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REMOVAL SITE EVALUATION WASTE PIT AREA ROADS AND EXPOSED SURFACES APRIL, 1991

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REMOVAL SITE EVALUATION ADDENDUM

WASTE PIT AREA CONTAINMENT IMPROVEMENT

(Previously identified as
The Waste Pit Area Roads
and Exposed Surfaces)

Fernald Environmental Management Project
U. S. Department of Energy

June 1992

This addendum to the original RSE is being prepared to include newly identified areas of concern. These areas are correction of Pit 4 south berm erosion, protection from Burn Pit wind erosion, and improvements to vegetation cover on pits. These areas were identified in RI/FS planning meetings as areas in need of attention and it has been determined that a removal action is necessary to address the threat posed by the addition of these areas to the existing RSE for Waste Pit Area Roads and Exposed Surfaces.

A summary of these newly identified areas and the Weston Road area follows.

Pit 4 South Berm Erosion

Routine inspections of the waste pit area have identified areas of erosion along the southern berm of pit 4. There is an active drainage ditch which is located between the waste pit road and this southern berm. Stormwater crosses beneath the waste pit road near the southwest corner of pit 4. Several cubic yards of rip-rap have been placed in the area at the southwest corner of pit 4 and the rip-rap has mitigated any further erosion in this area. However, the remainder of the southern perimeter of the pit continues to be exposed to stormwater drainage.

The erosion appears to have been caused by stormwater runoff from the surface liner of pit 4, as well as by high rates of stormwater flow through the drainage ditch. The area of impact presently extends up to three feet into the southern face of the pit 4 berm in some areas. The erosion of the berm prohibits establishment of substantial vegetative growth in this area of the berm.

Groundwater monitoring wells 1021 and 2021 are located at the southern berm of pit 4. Results from these wells have consistently shown elevated levels of uranium and other contaminants.

It is clear from the visual inspections of the berm that stormwater erosion has the potential to cause the migration of contamination from pit 4 to the surrounding environment. The potential for migration of contamination warrants the inclusion of this area in the RSE addendum.

Burn Pit Wind Erosion

The Burn Pit area has no vegetative cover. This area has previously been used as a roadway through the waste pit area. There is a potential for fugitive dust emissions from both wind erosion and traffic across the pit surface.

The CIS data was reviewed to determine the level of contamination on the surface of the burn pit. The data from the 0 to 1 foot portion of the six borehole samples is presented below.

Borehole No.	U-238 (pCi/g)	Th-232 (pCi/g)	Ra-226 (pCi/g)
7-01	7.0	1.6	2.1
7-02	10.6	3.1	1.1
7-03	191	4.5	1.2
7-04	223	2.7	1.5
7-05	10.3	1.4	0.8
7-06	72.9	1.8	2.2

The above data supports the potential of this area to contribute to fugitive emissions from the waste pit area. The potential for migration of contamination warrants the inclusion of this area in the RSE addendum.

Vegetation Cover on Pits

There are numerous areas of the surface of Pits 1, 2, and 3 which currently contain no vegetation cover. The reason for the lack of vegetation in these areas is not clearly understood. Possible explanations include; higher than average radiation levels in these areas, migration of waste pit contamination to the surface of the pits, and periodic standing water.

The lack of vegetation on these areas may result in increase contamination of stormwater run-off from these areas and possible fugitive dust windbourne emissions from the surface (if higher levels of surface contamination exist). The potential for migration of contamination is grounds for including this area in the RSE addendum.

Weston Road Area

On April 13 and 14, and May 16 and 17, radiological surveys were conducted on portions of the dirt roadway which runs from south to west on the border of the Waste Pit Area (commonly known as the Weston Road). Preliminary results from the surveys are shown in the table below.

DATE	AREA	Highest DPM/100 cm^2 Beta/Gamma	COMMENTS
4/13/92	Area near dirt pile and near gate W-31	42,000	Highest value in dirt, range ??? - 42,000
4/14/92	In run-off ditch near gate W-31	18,000	Highest value on acid brick, range 2,000 - 18,000
5/16/92	Roadway from entry to WPA to Gate W-31	< MDA	All values less than 100 cpm above background
5/17/92	Roadway from entry to WPA to Gate W-31	< MDA	All values less than 100 cpm above background

Most areas surveyed were below minimum detectable activity (MDA). Compared to the levels of radiological contamination in the waste pit area, as discussed in the original RSE, these above results do not indicate that an imminent threat exists as a result of this contamination.

Further, the potential for migration of this contamination is mitigated by the recently completed Stormwater Runoff Control Removal Action. Stormwater runoff from this area is now captured and collected and routed through the stormwater retention basin system. This water no longer routinely flows to Paddy's Run.

Even though a response under CERCLA is not considered appropriate at this point, additional sampling and analysis (including a subsurface investigation) will be performed in this area. The results of this sampling effort will be added to the administrative record for this removal action.