

3234

**REMOVAL SITE EVALUATION REMOVAL OF
TANK #5/CONCRETE FOUNDATION FORM THE
GENERAL SUMP APRIL 1992**

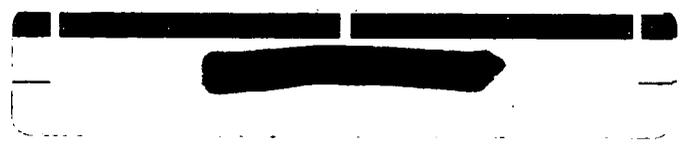
04-01-1992

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ENCLOSURE

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**REMOVAL SITE EVALUATION
REMOVAL OF TANK #5/CONCRETE FOUNDATION
FROM THE GENERAL SUMP**

Fernald Environmental Management Project
U. S. Department of Energy

APRIL 1992

Removal Site Evaluation
Completion of Construction General Sump

INTRODUCTION

The General Sump project is a subproject of the Product Retention Project (PRP) and is the final treatment facility for processing sitewide effluents prior to discharge to the Great Miami River. The General Sump is capable of treating effluents from the entire Fernald plant by the addition of lime. Following any lime addition, solids are allowed to settle and the sludges are pumped to Plant 8 for filtration. The decanted liquors are then sent to the Great Miami River.

The 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 Contingency Plan (NCP). This RSE addresses the removal of Tank #5/Concrete Foundation from the General Sump Construction project.

SOURCE AND NATURE OF THE THREAT OF A RELEASE

The construction of the General Sump project consists (in part) of removing Tank #5 and part of the concrete foundation. The tank and foundation are contaminated with above background levels of uranium. The attached Lab Analysis Report of samples taken and the table listed in the next section identifies the levels of the potential threat of release of airborne particulates to the atmosphere. No indication is present that any debris from this action will exceed 100 pci/g, as proposed in the Soil & Debris Removal Work Plan #17 (see attached analysis).

EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

The remaining material to be demolished from the General Sump consists of one (1) Tank (Number 5) 20' dia x 20' high x 3/8" steel, concrete foundation, and miscellaneous steel pipe. The foundation will be re-grouted back to grade and reduced in size, in order to accept new Tank #15 to be erected. The attached Lab Analysis Report for the field samples and the table below show the isotopic level and concentration of the above background contamination.

<u>SAMPLE #</u>	<u>MATERIAL SAMPLED</u>	<u>URANIUM CONCENTRATION PPM</u>	<u>THORIUM CONCENTRATION PPM</u>	<u>% ENRICHMENT</u>
91-058-2649	Concrete	28	< 18	0.89
91-058-2650	Sand	47	< 18	0.89
91-058-2651	Concrete	31	< 18	0.88
91-058-2652	Sand	<18	< 18	0.84
91-058-2653	Concrete	121	< 18	0.83
91-058-2654	Sand	<11	< 18	
91-058-2657	Paint	18	< 45	

1698

**Removal Site Evaluation
Completion of Construction General Sump**

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The potential threat posed by the above background levels of contamination within the material is the airborne particulate that could be released to the atmosphere during the demolition process.

This construction project is located in the area of 101 and B Street in the controlled area of the FEMP site. All demolition activity will be controlled by FEMP Site Standard Operating Procedure SSOP-0044I, "Disposition Requirements for Radiologically Contaminated and U Contaminated Construction/Maintenance Waste." In order to minimize the threat of worker exposure and the threat of airborne particulate released to the atmosphere, the following measures will be used.

1. Physical barriers around the work area.
2. Protective clothing/filtered face mask for workers, as required.
3. Radiation monitoring during demolition process and placing rubble in waste containers.
4. Portable vacuum equipped with HEPA filter at the work point during demolition process.
5. Since the metal cannot be decontaminated it is classified as metal refuse. It shall be packaged into approved waste containers per SSOP-0044I.

The dressout in protective clothing/filtered face mask, vacuum filtration at the work point, and packaging and sealing waste containers at the work area, will all minimize the threat of worker exposure and the potential insult to the environment. All work will be controlled by radiation/penetration permits and monitoring will verify containment of contamination within the work area.

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). The following apply specifically to the construction project involving the removal of Tank #5/Concrete Foundation from the General Sump.

40 CFR 300.415(b)(2)(i)

Actual or potential exposure to hazardous substances or pollutants or contaminants to nearby populations, animals, or food chain.

