

3791

**REMOVAL SITE EVALUATION PROPOSED
CHEMICAL STORAGE BUILDING EXTENSION
JULY 1992**

07-01-1992

DOE/WEMCO

25

RSE

REMOVAL SITE EVALUATION
Proposed Chemical Storage Building Extension

Fernald Environmental Management Project

U.S. Department of Energy

July 1992

1.0 INTRODUCTION

The purpose of this project is to construct a Chemical Storage Building located directly west of the Analytical Laboratory, Building 15, in the southwest quadrant of the 135-acre controlled area at the Fernald Environmental Management Project (FEMP). CFR 1910.120 Subpart C requires site control measures "appropriate site control measures [that will] control employee exposure to hazardous substances." The Chemical Storage Building, intended to house hazardous chemicals used in a variety of processes and experiments in the Analytical Laboratory, would substantially reduce the potential for worker exposure. These chemicals are currently stored in the Analytical Laboratory itself.

This project will construct a 650 square foot building containing a curbed pad for the storage of solvents. In addition, a 542.72 square foot curbed pad will be provided on the north side of the new building. The pad will be surfaced with a solvent-resistant finish, and the building roof will cover the entire exterior pad, including a concrete ramp connecting the pavement and the west side of the Analytical Lab (See Attachment I). This construction will require removal of topsoil from an area of approximately 1200 square feet and will generate approximately 1,000 cubic feet of waste material. This includes excavation of soil to a depth of approximately three feet for the building foundation and approximately one foot for the curbed pad.

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 Substances Pollution Contingency Plan (NCP). This RSE addresses a construction project involving removal of topsoil and has been completed to support the decision as to whether the Chemical Storage Building Extension conditions warrant a removal action.

2.0 SOURCE TERM

In the Laboratory Upgrade - Phase I Project 0087502, the soil in the area west of the Analytical Laboratory was identified as radiologically contaminated, removed to a depth of eight to ten inches, and disposed of in accordance with FMPC-720. The soil in this area was then replaced with uncontaminated soil from off site. The area where this extension will be constructed has been monitored by the Radiological Safety Group, and no radiological contamination has been found.

Based on the facts presented above and the Radiological Survey Report (see attachment II), the soil from this area can be disposed of as Category I material.

3.0 EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

Based on the process knowledge shown above and the Radiological Survey Report, the potential threat caused by the extension of the Chemical Storage Building is negligible. Of the 112 measurements taken as part of the radiological survey, 36 were taken from the grassy area west of the Analytical Laboratory (the proposed construction area) and none registered detectable levels of radioactivity.

The soil to be removed for this project is RCRA nonhazardous (a.k.a. non-RCRA) based upon process knowledge. The complete RCRA determination, dated August 3, 1992, is included as Attachment II. The plastic, cardboard, paper, and protective clothing will have to be monitored by the Radiological Safety Group for proper radiological disposal.

4.0 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 radiological survey and other data presented herein, none of the eight factors listed in the NCP are applicable to the Chemical Storage Building Extension.

5.0 APPROPRIATENESS OF A RESPONSE

If it is determined that a response action is appropriate because of the level of contamination found in the topsoil removed from the area south of the present Chemical Storage Building, a removal action may be required to address the existing situation.

If a planning period of less than six months exists before starting 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 begins, DOE will issue an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat of 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 Administrative Record.

Attachment I

Attachment II



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From: C. G. Rieman (6828) WEMCO:EM:RCRA(FME):92-019
Date: August 3, 1992
Subject: RCRA DETERMINATION AND RADIOLOGICAL CHARACTERIZATION FOR THE LABORATORY
PAD AND CHEMICAL BUILDING - WBS 1.1.2.1.04.05

To : M. B. Thompson Jr.

