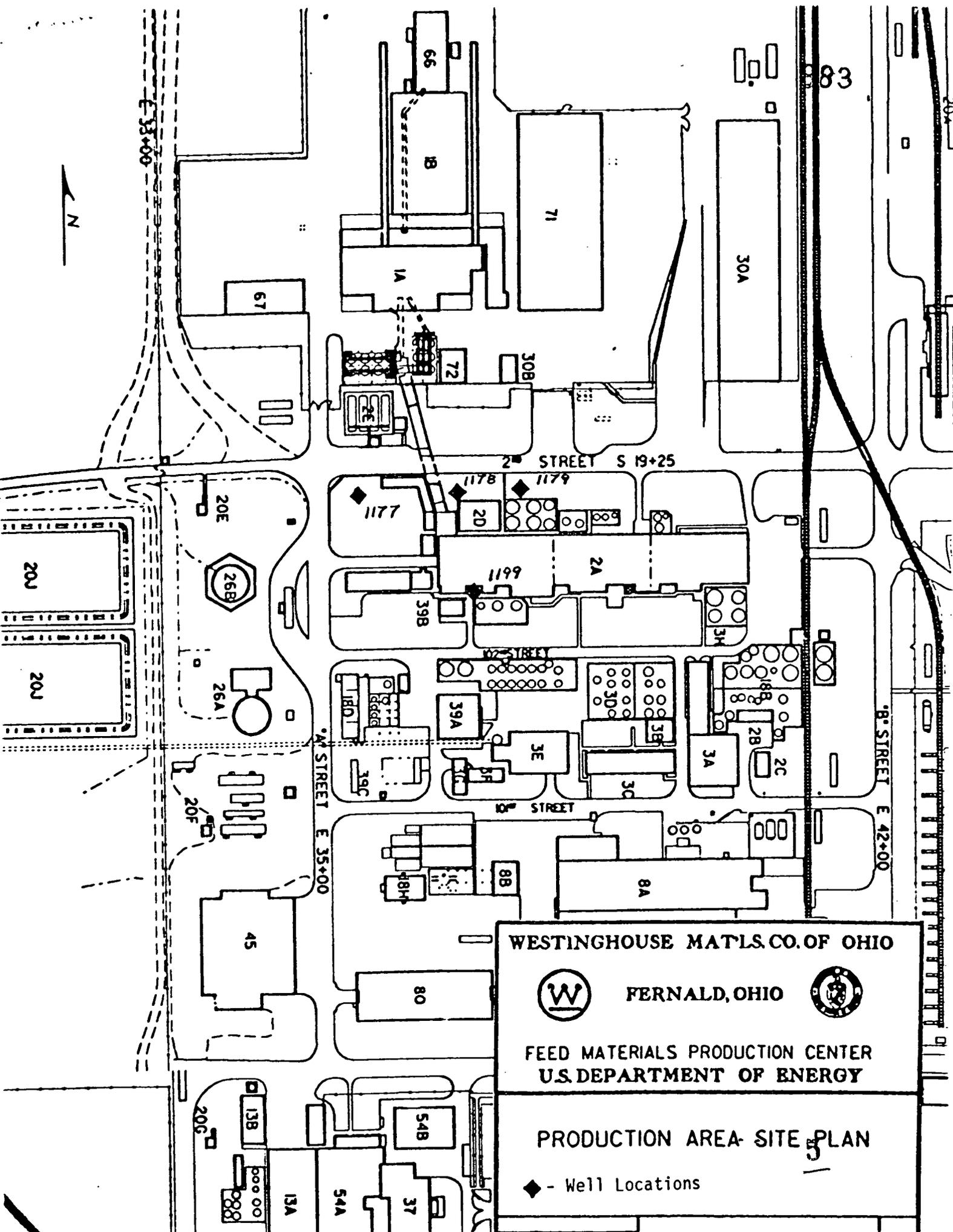
REMOVAL SITE EVALUATION
GUARD POSTS FOR SAMPLING WELLS PROJECT

APPROPRIATENESS OF A RESPONSE

If a planning period of less than six months exists prior to initiation of a response action, DOE will issue an Action Memorandum. The Action Memorandum will describe the selected response and provide supporting documentation for the decision.

If it is determined that there is a planning period greater than six months before a response is initiated, DOE will issue an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat of public health and the environment and to evaluate viable alternative response actions. It will also serve as a decision document to be included in the Administrative Record.

Incidental to protective maintenance activity for groundwater monitoring wells, intrusion into areas of contaminated soil have occurred. The reason for the excavation was not to remove or remedy the situation. The FMPC is currently on the NPL and is in the RI/FS process. The overall remedial action will address the final means of removing or stabilizing the contaminated soil. The maintenance work associated with this RSE will be conducted with appropriate controls, and removed soil will be properly controlled as contaminated waste. Existing site policy and procedures adequately manage the control of construction generated excavation rubble and identifies proper control measures to prevent fugitive contaminant releases during materials dispositioning. A removal action is not required to address the existing situation.



WESTINGHOUSE MAT'LS. CO. OF OHIO



FERNALD, OHIO



FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY

PRODUCTION AREA-SITE PLAN

◆ - Well Locations