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REMOVAL SITE EVALUATION SOIL FROM THE GARAGE FACILITIES UPGRADE PROJECT (BUILDING 31) SEPTEMBER 20, 1990

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REMOVAL SITE EVALUATION

SOIL FROM THE GARAGE FACILITIES UPGRADE PROJECT (BUILDING 31)

Feed Materials Production Center

U. S. Department of Energy

September 20, 1990

REMOVAL SITE EVALUATION
SOILS FROM THE GARAGE FACILITIES
UPGRADE (BUILDING 31)

INTRODUCTION

The Garage Facility Upgrade Project was approved and construction began June 29, 1989. The project included the installation of a five-ton jib crane inside the garage and the shortening of a drain pipe to get the floor drain out of an office in the garage. In order to install the crane, the concrete flooring and soil below it was removed. The excavation was filled with concrete around the base of the crane for additional support. The pipe shortening involved a second excavation, the soil from which was placed in the same boxes as the soil from the jib crane excavation.

As a part of the project, a contamination survey was conducted on the garage floor and the soil below. As it was removed, the soil was placed in boxes for storage until the RCRA sampling could be completed. This action allowed construction to proceed.

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 the boxes of soil from the excavations done for the garage upgrade project, and has been completed to support the decision as to whether the present conditions warrant a removal action.

SOURCE TERM

Field investigations, including sampling of the concrete rubble and excavated soil, confirmed that the materials removed for the completion of this project are not contaminated. Data from the Radiological Characterization/RCRA Determination (attachment 1), completed January 18, 1990, verifies that the soil is acceptable to be used for fill dirt in the K-65 area in accordance with Site Policy and Procedure #FMPC-720, "Control of Construction Waste." The sample locations are shown in Attachment 2.

The data included in the attachments sufficiently identifies the soil radiologically as a Category I soil, which is soil with less than 35 pCi/g for total uranium, pursuant to FMPC-720.

EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

The potential threat posed by the boxes of soil, excavated for the jib crane installation and the shortening of the drain pipe for the garage upgrade project, is minimal. The only existing threat is that of exposure to uranium, thorium, and EP toxic metals as a result of

suspension of the soil particles in the atmosphere. However, the soil from this project is not uranium, thorium, or EP toxic metals contaminated, so this threat is virtually non-existent. The tables in Attachment 1 show the data from the analysis of the soil which supports this conclusion.

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 factors to be considered in this determination are listed in 40 CFR 300.415 (b)(2).

Based on the sampling data presented herein, none of the eight factors listed in the NCP are applicable to these boxes of non-contaminated soil.

APPROPRIATENESS OF A RESPONSE

If it is determined that a response action is appropriate due to the levels of contamination found in the soil that is in the boxes, a removal action may be required to address the existing situation.

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.

Incidental to construction activity, intrusion into an area of potentially contaminated soil may occur. The reason for the construction activity was not to remove or remedy a contamination problem. 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 contaminated soil. The construction work associated with this RSE was conducted with appropriate controls, and removed soil was properly controlled as potentially contaminated waste. Existing site policy and procedures adequately manage the control of construction generated excavation rubble and and soil, and identifies proper control measures to prevent fugitive contaminant releases during materials dispositioning. A removal action is not required to address the existing situation.

Attachment 1

TABLE ONE
GARAGE UPGRADE PROJECT (BUILDINGS)
LEAD, URANIUM AND THORIUM ANALYSIS

Sample	Pb-206 (mg/g)	U (wt%)	U (pCi/g)	Total Th-232 (pCi/g)	Th-228 (pCi/g)
RC 0319	9.7	U234 0.005 U235 0.700 U238 99.28	< 7.4	< 2.5	ND
RC 0320	N.A.	-----	----	< 2.5	----
RC 0321	25.7	U234 0.005 U235 0.660 U238 99.32	< 7.2	< 2.5	ND
OSWER 93.55.4 -02	500	----	----	< 2.5	----
NRC BTP			Total U 30		
DOE 5400.5 IV-4(a) (2)					5 15

Note: ND signifies that this quantitiy was not determined because of the low thorium concentration of these samples and comparison of all thorium results obtained.

N.A. signifies that data was not available.

OSWER 9355.4-02 = Office of Solid Waste and Emergency Response, USEPA interim guidance for lead in soils.

NRC BTP = Nuclear Regulatory Commission Branch Technical Position (pg. 13 of FMPC-720), 30 pCi/gm is for natural uranium (U-238 + U-235 + U234) without other daughters present.

DOE Order 5400.5 = Chapter IV, section 4 (a)(2), Guidelines for Residual Radionuclides in Soil, thorium (Th-232) and (Th-228, if present) cannot exceed 5 pCi/gm for first 15 cm of depth of soil averaged over a 100 cm cm area; 15 pCi/gm beyond 15 cm depth.

