U. S. ENVIRONMENTAL PROTECTION AGENCY

REGION ___

POTENTIAL HAZARDOUS WASTE SITE

SITE INSPECTION REPORT

SITE IDENTIFICATION

Site number (obtain from Headquarters) 000000050

Site Name Weldon Springs Chemical Plant (Buildings, Land, Ash Pan and Raffinate Pits)

Street (or other) identifier) Mo. 94 2 miles S. of U.S. 40

City, State, Zip

County Name St. Charles County, Missouri

Operator of Site U.S. Army 169 Acres - Buildings and Land : Armament Command FTS 367-6982 Telephone

Street

City, State, Zip Rock Island Arsenal, Illinois 61201

Owner of Realty (if different from operator of site) Kansas City Engineering District, 816-374-3450 Telephone

City, State, Zip U.S. Army Corps of Engineers

Site Description Former DNT-TNT Plant; Former Uranium Feed Materials Production Plant

Ownership /X/ Federal /__/ State /__/ County /__/ Municipal /__/ Private

Fill in pages 2 through 13 of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition.

Estimate date of Tentative Disposition unknown

Apparent seriousness of problem /__/ High /__/ Medium /X/ Low /__/ None

File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate supplemental forms in the file. Submit a copy of the forms to:

Site Tracking System
Hazardous Waste Enforcement Task Force
U. S. Environmental Protection Agency
401 M Street SW (EN335)
Washington, D. C. 20460

Prepared by Richard Kaufman

Telephone 374-3307

Date Nov. 1, 1979

Form 2-GPS Revised 10/18/79

INSPECTION INFORMATION

Principal Inspector: DOE & US Army & Contractor EG&G

Organization

US Army Toxic & Hazardous Materials Agency Aberdeen Md: 301-671-34[illegible]

Title

Area Code and Telephone

INSPECTION PARTICIPANTS

Names

Organization

Telephone

SITE REPRESENTATIVES INTERVIEWED (Corporate Officials, Workers, Residents)

Names: E. L. Keller

Title/Telephone: Director, Technical Services, DOE FTS 626-0947

Address: POBE Oak Ridge, Tennessee 37830

Names: Andrew W. Anderson

Title/Telephone: U.S. Army Toxic and Hazardous Materials Agency 301-671-3434

Address: Aberdeen Proving Ground, Maryland 21010

GENERATOR INFORMATION (List sources of waste)

Names

Telephone: TNT/DNT: U.S. Army

Address: Uranium/Thorium: AEC/ERDA

Waste Type Generated

TRANSPORTER/HAULER INFORMATION

Names: US Army

Telephone: AEC/ERDA

Address

Waste Type Transported

If waste is processed on site and also shipped to other sites, identify off-site facilities used for disposal:

Names: planned disposal of Raffinate Pit solid waste

Telephone: to Cotter Corporation, Canon City, Colorado

Address

INSPECTION INFORMATION (Continued)

Date of Inspection _____ Time of Inspection _____

Access gained by /__/ Permission /__/ Warrant
(Credentials must be shown in all cases)

Weather _____

SAMPLING INFORMATION

Check off the types of samples taken and indicate where they have been sent e.g. regional lab, other EPA lab, contractor, etc. and estimate when the results will be availabl

SAMPLE TYPE	COLLECTED	REMARKS	ESTIMATE DATE THAT RESULTS WILL BE AVAILABLE
Groundwater	/__/ Yes		
Surface Water	/X/ Yes	Excess Radium detected in water from past	
Waste	/__/ Yes	Refinate Pits - 10 to 200 pc/l	
Air	/__/ Yes		
Runoff	/__/ Yes		
Spill	/__/ Yes		
Soil	/X/ Yes	TNT/DNT contamination found in ppb	
Vegetation	/__/ Yes		
Other_____	/__/ Yes		

FIELD MEASUREMENTS TAKEN (E.g. radioactivity, explosivity, PH, etc.)

Type	Location of Measurements	Results
Radiological Survey	Aerial	Nov. 1975 - residual radioactivity over background detected.
Radiological Survey	Soil	March 1976 - residual radioactivity over background detected

Photos Taken /X/ Ground /X/ Aerial Photos in custody of In Assessment Study of Site, March 1976, US Army.

Site Mapped /X/ Yes Location of Maps EPA Kansas City, HAZM, has a

Latitude /3/8/ deg /3/0/ min /__/__/ sec Longitude /9/0/__/ deg /3/7/ min /__/__/ sec

SITE INFORMATION

/_/ ACTIVE — Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.

/X/ INACTIVE — Those sites which no longer receive wastes.

/_/ OTHER — Specify: _____
Those sites resulting from incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.