- Ref:
1. WEMCO Site Standard Operating Procedure, SSOP-0044, "Management of Soil, Debris and Waste from a Project", issued June 10, 1992
 2. WEMCO Safety Procedure SP-P-35-010, "Unrestricted Release of Materials from FEMP", issued March 13, 1990
 3. Environmental Compliance Spill/Release Incident Tracking Report, dated July 21, 1992
 4. Upset Condition Documentation, issued September 18, 1990
 5. WEMCO:R(SW):90-012, S. G. Schneider to J. R. Hughes, "Radiological/RCRA Characterization of the North Lab Expansion, Phase I Project 0087502-1.1.4.1.03" dated November 28, 1989
 6. WEMCO:R(RRA):89-027, F. T. Jebens to J. P. Hopper, "Estimate for Non-process Removals", dated December 18, 1989
 7. WEMCO:R:89-572, W. A. Weinreich to J. A. Reafsnyder (USDOE), "Removal Action - West side of the FMPC Laboratory Building", dated January 5, 1990
 8. WEMCO:EC(SW):90-569, S. G. Schneider to M. B. Thompson Jr., "RCRA Determination and Radiological Characterization of Rubble From Lab Chem Building", dated September 14, 1990
 9. WEMCO:PM&A(EHSI):90-092, J. R. Hughes to R. S. Shirley, "Removal Action - West Side of Analytical Facility Status Update", dated December 3, 1990
 10. WEMCO:PM&A(EHSI):91-131, J. R. Hughes to C. G. Rieman, "Analytical Facilities Upgrade: Suspect RCRA Areas", dated March 3, 1991
 11. WEMCO:PM&A(EHSI):91-133, J. R. Hughes to J. P. Erfman, "Analytical Facility Upgrade: Site Demolition-Soil", dated March 18, 1991
 12. WEMCO:EC&QA(FME):91-137, C. S. Waugh to J. R. Hughes, "Re-Evaluation of the RCRA Determination for the Soil Generated During the Construction of the North Laboratory Expansion, Phase I, for Conformance to TC Regulations", dated August 16, 1991

13. WMC0:E(PM4):92-257, J. R. Hughes to S. C. Hoskins, "Area West of Building 15", dated April 3, 1992

This memo transmits the RCRA determination and radiological characterization for the waste to be generated from the Laboratory Pad and Chemical Building construction project. The waste to be generated consists of 1000 cubic feet (100,000 pounds) of soil, plastic, cardboard and paper, and protective clothing (anti-C, rubber gloves, etc.).

PROCESS KNOWLEDGE

This construction project is located in the controlled area of the FEMP at the northwest corner of the new Laboratory Building, a sketch of the location is shown in Attachment Number I. This project will consist of constructing a new 600 square foot Chemical Storage Building containing a containment dike for the storage of hazardous chemicals. In addition, a 120 square foot curbed concrete pad will be provided on the south side of the building. The demolition will include excavation of soil to a depth of approximately three feet for the building foundation and approximately one foot for the concrete pad.

The two areas shown in black in Attachment Number I are the areas where high radiological contamination was found during the RI/FS study. The radiologically contaminated soil from these two areas was removed and disposed of per Reference Numbers 6 and 7.

The original RCRA determination for this project (Reference Number 8) determined the soil waste from this project to be RCRA nonhazardous based upon process knowledge and EP Toxicity metal analysis below the regulatory limits. Analysis for Radiological constituents revealed that soil below the first foot depth contained 400 PCi/g uranium. However, because of change in the scope of work, moving the construction site, a new RCRA determination was deemed necessary.

The soil from the Laboratory Upgrade-Phase I Project shown in Attachment Number I was determined to be RCRA nonhazardous (a.k.a. non-RCRA) per Reference Numbers 5. Because the waste was not disposed of before September 25, 1990, when the new TC regulation became effective, the soil waste was re-evaluated for conformance to the TC regulation and determined to be RCRA nonhazardous (a.k.a. non-RCRA).

The radiologically contaminated soil in the area identified in Attachment Number I (Phase I Soil Removal), was removed to a depth of eight to ten inches and disposed of per FMPC-720. The soil in this area was then replaced with uncontaminated soil from off site per Reference Numbers 9, 10, 11 and 13. The area where this project will be constructed has been monitored by the Radiological Safety Group and no radiological contamination was found. The results from the Radiological Survey Report are shown in Attachment Number II.

M. B. Thompson Jr.

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WEMCO:EM:RCRA(FME):92-019

The soil and concrete which was removed from this area is contained in 32 white metal containers and is being held pending the closure of the two nearby HWMU's. The soil in six of these containers was sampled and found to be free of any RCRA hazardous materials per Reference Number 12.

The new site for this project is located outside the two Hazardous Waste Management Units (HWMU) which are identified in Attachment Number I.

The plastic waste to be generated as a result of this project will be from plastic sheets, used as dust barricades and plastic bags used to wrap any radiologically contaminated waste.