Removal Site Evaluation
Completion of Construction General Sump

40 CFR 300.415(b)(2)(iii)

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or bulk storage containers, that may pose a threat of release.

These factors are considered appropriate as a result of the potential exposure to or potential of contaminants during the construction project involving the removal of Tank #5/Concrete Foundation from the General Sump.

APPROPRIATENESS OF A RESPONSE

If it is determined that a response action is appropriate due to potential exposure to or threat of release of contaminants or hazardous substances, a removal action may be required to address the existing situation.

If a planning period of less than six months exist 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 to 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 administration record.

Based on the evaluation of all the above factors, it has been determined that existing controls for the planned action are adequate and a removal action is not required.

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

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Analysis ID: 910604-017 Project: 1315 000 Customer Sample ID: 91-058-2649
Customer: ENV. CHAR & SURV. Acquisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D. RACK Data Sample Completed:
Material Description: GEN SUSP PROJ. - CONCRETE SP 1-C Charge Number: 68R01

iv. Ser Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
344 330044	U Activity Calc - 150 RAD	24	pCi/g	HR CHILES	4024-91-035	11-JUL-1991
405 4024	Th Activity Calc - 150 RAD	13.0	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-228 - 150 RAD	6.9	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-230 - 150 RAD	5.6	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-232 - 150 RAD	0.76	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
505 6006	U-233 - 150 TMS	<0.001	µCi/g	HR CHILES	4024-91-035	10-JUL-1991
6006	U-234 - 150 TMS	0.003	µCi/g	HR CHILES	4024-91-035	10-JUL-1991
6006	U-235 - 150 TMS	0.39	µCi/g	HR CHILES	4024-91-035	10-JUL-1991
6006	U-236 - 150 TMS	0.003	µCi/g	HR CHILES	4024-91-035	10-JUL-1991
6006	U-238 - 150 TMS	99.07	µCi/g	HR CHILES	4024-91-035	10-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

Analysis ID: 910604-017 Project: 1315 000 Customer Sample ID: 91-058-2649
Customer: ENV. CHAR & SURV. Acquisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D. RACK Data Sample Completed:
Material Description: GEN SUSP PROJ. - CONCRETE SP 1-C Charge Number: 68R01

v. Ser Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
905 9011	Total Th - XRF Anal.	<18	ppm	DM DRYDEN	7003-91-015	2-JUL-1991
9011	Total U - XRF Anal.	28	ppm	DM DRYDEN	7003-91-015	2-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

ANALIS ID: 910604-018 Project: 1315 0002 Customer Sample ID: 91-058-2650
Customer: ENV. CHAR & SURV. Requisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D.BACK Date Sample Completed:
Material Description: GEN SURF PROJ. - SAND SP 1-0 Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
330044	U Activity Calc - 150 KAP	27	pci/g	KA STEHART	4024-91-035	9-JUL-1991
4024	Th Activity Calc - 150 2A0	63.0	pci/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-228 - 150 KAP	22.0	pci/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-230 - 150 2A0	39.0	pci/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-232 - 150 KAP	2.0	pci/g	PJ STUY	4024-91-035	11-JUL-1991
6006	U-233 - 150 YAS	<0.001	wt % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-234 - 150 YAS	0.003	wt % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-235 - 150 YAS	0.39	wt % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-236 - 150 YAS	0.028	wt % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-238 - 150 YAS	99.08	wt % (U)	HR CHILES	4024-91-035	9-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

ANALIS ID: 910604-018 Project: 1315 0002 Customer Sample ID: 91-058-2650
Customer: ENV. CHAR & SURV. Requisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D.BACK Date Sample Completed:
Material Description: GEN SURF PROJ. - SAND SP 1-0 Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
9011	Total Th - XRF Anal	<13	ppm	OM DRYDEN	7003-91-015	2-JUL-1991
9011	Total U - XRF Anal	47	ppm	JK DRYDEN	7003-91-015	2-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

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Anal. ID: 910604-019 Project: 1315 0001 Customer Sample ID: 91-058-2651
 Customer: ENV. CHAK & SURV. Requisition Number:
 Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
 Sampled By: D. BACK Date Sample Completed:
 Material Description: GEN SWMP PROJ. - CONCRETE SP 2-C Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
9011	Total Th - XRF Anal.	<18	ppm	DM DRYDEN	7003-91-015	2-JUL-1991
9011	Total U - XRF Anal.	31	ppm	DM DRYDEN	7003-91-015	2-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