GENERATOR ON SITE No /X/ Yes /_/ If yes, specify generator's SIC Code /_/_/_/_

Area of Site 219 Acres

Are there buildings on the site No /_/ Yes /X/ If yes, specify 8 major 36 minor

CHARACTERIZATION OF SITE ACTIVITY

Check off one or more of the activities below:

/_/ TRANSPORTER	/X/ STORER	/_/ TREATOR	/X/ DISPOSER
/_/ Rail	/_/ Pile	/_/ Filtration	/_/ Landfill
/_/ Ship	/X/ Surface Impoundment	/_/ Incineration	/_/ Landfarm
/_/ Barge	/_/ Drums	/_/ Volume Reduct	/X/ Open Dump
/_/ Truck	/X/ Tank, Above Ground	/_/ Recycling/ Recovery	/_/ Surface Impoundment
/_/ Pipeline	/_/ Tank, Below Ground	/_/ Chem/Phys Treatment	/_/ Midnight Dumping
/_/ Other _____	/X/ Other Contaminated Buildings and Equipment	/_/ Biological Treatment	/_/ Incineration
		/_/ Waste Oil Reprocessing	/_/ Underground Injection
		/_/ Solvent Recovery	
		/_/ Other	/_/ Other

SUPPLEMENTAL FORMS

If the site falls within any of the categories listed below, supplemental forms must be filled out. Indicate which supplemental forms you have filled out and attached to this form:

/_/ Storage	/_/ Incineration	/_/ Landfill
/X/ Surface Impoundment	/_/ Deep Well	/_/ Chem/Bio/Phys Treatment
/_/ Landfarm	/_/ Open Dump	/_/ Transporter
/_/ Recyclor/Reclaimer		

WASTE RELATED INFORMATION

WASTE TYPE:

/X/ LIQUID /X/ SOLID /__/ SLUDGE /__/ GAS

WASTE CHARACTERISTICS:

/__/ CORROSIVE /__/ IGNITABLE /X/ RADIOACTIVE /__/ HIG

/X/ TOXIC /__/ REACTIVE /__/ INERT /X/ FL

/__/ OTHER SPECIFY _____

WASTE CATEGORIES:

Are records of wastes available? Specify items such as manifests, inventories, etc:

Partial. Stored at DOE Technical Services (Oak Ridge Tennessee) and on-site.

Estimated amount of waste by category and specify details below:

SLUDGE	OIL	SOLVENTS	CHEMICALS	SOLIDS	OTHER
_____	less than 1000 gallons	_____	unknown	6 million	20 mil
amt & unit	amt & unit	amt & unit	amt & unit	amt & unit cubic feet	amt & gallons
/__/ Paint, Pigments	/X/ Oily Wastes	/__/ Halogenated Solvents	/__/ Acids	/__/ Flyash	/__/ L
/__/ Metals Sludges	/__/ Other Heavy Contaminated with Uranium	/__/ Non-halogntd Solvents	/__/ Pickling Liquors	/__/ Asbestos	/__/ H
/__/ POTW		/__/ Other _____	/__/ Caustics	/__/ Milling	/__/ R
/__/ Alum Sldg			/__/ Pesticides	/__/ Mine Tailings	/__/ M
/__/ Other _____			/__/ Dyes/Inks	/__/ Ferrous	/__/ C
			/__/ Cyanides	/__/ Non-ferr	S
			/__/ Phenols	/X/ Other Raffinates	Rad Contam Water
			/__/ Halogens		
			/__/ PCB		
			/__/ Metal Solvents		
			/X/ Other Uranium Oxides and Fluorides in Buildings.		

LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE: (place in descending ord

	Substance	Form (Solid, Liq, Vapor)	Toxicity (High, Med, Low, None)	CAS Number	Amount and Unit
1	Uranium	Solid	Medium	7440-61-1	150 tons in Pits + Content in [illegible]
2	Thorium	Solid	High	7440-29-1	75 tons.
3	Radium	liquid	High	none	unknown
4	TNT	Solid	High	118-96-7	unknown
5	DNT	solid		25321-14-6	unknown
6	Nitrates	liquid	Low		
7					
8					

HAZARD DESCRIPTION

FIELD EVALUATION	HAZARD DESCRIPTION	REMARKS
Check below if "yes"		
/X/	Human Health Hazards	
/__/	Non-Worker Injury/Exposure	
/__/	Worker Injury/Exposure	
/__/	Contamination of Water Supply	
/__/	Contamination of Food Chain	

HAZARD DESCRIPTION

FIELD EVALUATION	HAZARD DESCRIPTION	REMARKS
Check below if "yes"		
/__/	Contamination of Ground Water	
/__/	Contamination of Surface Water	
/__/	Damage to Flora/Fauna	
/__/	Fish Kill	
/__/	Contamination of Air	

HAZARD DESCRIPTION

FIELD EVALUATION	HAZARD DESCRIPTION	REMARKS
Check below if "yes"		
/__/	Noticeable Odors	
/X/	Contamination of Soil	
/__/	Property Damage	
/__/	Fire or Explosion	
/X/	Spills/Leaking Containers/Runoff Standing Liquid	