The cardboard and paper waste will be from off site, used to package and transport any new equipment that is to be installed.

The protective clothing to be generated as a result of this project (anti-C clothing, rubber gloves, etc.) will be used for worker protection, if required.

SAMPLING AND ANALYSIS

Based upon the process knowledge shown above, sampling of this construction site was not considered to be necessary.

RADIOLOGICAL CHARACTERIZATION

Based upon the process knowledge shown above, and the Radiological Survey Report, (Attachment Number II) the soil from this area can be disposed of as Category I material. The plastic, cardboard, paper and protective clothing will have to be monitored by the Radiological Safety Group for proper radiological disposal.

RCRA DETERMINATION

The soil to be removed for this project is RCRA nonhazardous (a.k.a. non-RCRA) based upon the process knowledge described above.

The plastic waste to be generated from this project is RCRA nonhazardous (a.k.a. non-RCRA), provided that it meets the conditions specified in MEF-1539), dated February 11, 1992, Attachment Number III.

M. B. Thompson Jr.

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WEMCO:EM:RCRA(FME):92-019

The paper, cardboard and protective clothing are RCRA nonhazardous (a.k.a. non-RCRA) if they meet the following conditions.

- o Do not contain any entrapped liquids.
- o The waste material has not come in contact with any acutely toxic waste. Attachment III contains the list of acutely toxic wastes.

No materials have been identified that would cause the waste from this project 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 37451-21 to 24 (in lieu of 40 CFR 261.21 to-24) or the revised Toxicity Characteristic under 40 CFR 261.24.

SUMMARY

The soil from this project can be disposed of as RCRA nonhazardous (a.k.a. non-RCRA) Category I material per Reference Number 1. The plastic, paper, cardboard and protective clothing waste can be disposed of as RCRA nonhazardous (a.k.a. non-RCRA) if they meet the conditions specified above. These waste will have to be monitored by the Radiological Safety Group for proper radiological disposition per Reference Numbers 1 and 2.

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. Rieman
Facilities and Materials Evaluation

CGR:tmk

w/attachments

M. B. Thompson

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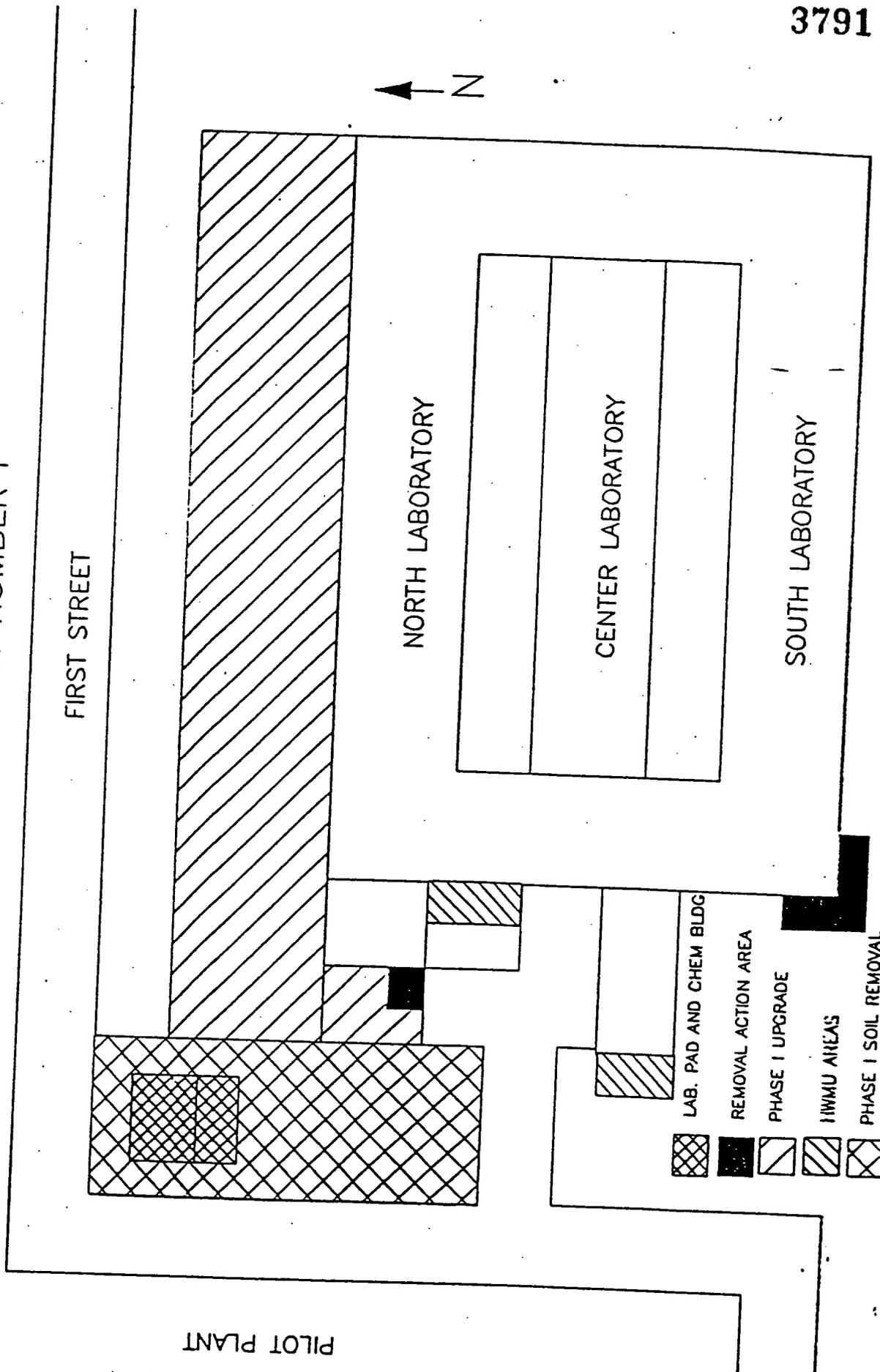
WEMCO:EM:RCRA(FME):92-019