Anal. ID: 910604-019 Project: 1315 0001 Customer Sample ID: 91-058-2651
 Customer: ENV. CHAK & SURV. Requisition Number:
 Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
 Sampled By: D. BACK Date Sample Completed:
 Material Description: GEN SWMP PROJ. - CONCRETE SP 2-C Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
320044	U Activity Calc - ISO RAD	23	pCi/g	KA STRICKY	4024-91-035	9-JUL-1991
4024	Th Activity Calc - ISO RAD	13.0	pCi/g	PI STUY	4024-91-035	11-JUL-1991
4024	Th-230 - ISO RAD	5.4	pCi/g	PI STUY	4024-91-035	11-JUL-1991
4024	Th-230 - ISO RAD	5.4	pCi/g	PI STUY	4024-91-035	11-JUL-1991
4024	Th-232 - ISO RAD	0.72	pCi/g	PI STUY	4024-91-035	11-JUL-1991
6006	U-233 - ISO TNS	<0.001	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-234 - ISO TNS	0.006	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-235 - ISO TNS	0.03	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-236 - ISO TNS	0.033	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-238 - ISO TNS	99.03	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

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MSSE

ANALYSIS ID: 910604-020 Project: 1315 0002 Customer Sample ID: 91-058-2652
Customer: ENV. CHAR & SURV. Requisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D.BACK Date Sample Completed:
Material Description: GEN SUIMP PROJ. - SAND SP 2-0 Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
4 330044	U Activity Calc - 1SD RAD	8.0	pCi/g	KA STEPHAN	4024-91-035	9-JUL-1991
5 4024	Th Activity Calc - 1SD RAD	2.6	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-228 - 1SD RAD	0.85	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-230 - 1SD RAD	1.4	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
4024	Th-232 - 1SD RAD	0.42	pCi/g	PJ STUY	4024-91-035	11-JUL-1991
5 6006	U-233 - 1SD TMS	<0.001	WT % (U)	RR CHILES	4024-91-035	9-JUL-1991
6006	U-234 - 1SD TMS	0.005	WT % (U)	RR CHILES	4024-91-035	9-JUL-1991
6006	U-235 - 1SD TMS	0.34	WT % (U)	RR CHILES	4024-91-035	9-JUL-1991
6006	U-236 - 1SD TMS	0.026	WT % (U)	RR CHILES	4024-91-035	9-JUL-1991
6006	U-238 - 1SD TMS	20.12	WT % (U)	RR CHILES	4024-91-035	9-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

ANALYSIS ID: 910604-020 Project: 1315 0002 Customer Sample ID: 91-058-2652
Customer: ENV. CHAR & SURV. Requisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D.BACK Date Sample Completed:
Material Description: GEN SUIMP PROJ. - SAND SP 2-0 Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
5 9011	Total Th - XRF ANL	<18	ppm	DM DEYDEN	7003-91-015	2-JUL-1991
9011	Total U - XRF ANL	<11	ppm	DM DEYDEN	7003-91-015	2-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

ANALIS (O: 910604 021 Project: 1315 0001 Customer Sample ID: 91-058-2653
Customer: ENV. CHAR & SURV. Requisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D.BACK Date Sample Completed:
Material Description: GEN SUMP PROJ. - CONCRETE SP 3-C Charge Number: 68601

Procedure No.	Analysis	Result	Units	Date Entered By	File Number	Date Completed
4024	U Activity Calc - (SO) RAD	89	pCi/g	HA STEWART	4024-91-035	9-JUL-1991
4024	Th Activity Calc - (SO) RAD	51.0	pCi/g	PI STUY	4024-91-035	11-JUL-1991
4024	Th-230 - (SO) RAD	9.5	pCi/g	PI STUY	4024-91-035	11-JUL-1991
4024	Th-230 - (SO) RAD	38.0	pCi/g	PI STUY	4024-91-035	11-JUL-1991
4024	Th-232 - (SO) RAD	3.1	pCi/g	PI STUY	4024-91-035	11-JUL-1991
6006	U-233 - (SO) TMS	<0.001	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-234 - (SO) TMS	0.006	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6005	U-235 - (SO) TMS	0.83	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6006	U-236 - (SO) TMS	0.019	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991
6005	U-238 - (SO) TMS	99.15	WT % (U)	HR CHILES	4024-91-035	9-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

