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OPERATION PROCEDURE FOR THE REMOVAL AND RELOCATION OF OFF-SITE CONTAMINATED SOILS TO CONTROLLED, ON-SITE AREAS JUNE 19, 1989

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OPERATION PROCEDURE

for the

REMOVAL and RELOCATION

of

OFF-SITE CONTAMINATED SOILS

to

CONTROLLED, ON-SITE AREAS

June 19, 1989

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Offsite Soils Removal Procedure

Removal Criteria:

The removal criteria is designated as soils containing 30 pCi/gm (45 ppm) total uranium, and/or 10 pCi/gm (46 ppm) total thorium. Soils exhibiting activity at or above the designated criteria will be removed and relocated to a controlled, on-site area. Soils exhibiting activity levels below the designated criteria do not require removal and relocation.

Excavation Drawings / Specifications:

Excavation drawings shall be prepared, and shall clearly show the following information:

1. The areas where the characterization sampling has been performed, including the location of the characterization grid points.

2. The areas where contaminated soils are located, based on the characterization analysis results.

3. The areas that require excavation, based on the designated criteria.

4. The depth of the required excavation, in inches.

5. An estimate of the amount of soil requiring removal, based on 3 & 4 above.

Attachment I of this procedure is a copy of the excavation drawing to be utilized for the off-site soils located near manhole 180. The excavation will be performed using the full sized drawings, The copies attached are for reference only.

Procedure:

A project manager shall be appointed to oversee all phases of the removal action, and will have total project control. The project manager will be responsible for the coordination of field operations, and must be present at the excavation area during all off-site activities.

A Radiological Services (R.S.) technician will be designated, and present at the offsite area, during all operations conducted in the vicinity of the excavation.

Mechanical laborers will be on hand to help with area and equipment decontamination as needed.

Offsite Soils Removal Procedure

Procedure: (cont'd)

The cleanup activities will not commence until a period of continuous dry weather, not less than 24 hours in duration, has elapsed.

The basic concept for this removal action is to take a back-hoe and a dump truck to the contaminated area, load the soil into the truck, and move the soil to an on-site designated location, and unload it. The excavated area, off-site, will then be sampled to be certain that the contamination has reduced to concentrations below the designated criteria for soil removal, certified as such, and then back-filled by a independent subcontractor, using uncontaminated dirt. During the time period after the excavation has been accomplished, but prior to receiving the certification sampling results, The excavated area will be roped off, and warning signs shall be placed around the roped off area. The certification samples shall be given the highest priority for analysis, in the laboratory.

Staging:

The dump truck and backhoe may require decontamination prior to leaving the site to retrieve the dirt. The project manager and the R.S. technician will also travel to the site, and be present during all off-site operations. All equipment and personnel will be monitored by the R.S. technician prior to leaving the site, and again after the soil has been loaded, but prior to transporting it back to the on-site location. The equipment will not leave the site, or the off-site excavation area until the R.S. technician has approved the vehicles for off-site transport. The dump truck bed will be lined with a suitable waterproof liner to prevent dirt or water from spilling out during transport. Additionally, the contaminated dirt shall be covered with a tarpaulin during transport. The monitoring, truck bed liner, and tarpaulin will insure that the contamination within the dirt will not be dispersed during transport. All monitoring done by the R.S. technician will conform to current standards and practices currently in use, for release of vehicles from the site. Once all vehicles are released by the R.S. technician they will be staged in the WMCO parking lot, with the project Manager leading the group.

Protective Equipment:

Personnel will wear clean brown coveralls, safety glasses, hard hats, gloves and safety shoes.

Transportation:

During transport to and from the excavation area, all safety precautions will be taken to protect the operators and the public. Vehicles will use flashers and all personnel will wear seat belts.

Offsite Soils Removal Procedure

Procedure: (cont'd)

Excavation:

At the excavation site, the mechanical laborers will measure and stake out the area to be excavated, under the direction of the project manager. Dust suppression will be performed using a pressurized water sprayer before the excavation begins, and as necessary during the operation.