c: J. E. Clements
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Central Files
FME Files

ATTACHMENT NUMBER 1

ATTACHMENT NUMBER I



ATTACHMENT NUMBER II
RADIOLOGICAL SURVEY RESULTS

FMPC
INDUSTRIAL RADIOLOGICAL SAFETY & TRAINING - RADIOLOGICAL SAFETY
RADIOLOGICAL SURVEY REPORT

3791

e: 8-22-91 LOCATION: Grid #14 Outdoors RST: C. Stevens
 e: 14:00 LEVEL: 580' *Chris Stevens* Page 1 of 5
 DA: A SURVEY: ROUTINE SPECIAL REQUEST RWP INCIDENT

EVENTS:
 Process Area Characterization of
 60" 26.
 AD = Not Able to Determine
 1.5 min MDA = 18.0 d / 16.9 Bq
 FOLLOW-UP SURVEY ATTACHED YES NO
 KEY MAP ATTACHED YES NO

INSTRUMENTS

MODEL	SERIAL NUMBER	CALIBRATION DATE	BKRD.	EFF.
Ludlum #3	44209	9-91	C	0.1
Ludlum #3	77178	12-91	60/260	0.1
Timeloc #3	L85100 #3	9-91	9-0.34 16-1.5	0.240 0.224

ANALYZE FOR: ALPHA BETA-GAMMA OTHER

TYPE OF SURVEY: CONTAMINATION RADIATION OTHER

GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr)				DPM ALPHA		DPM BETA-GAMMA	
		CONTACT		3 FT.		100 CM ²	PROBE	100 CM ²	PROBE
		γ	B/γ	γ	B/γ				
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND
	Wall, 1.5 m. up						ND		ND
	Wall, 0.15 m. up						ND		ND

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Logical Safety Technician Supervisor _____