ANALIS (O: 910604 021 Project: 1315 0001 Customer Sample ID: 91-058-2653
Customer: ENV. CHAR & SURV. Requisition Number:
Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
Sampled By: D.BACK Date Sample Completed:
Material Description: GEN SUMP PROJ. - CONCRETE SP 3-C Charge Number: 68801

Procedure No.	Analysis	Result	Units	Date Entered By	File Number	Date Completed
9011	Total Th - XRF ANL	<18	ppm	DM OXYOEN	7003-91-015	2-JUL-1991
9011	Total U - XRF ANL	121	ppm	DM IKYDIN	7003-91-015	2-JUL-1991

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

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1850
 ANALIS ID: 910604-024 Project: 1315 0003 Customer Sample ID: 91-058-2657
 Customer: ENV. CHAR & SUKV. Requisition Number:
 Date Sampled: 4-JUN-1991 Date Sample Received: 4-JUN-1991
 Sampled By: D.BACK Date Sample Completed:
 Material Description: GEN SUMP PROJ. - PAINT TK.5 Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
3002	U - BrPADAP AnL	18	ppm	JJ STOECKEL	1	19-JUL-1991
3059	Total Th - Color. AnL	<45	ppm	JJ STOECKEL	2	19-SEP-1991

AAAA Comments from the ENVIRONMENTAL & PROCESS MATERIALS LABORATORY for sample 910604-024 AAAAA

ed by L.Hartula

Westinghouse Materials Co of Ohio
Analytical Chemistry Department
Results of Analyses

ANALIS ID: 910605-117 Project: 1315 0003 Customer Sample ID: 91-058-2654
 Customer: ENV. CHAR & SUKV. Requisition Number:
 Date Sampled: 4-JUN-1991 Date Sample Received: 5-JUN-1991
 Sampled By: D.BACK Date Sample Completed:
 Material Description: GEN SUMP PROJ. - SAND SP 3-0 Charge Number: 68801

Procedure No.	Analysis	Result	Units	Data Entered By	QA File Number	Date Completed
9011	Total Th - XRF AnL	<18	ppm	DE DRYDEN	7003-91-016	15-JUN-1991
9011	Total U - XRF AnL	<11	ppm	DE DRYDEN	7003-91-016	15-JUL-1991

27-42 P.M.D.

TCT - St. Louis

General Comp
SP: 91-038
Case No. GBD 01

2 Copies - St. Louis
1 Copy - K. L. ...
C. C. C. C. C.

Consulting Engineers, Scientists and Analytical Services

1908 Innerbelt Business Center Drive
St. Louis, Missouri 63114-5700
Phone (314) 426-0880
Fax (314) 426-4212

January 22, 1992
3555-000160

3234

Ms. Donna Fisher
Westinghouse Environmental Management Company of Ohio
7400 Wiley Road
Fernald, Ohio 45030

Re: Summary Report of Analysis, Release No. 1022

Dear Ms. Fisher:

On December 13, 1991, TCT-St. Louis (TCTSL) received the following samples for analysis:

<u>TCTSL ID</u>	<u>WMCO ID</u>	<u>Collected</u>	<u>Matrix</u>	<u>TCLP/Total</u>
91007953	910605-117	12/11/91	SOIL	TCLP
91007954	911211-036	12/11/91	WATER	TCLP
91007955	911211-037	12/11/91	WATER	TCLP

The samples were analyzed in accordance with accepted USEPA protocols and the data are of known and documented quality.

The analytical bias correction, as prescribed in the June 29, 1990 Federal Register version of Method 1311, has not been applied to the TCLP results included in this release.

The required holding time was met for each sample analysis reported.

Volatile Organic (Method 8240)

These samples are contained in QC Lot Number VOA00AS1.

Sample 910605-117 was also examined for non-target compounds. Methylene chloride was identified and quantitated. No other non-target peaks were present above 10% of the internal standard areas.

The reported detection limits for Cyclohexanone and 2-Nitropropane have been raised to reflect current method detection limits.

TCT-St. Louis is pleased to be of service to you. If you have any questions, please call me at (314) 426-0880.