Excavation will be done according to the excavation drawings prepared and approved for the removal action. The project manager has the ultimate responsibility for guiding and controlling the excavation progress. If the site in question is considered a Class III site, as is manhole 180, the soils will be sandy with gravel. It is also the responsibility of the project manager to determine when the excavation is sufficient to comply with the excavation drawings, since Class III soils tend to collapse back into any hole created during excavation.

Spillage of soil during the excavation/loading process will be cleaned up by the mechanical laborers, using shovels, brushes, etc.

Off-site Monitoring:

After the area is excavated, but prior to returning to the FMPC, the R.S. technician will again monitor the equipment. Decontamination of the equipment will be performed by the mechanical laborers, to the satisfaction of the R.S. technician and the project manager. Any soils removed in the decontamination process will be placed into the dump truck, for transport to the site. After decontamination, a tarpaulin will be placed over the contaminated soils, secured, and the equipment will return to the FMPC, with the project manager following behind the back-hoe and dump truck to make certain that none of the contaminated material is dropped in transit (all precautions will be taken to prevent in-transit spillage). Any material that is dropped will be cleaned up immediately by the mechanical laborers, and the area of the spillage will be certified clean by the R.S. Technician.

Certification Methodology:

After the excavation area has been determined, and the excavation drawings completed, a certification sampling drawing will be created. The drawing will show the exact locations where certification samples will be taken, within the excavation area. Attachment II shows the certification sampling points for this removal action.

Offsite Soils Removal Procedure

Certification Methodology: (cont'd)

The samples will be 6 inch long plug samples from the first 6 inch depth of newly exposed soil, within the excavation area. The samples will be processed utilizing normal laboratory procedures.

Certification Criteria:

The criteria for certification of the excavated area is designated as the same as the removal criteria: 30 pCi/gm (45 ppm) total uranium, and/or 10 pCi/gm (46 ppm) total thorium. The excavated area will be sampled according to the certification drawing as mentioned above.

Soil Replacement:

After the excavated area has been certified to be below soil removal standards, the area must be back-filled to its original configuration, or as closely as possible. The back-filling process shall be done by an independent subcontractor, utilizing an off-site supply of dirt. The subcontractor will supply the back-fill dirt as part of, and stipulated in, the subcontract. Additionally, the subcontract will stipulate that the excavated and back-filled area shall be returned to its original condition, by seeding (where possible) or by the use of sod (if the contours are such that seeding would not work quickly enough to prevent severe erosion. The seeding or sod placement materials will be supplied by and the labor done by the subcontractor, as part of the subcontract.

It is the responsibility of the project manager, or a representative designated by the project manager, to arrange and award a subcontract to handle the back-fill/restoration activities. It should be arranged such that the subcontractor is ready to begin back-filling/restoration operations as soon as certification of the excavated area has been received.