HAZARD DESCRIPTION

FIELD EVALUATION	HAZARD DESCRIPTION	REMARKS
Check below if "yes"		
/__/	Sewer, Storm Drain problems	
/__/	Erosion Problems	
/__/	Inadequate Security	
/__/	Incompatible Wastes	
/__/	Midnight Dumping	

HAZARD DESCRIPTION

FIELD EVALUATION	HAZARD DESCRIPTION	REMARKS
Check below if "yes"		
/__/	Other - Specify	

POPULATION DIRECTLY AFFECTED BY SITE:

	Approximate number of People Affected	Within unit Area	Approximate Number of Buildings Affected	Distance to Site
In residential areas	240			2 mile
In commercial or industrial areas	Road Maintenance unknown		1	1/2 mile
In publicly travelled areas	unknown			Highway adjacent
Public Use Areas (Parks, Schools, etc.)	School 2000 park unknown		1	1/2 mile adjacent

WATER AND HYDROLOGICAL DATA

Depth to Groundwater minimum 60' beneath

Direction of Flow localized

Groundwater use in vicinity Raffinate Pits unknown

Potential yield of Aquifer unknown

Distance to Drinking Water Supply 3 miles to nearest known well

Direction to Drk Wtr Suppl South

Type of Drinking Water supply /__/ Non-Community < 15 connections /X/ Community (Town of St. Charles County u >15 connections

/__/ Surface Water /__/ Well

List all drinking water wells within 1/4 mile radius of site:

Well	Depth	Location (proximity to population/buildings)	Non-Communit
		Unknown	/__/
			/__/
			/__/
			/__/
			/__/

Receiving Waters /__/ Sewers /X/ Streams/Rivers

Name Missouri and Mississippi Rivers /__/ Lakes/Reservrs /__/ Other

Specify use and classification of receiving waters Navigable Streams

SOIL AND VEGETATION DATA

Location of Site is in:

/__/ Known Fault Zone

/__/ Karst Zone

/__/ 100 Year Floodplain

/__/ Wetland

/__/ A Regulated Floodway

/__/ Critical Habitat

/__/ Recharge Zone or Sole Source Aquifer

TYPE OF GEOLOGICAL MATERIAL OBSERVED

/X/ Overburden	/X/ Bedrock (specify)	/__/ Other (specify)
/__/ Sand	limestone	
/X/ Clay		
/__/ Gravel		

SOIL PERMEABILITY

/__/ Unknown

/__/ Moderate (10 to .1 ft/day)

/__/ Very High (100000-1000 ft/day)

/__/ Low (.1 to .001 ft/day)

/__/ High (1000-10 ft/day)

/X/ Very Low (.001 to .00001 ft/day)

Recharge Area /__/ Yes /X/ No Comments: Under tailings pits

Discharge Area /X/ Yes /__/ No Comments: 3 small streams cross surface

Slope (estimate % of slope) unknown Specify direction of slope, condition of slope, etc.

Other Geological Data See U.S. Army Assessment study, March 1976

PERMIT INFORMATION

List all Applicable Permits held by the site:

Permit Type (E.g. RCRA, State, NPDES, etc)	Issuing Agency	Permit Number	Date Issued	Expirtn date	In Compliance Yes	No	Un
Radioactive Material Storage	NRC	SMB 1314	1977		/_/	/X/	/
					/_/	/_/	/
					/_/	/_/	/
					/_/	/_/	/
					/_/	/_/	/
					/_/	/_/	/

PAST REGULATORY OR ENFORCEMENT ACTIONS

/__/ None

/X/ Yes If yes, summarize: NRC amended permit in May 1977 to require Buildings Decontamination and Decommission Plan by Nov. 15 1979

Based on the information on pages 2 through 13, fill out the projected date of the Tentative Disposition on the first page of this form.

SUPPLEMENTAL FORM

SURFACE IMPOUNDMENTS

Answer and Explain as Necessary:

1. Type of Impoundment 4 Raffinate Pits
   1 Ash Pit

2. Stability/Condition of Imbankments: slide observed and repaired on Pit #4 in 1975

3. Evidence of Site Instability (Erosion, Settling, Sink Holes, etc.)
   Yes ( ) No (X)

4. Evidence of Disposal of Ingnitable or Reactive Waste
   Yes ( ) No (X)

5. Waste Compatible with Impoundment Yes (X) No ( )

6. Records Checked for the Contents and Location of Each Surface Impoundment Yes (X) No ( )

7. Impoundment has Liner System Yes ( ) No (X)

   Integrity of Liner System Checked Yes ( ) No ( )

   Findings:

8. Soil Structure and Substructure Clay over limestone

9. Monitoring Wells Yes (X) No ( )

10. Length, Width and Depth Combined estimated surface area greater than 100 acre

11. Calculated Volumetric Capacity unknown

12. Percent of Capacity Remaining unknown

13. Estimate Freeboard: unknown

14. Solids Deposition Yes (X) No ( )

15. Dredging Disposal Method

16. Other Equipment