Sincerely,

Fred Grabau
Project Manager

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LABORATORY
DATA

WESTINGHOUSE TCLP ANALYSIS
3555-00160

3234

TCT SAMPLE NUMBER - 91007953
WACO SITE ID - 910605-117
DATE RECEIVED - 12/13/91

REPORT DATE - 01/22/91
MATRIX - SOIL
RELEASE NUMBER - 1022

91-058-2654
loc 3-0

TCLP VOLATILE ORGANICS
METHOD - 8240

1:5 DILUTION

DATE ANALYZED - 01/02/92
DATE ZHE EXTRACTED - 12/20/91
ASSOCIATED METHOD BLANK: MSA 1840

PARAMETER	DETECTION LIMIT	CONC. (UG/L)	REGULATORY LEVEL (UG/L)
BENZENE	25	ND	500
CARBON TETRACHLORIDE	25	ND	500
CHLOROBENZENE	25	ND	100000
CHLOROFORM	25	ND	6000
1,2-DICHLOROETHANE	25	ND	500
1,1-DICHLOROETHYLENE	25	ND	700
METHYL ETHYL KETONE	50	ND	200000
TETRACHLOROETHYLENE	25	ND	700
TRICHLOROETHYLENE	25	ND	500
VINYL CHLORIDE	50	ND	200
METHYLENE CHLORIDE	25	26.5	

SURROGATES	% REC
d8-TOLUENE	93
4-BROMOFLUOROBENZENE	87
1,2-DICHLOROETHANE-d4	90

WESTINGHOUSE TCLP ANALYSIS
3555-00160

3234

TCT SAMPLE NUMBER - 91007954
WMCO SITE ID - 911211-036
DATE RECEIVED - 12/13/91

REPORT DATE - 01/22/91
MATRIX - WATER
RELEASE NUMBER - 1022

TCLP VOLATILE ORGANICS
METHOD - 8240

1:5 DILUTION

DATE ANALYZED - 01/02/92
DATE EHE EXTRACTED - 12/20/91
ASSOCIATED METHOD BLANK: MSA 1840

PARAMETER	DETECTION LIMIT	CONC. (UG/L)	REGULATORY LEVEL (UG/L)
BENZENE	25	ND	500
CARBON TETRACHLORIDE	25	ND	500
CHLOROBENZENE	25	ND	100000
CHLOROFORM	25	ND	6000
1,2-DICHLOROETHANE	25	ND	500
1,1-DICHLOROETHYLENE	25	ND	700
METHYL ETHYL KETONE	50	ND	200000
TETRACHLOROETHYLENE	25	ND	700
TRICHLOROETHYLENE	25	ND	500
VINYL CHLORIDE	50	ND	200

SURROGATES

	% REC
d8-TOLUENE	96
4-BROMOFLUOROBENZENE	97
1,2-DICHLOROETHANE-d4	99

WESTINGHOUSE TCLP ANALYSIS
3555-00160

TCT SAMPLE NUMBER - 91007955
WMCO SITE ID - 911211-037
DATE RECEIVED - 12/13/91

REPORT DATE - 01/22/91
MATRIX - WATER
RELEASE NUMBER - 1022

3234

TCLP VOLATILE ORGANICS
METHOD - 8240

1:5 DILUTION

DATE ANALYZED - 01/02/92
DATE ZHE EXTRACTED - 12/20/91
ASSOCIATED METHOD BLANK: MSA 1840

PARAMETER	DETECTION LIMIT	CONC. (UG/L)	REGULATORY LEVEL (UG/L)
BENZENE	25	ND	500
CARBON TETRACHLORIDE	25	ND	500
CHLOROBENZENE	25	ND	100000
CHLOROPFORM	25	ND	6000
1,2-DICHLOROETHANE	25	ND	500
1,1-DICHLOROETHYLENE	25	ND	700
METHYL ETHYL KETONE	50	ND	200000
TETRACHLOROETHYLENE	25	ND	700
TRICHLOROETHYLENE	25	ND	500
VINYL CHLORIDE	50	ND	200