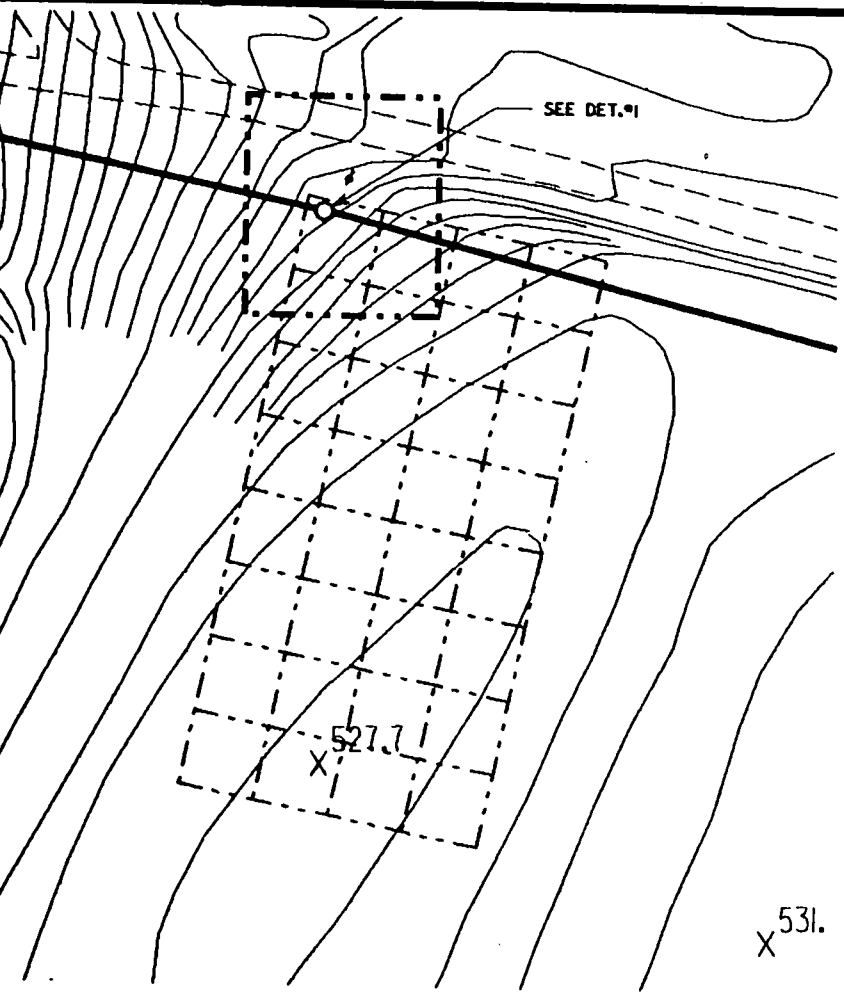
Owner Acceptance:

It shall be the responsibility of the project manager, or a representative designated by the project manager, to meet with and obtain the acceptance form signature of the property owner. Attachment III is a copy of the release form required for acceptance by the property owner. The project will not be considered complete until the property owner has signed the release form, indicating acceptance of the property.

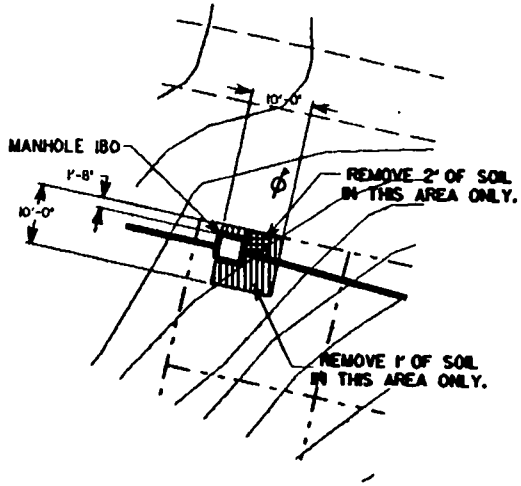
Offsite Soils Removal Procedure

Relocation of Removed Soils:

Soils removed from the off-site, excavated area, will be transported to a designated on-site location, and handled according to current standard operating procedures for moving soils within the site boundaries. It is the responsibility of the project manager to make sure that a designated location for placement of the contaminated soils is determined prior to the start of removal operations. The designated area for soil disposition is the west dirt pile north of plant 1.



LOCATION MAP



DETAIL #1

SOIL REMOVAL

$10' \times 10' \times 1' = 100 ft^3$

$5' \times 5' \times 1' = 25 ft^3$

TOTAL = $125 ft^3$

ATTACHMENT I

PRELIMINARY

REVISIONS	DATE	DRN. BY	APPD.	NO.	REVISIONS	DATE	DRN. BY	APPD.	REF. DWG. NO.