Attachment 1

TABLE 2
GARAGE UPGRADE PROJECT (BUILDING 31)
EP TOXICITY ANALYSIS

SAMPLE	Ag	As	Hg	Se	Ba	Cd	Cr	Pb
	mg/l							
RC 0319	<1.0	<1.0	<0.1	<0.1	<25	<0.2	<1.0	<1.0
RC 0321	<1.0	<1.0	<0.1	<0.1	<25	<0.2	<1.0	<1.0
TCLP Limits	5.0	5.0	0.2	1.0	100	1.0	5.0	5.0

Note: The method for the Toxicity Characteristics Leaching Procedure (TCLP) was published in the Federal Register on Thursday, March 29, 1990.

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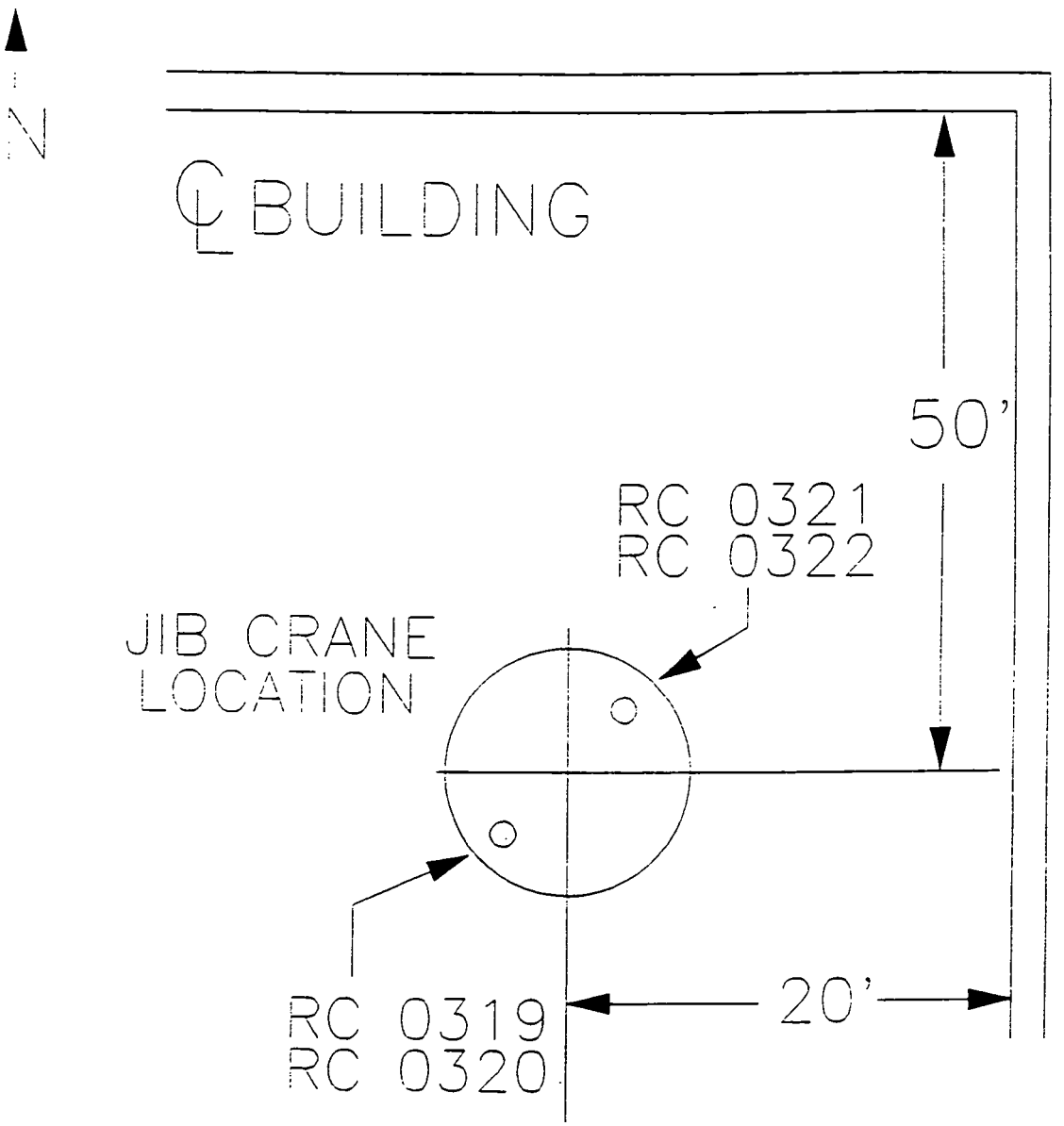
Garage Building Upgrade Project
Crane Excavation and Sample Locations



Drawing Not to Scale