SURROGATES	% REC
d8-TOLUENE	96
4-BROMOPFCOROBENZENE	94
1,2-DICHLOROETHANE-d4	95

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ORGANIC
QUALITY CONTROL

WESTINGHOUSE WATER ANALYSIS
QUALITY CONTROL

3234

TCT SAMPLE NUMBER - 91007810
WMCO SITE ID - 911209-112

REPORT DATE - 01/22/92
QC SAMPLE - MATRIX SPIKE

TOTAL VOLATILE ORGANICS - METHOD 8240

DATE ANALYZED - 12/16/91

PARAMETER	PERCENT RECOVERY	QC LIMITS
ACETONE	79	D-271
BENZENE	101	37-151
CARBON DISULFIDE	101	56-115
CARBON TETRACHLORIDE	99	70-140
CHLOROBENZENE	99	37-160
CHLOROFORM	108	15-138
1,2-DICHLOROETHANE	98	49-155
1,1-DICHLOROETHYLENE	107	D-234
CYCLOHEXANONE	104	48-182
ETHYL BENZENE	101	37-162
ETHYL ACETATE	96	50-214
ETHYL ETHER	99	77-116
METHYL ETHYL KETONE	82	33-191
METHYL ISOBUTYL KETONE	101	40-173
METHYLENE CHLORIDE	97	D-221
2-NITROPROPANE	88	51-156
TETRACHLOROETHYLENE	105	64-148
TOLUENE	100	47-150
1,1,1-TRICHLOROETHANE	98	52-162
1,1,2-TRICHLOROETHANE	99	52-150
TRICHLOROETHYLENE	96	71-157
TRICHLOROTRIFLUOROETHANE	111	73-122
TRICHLOROFLUOROMETHANE	110	17-181
VINYL CHLORIDE	110	D-251
TOTAL XYLENES	103	87-111

SURROGATES	% REC
d8-TOLUENE	104
4-BROMOFLUOROBENZENE	101
1,2-DICHLOROETHANE-d4	99

WESTINGHOUSE WATER ANALYSIS
 QUALITY CONTROL

3234

TCT SAMPLE NUMBER - 91007810
 WMCO SITE ID - 911209-112

REPORT DATE - 01/22/92
 QC SAMPLE - MATRIX SPIKE
 DUPLICATE

TOTAL VOLATILE ORGANICS - METHOD 8240

DATE ANALYZED - 12/16/91

PARAMETER	PERCENT RECOVERY	QC LIMITS
ACETONE	135	D-271
BENZENE	99	37-151
CARBON DISULFIDE	102	56-115
CARBON TETRACHLORIDE	99	70-140
CHLOROBENZENE	100	37-160
CHLOROPFORM	111	15-138
1,2-DICHLOROETHANE	98	49-155
1,1-DICHLOROETHYLENE	106	D-234
CYCLOHEXANONE	106	48-182
ETHYL BENZENE	100	37-162
ETHYL ACETATE	94	50-214
ETHYL ETHER	102	77-116
METHYL ETHYL KETONE	115	33-191
METHYL ISOBUTYL KETONE	108	40-173
METHYLENE CHLORIDE	99	D-221
2-NITROPROPANE	89	51-156
TETRACHLOROETHYLENE	103	64-148
TOLUENE	101	47-150
1,1,1-TRICHLOROETHANE	99	52-162
1,1,2-TRICHLOROETHANE	96	52-150
TRICHLOROETHYLENE	98	71-157
TRICHLOROTRIFLUOROETHANE	106	73-122
TRICHLOROFLUOROMETHANE	110	17-181
VINYL CHLORIDE	110	D-251
TOTAL XYLENES	102	87-111

SURROGATES	% REC
d8-TOLUENE	106
4-BROMOFLUOROBENZENE	100
1,2-DICHLOROETHANE-d4	100

WESTINGHOUSE TCLP ANALYSIS
QUALITY CONTROL

3234

REPORT DATE - 01/22/91

WMCO SITE ID - METHOD BLANK
MSA 1840

TCLP VOLATILE ORGANICS
METHOD - 8240

DATE ANALYZED - 01/02/92

PARAMETER	DETECTION LIMIT	CONC. (UG/L)
BENZENE	5.0	ND
CARBON TETRACHLORIDE	5.0	ND
CHLOROBENZENE	5.0	ND
CHLOROPFORM	5.0	ND
1,2-DICHLOROETHANE	5.0	ND
1,1-DICHLOROETHYLENE	5.0	ND
METHYL ETHYL KETONE	10.0	ND
TETRACHLOROETHYLENE	5.0	ND
TRICHLOROETHYLENE	5.0	ND
VINYL CHLORIDE	10.0	ND