NOTE: WMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

WESTINGHOUSE MATLS CO. OF OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY

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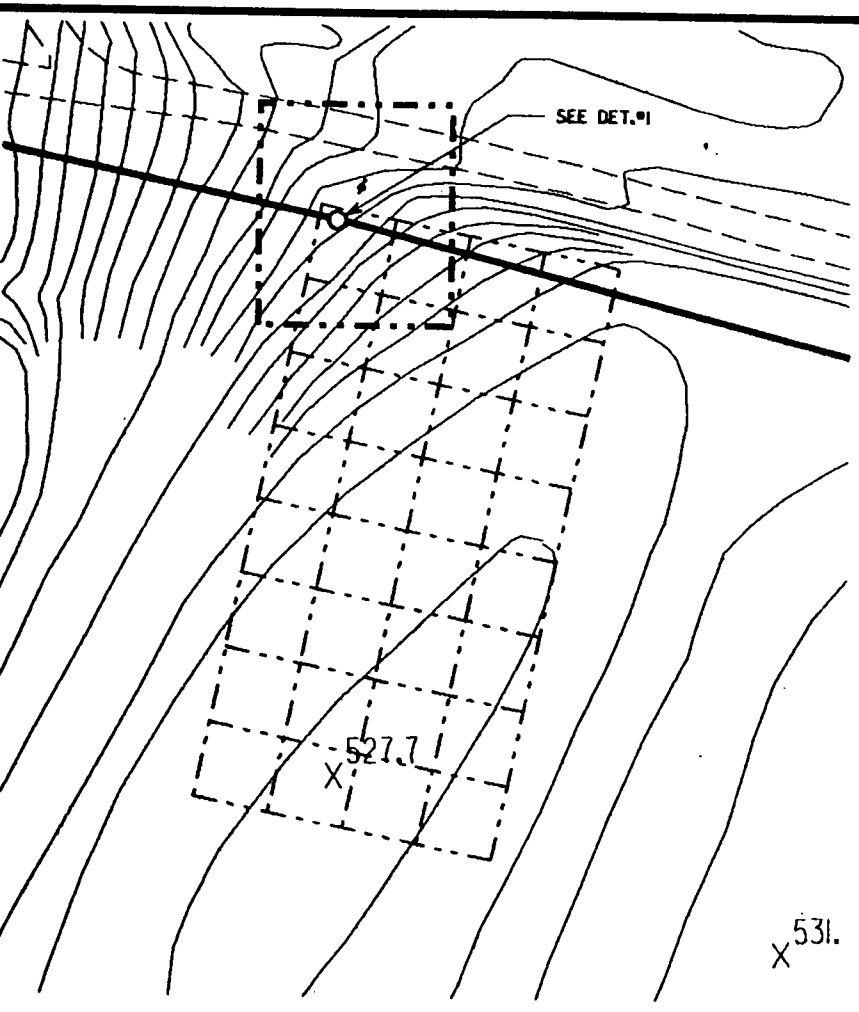
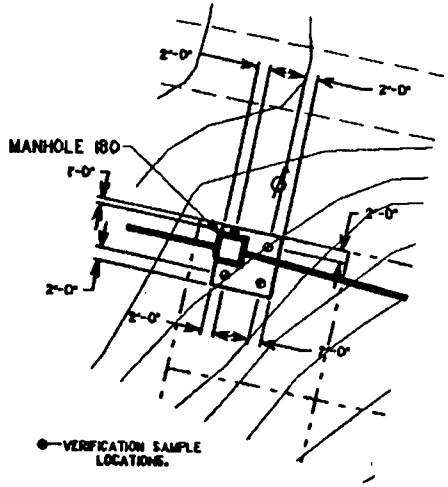
FILE mark



LOCATION MAP



DETAIL #1

ATTACHMENT II

PRELIMINARY

REVISIONS	DATE	DSN. BY	APPD.	NO.	REVISIONS	DATE	DSN. BY	APPD.	REF. DWG. NO.

NOTE: WinCD C.A.D. DRAWING NOT TO BE REVISED MANUALLY

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Attachment III

PROPERTY OWNER RELEASE FORM

I, _____, hereby certify that I have inspected the area that previously contained contaminated soils, and that the area has been "restored" to my satisfaction. I further agree that I have reviewed the certification sampling results presented to me, as proof of the results of the soils removal action, and concur that the contaminated soils have been removed from the area. By virtue of my signature below, I agree that no further restoration activity is necessary for the excavated and restored area, as described below, at this time.

Description of Area Excavated & Restored:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____

(Property Owner's or Representative's Signature) (Date)

_____ _____

WMCO Representative's Signature (Date)