SURROGATES	REC
d8-TOLUENE	100
4-BROMOFLUOROBENZENE	95
1,2-DICHLOROETHANE-d4	94

WESTINGHOUSE TCLP ANALYSIS
 QUALITY CONTROL

REPORT DATE - 01/22/91

3234

WMCO SITE ID - TCLP BLANK
 OPA 6266

TCLP VOLATILE ORGANICS
 METHOD - 8240

1:5 DILUTION

DATE ANALYZED - 01/02/92
 DATE ZHE EXTRACTED - 12/20/92
 ASSOCIATED METHOD BLANK: MSA 1840

PARAMETER	DETECTION LIMIT	CONC. (UG/L)
BENZENE	25	ND
CARBON TETRACHLORIDE	25	ND
CHLOROBENZENE	25	ND
CHLOROPFORM	25	ND
1,2-DICHLOROETHANE	25	ND
1,1-DICHLOROETHYLENE	25	ND
METHYL ETHYL KETONE	50	ND
TETRACHLOROETHYLENE	25	ND
TRICHLOROETHYLENE	25	ND
VINYL CHLORIDE	50	ND

SURROGATES	% REC
d8-TOLUENE	95
4-BROMOFLUOROBENZENE	96
1,2-DICHLOROETHANE-d4	99



From: C. G. Rieman/6828

3234

WEMCO:EM(FME):92-148

Date: April 20, 1992

Subject: RCRA DETERMINATION AND RADIOLOGICAL CHARACTERIZATION FOR THE
GENERAL SUMP PROJECT (PROJECT NUMBER 00-86501)

To : Roy Cauley

- Ref:
1. WEMCO Site Standard Operating Procedure, SSOP-0044I "Controlling the Generation of Construction/Maintenance Waste", issued February 19, 1992
 2. Environmental Compliance Spill/Release Incident Tracking Report, dated April 1, 1992
 3. Upset Condition Documentation, issued September 18, 1990

This memo transmits the RCRA determination and radiological characterization for the construction waste to be generated for the General Sump Project, Project Number 00-86501. The waste to be generated consists of approximately 0.5 cubic yard of soil and sand, approximately 1.5 cubic yard of concrete, approximately 54.3 cubic feet of metal, and approximately 250 linear foot of various size piping associated with the general sump tank.

PROCESS KNOWLEDGE

This construction project is located in the controlled area of the FEMP, east of Plant 8. The general sump tank and piping was used for Plant 2/3 process materials only and was not used for hazardous waste storage. The sump and piping have not been in service for several years and are empty to RCRA standards. The recorded spills in this area per Reference 3, were minor in scope and are not believed to have impacted the waste material to be generated as part of this project. No spills or releases were reported in Reference 2.

SAMPLING AND ANALYSIS

Sand and concrete samples were collected from three boring locations around the tank and analyzed for total uranium, isotopic uranium, total thorium, isotopic thorium, TCLP metals, volatile organics, semi-volatile organics, pesticides, and herbicides. Paint samples were also collected from the inside and the outside of the tank and analyzed for TCLP lead. The results are summarized in Attachment I.

RADIOLOGICAL CHARACTERIZATION

Analytical results of the concrete from sample locations 1-C and 2-C, indicate that the concrete from these areas to be Category 1 waste, and the concrete from sample location 3-C to be low level waste. Analytical results of the sand from the three locations (1-C, 2-C, and 3-C) shows the waste material to be Category 1 material. The analytical results are shown in Attachment I.

The metal tank and metal piping will have to be surveyed by the Radiological Safety Group for radiological disposition during demolition. The Radiological Survey (Attachment II) dated March 19, 1990 indicated that the tank is low level waste.

RCRA DETERMINATION

The results of the TCLP lead analysis from the paint samples were significantly below the TCLP regulatory level of 5.0 mg/L as shown in Attachment I. The results of the sand and concrete sample analysis indicates Barium was present at all locations, however, the concentration of Barium was well below the regulatory level of 100 mg/L at all locations. The TCLP analysis of the soil and concrete for the remaining metals (Arsenic, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver) were all below detection limits.

The analytical results indicate that the spills/releases documented in Reference 3 for the General Sump Area have not impacted the potential waste materials of this project.

Based upon process knowledge and the TCLP analytical results, the waste from this project (soil, sand, concrete, metal tank and metal pipe) are RCRA nonhazardous (a.k.a. non-RCRA). No materials have been indentifiedthat would cause the waste to meet any of the hazardous waste listings under OAC 3745-51 (in lieu of 40 CFR 261, Subpart D) or exhibit any of the hazardous waste characteristics under OAC 3745-21 to 24 (in lieu of 40 CFR 261.24) or the revised Toxicity Characteristic under 40 CFR 261.24.

SUMMARY

The waste from this project (soil, sand, concrete, metal tank and metal pipe) are RCRA nonhazardous (a.k.a. non-RCRA) and can be disposed of per Reference 1.

This determination applies only to the concrete, sand, metal and metal pipe listed on the Construction Waste Identification/Disposition (CWID) form dated October 15, 1990. If any additional waste is generated from this project, an additional RCRA determination will be required.

If there are any questions please contact me at extension 6828, or C. S. Waugh at extension 6777.



C. G. Riemann
Facilities and Materials Evaluation
Environmental Management

DAL/tmk

w/attachments

c: J. E. Clements
L. S. Farmer
R. W. Hairston
J. E. Harmon
J. P. Hopper
S. C. Hoskins
L. A. Hurst
H. J. Knue
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S. J. Lund
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R. A. Thiel
F. B. Thompson
J. L. Trujillo
T. J. Walsh

Central Files
FME Files

02-8

3234

ATTACHMENT I
ANALYTICAL RESULTS

ANALYTICAL RESULTS

GENERAL SUMP PROJECT

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE MATRIX	TOTAL U (ppm)	ISO U pCi/mL	TOTAL Th (ppm)	ISO Th pCi/mL	BARIUM (ppm)	LEAD (ppm)	VOA (ppm)	SEMI-VOA (ppm)	PESTICIDES (ppm)	HERBICIDES (ppm)
91-058-2657	NA	paint	18	NA	<45	NA	NA	0.43	NA	NA	NA	NA
91-058-2659	NA	paint	21	NA	<45	NA	NA	0.32	NA	NA	NA	NA
91-058-2649	1-C	concrete	28	24	<18	13.0	0.946	ND	ND	ND	ND	ND
91-058-2650	1-0	sand	47	27	<18	63.0	19.9	ND	ND	ND	ND	ND
91-058-2651	2-C	concrete	31	23	<18	13.0	0.862	ND	ND	ND	ND	ND
91-058-2652	2-0	sand	<11	8.0	<18	2.6	3.920	ND	ND	ND	ND	ND
91-058-2653	3-C	concrete	121	89	<18	51.0	0.710	ND	ND	ND	ND	ND
91-058-2654	3-0	sand	<11	<8.0	<18	5.3	8.05	ND	ND	ND	ND	ND
91-058-2655	field blank	liquid	0.0002 (e)	INSUF. SA.	<0.0004 (e)	<0.05	ND	ND	ND	ND	ND	ND
91-058-2658	trip blank	liquid	0.0002 (e)	INSUF. SA.	<0.0004 (e)	<0.037	ND	ND	ND	ND	ND	ND
91-058-2859	trip blank	liquid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
91-058-2860	field blank	liquid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

(e) = g/L

NA = not analyzed for

ND = not detected above the method detection limit

3234

11.9.01

3234

ATTACHMENT II
RADIOLOGICAL SURVEY

11.9.01

FMPC
OPERATIONS SAFETY & HEALTH - RADIOLOGICAL SAFETY
RADIOLOGICAL SURVEY REPORT

17A
3234

Date: 3-19-90 LOCATION: General Sump REF: _____
 TIME: 1515 LEVEL: 580 D.F. LUDY Page 1 of 1

REASON FOR SURVEY: ROUTINE SPECIAL REQUEST RWP INCIDENT

COMMENTS:
Direct Field Contamination
Survey of Tank #5

INSTRUMENTS				
MODEL	SERIAL NUMBER	CALIBRATION DATE	SKRD.	EFF.
1409	401495	7-90	2000	10

ANALYZE FOR: ALPHA BETA-GAMMA OTHER _____

FOLLOW-UP SURVEY ATTACHED YES NO
 SURVEY MAP ATTACHED YES NO

TYPE OF SURVEY: CONTAMINATION RADIATION OTHER _____

ITEM NUMBER	GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr)				DPM ALPHA		DPM BETA-GAMMA	
			γ	B γ	γ	B γ	100 CM ²	PROBE	100 CM ²	PROBE
			CONTACT	CONTACT	3 FT.	3 FT.				
1		Outside Tank					200		5000	
2		Inside Tank					500		15000	
3		Inside Tank					200		4000	
4		Outside Tank					100		1500	
5		Inside Tank					100		1500	
6		Inside Tank					45000		65000	

NO.	DISTRIBUTION OF COPIES
1	Radiological Safety Technician Supervisor
2	Radiological Safety Engineer
3	Facility Supervisor

NOTIFICATION OF SURVEY RESULTS					
SUPERVISOR NOTIFIED	TIME	DATE	NOTIFIED BY	REVIEWED BY	DATE
					2/3