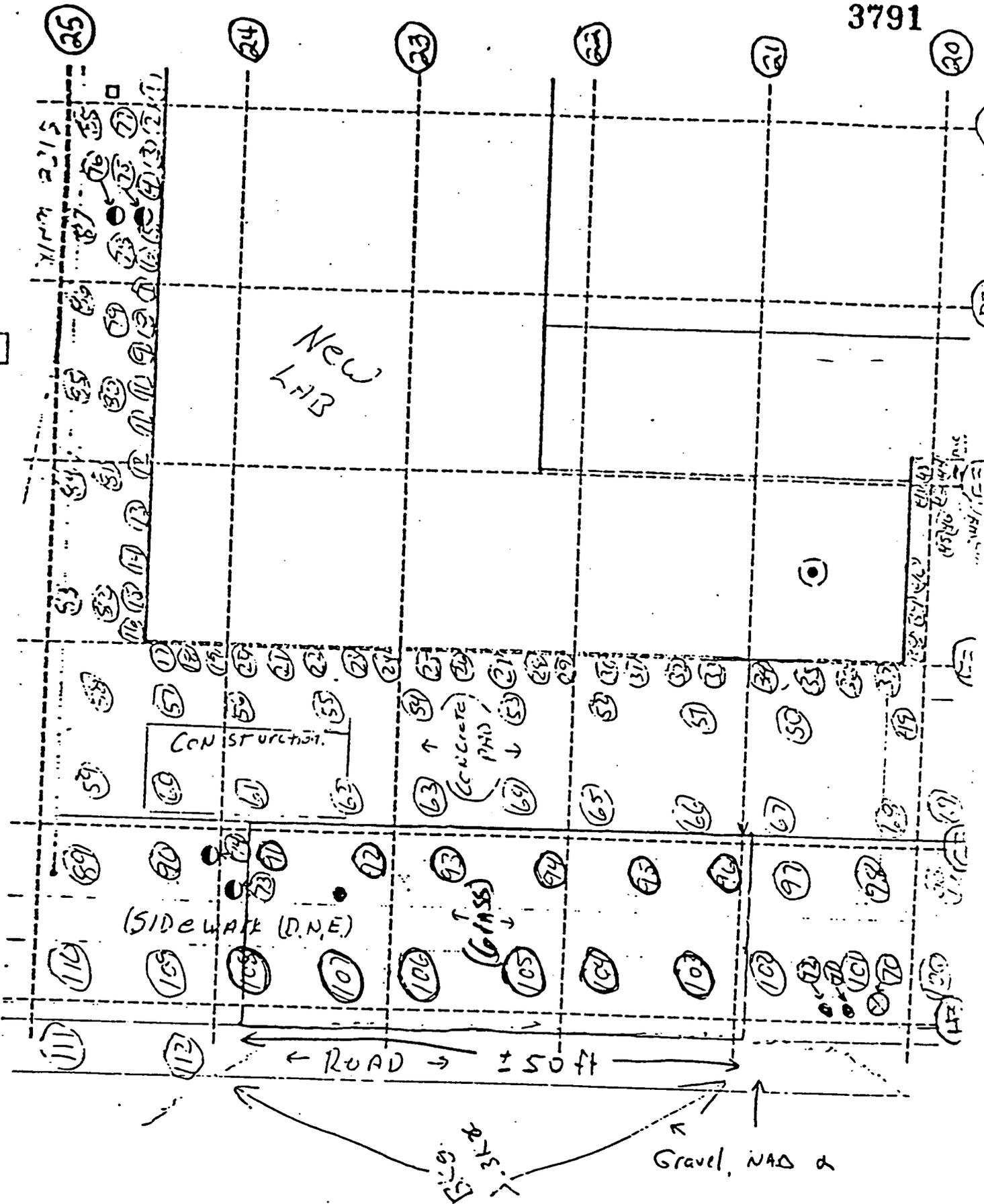
Logical Safety Engineer _____

Supervisor _____

NOTIFICATION OF SURVEY RESULTS

SUPERVISOR NOTIFIED	TIME	DATE	NOTIFIED BY	REVIEWED BY	DATE

PROCESS AREA OUTDOORS



ATTACHMENT NUMBER III
PLASTIC MEF NUMBER 1539

REC'D
2/11/92
4

FMPG
MATERIAL EVALUATION FORM

MEF NO: 1539

MEF REV. NO: 13791

SECTION I - MATERIAL GENERATOR			
1. FMPG SRC: MTC: <u>003</u>		2. PLANT AND/OR BUILDING NO.: <u>Site-wide</u>	
4. EQUIPMENT NAME(S): <u>Waste (Hazard) bins</u>		3. PROCESS AREA: <u>site wide</u>	
7. APPROXIMATE NET WEIGHT OF FULL CONTAINER? <input type="checkbox"/> <100 lbs. <input type="checkbox"/> 100 to 1000 lbs. <input type="checkbox"/> >1000 lbs.		5. MEF NO. DATE: <u>2/11/92</u> MEF REV. DATE:	
8. DOES MATERIAL CONSIST OF MORE THAN ONE SUBSTANCE? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		6. MATERIAL PHYSICAL STATE: <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> Wet Solid (Sludge) <input checked="" type="checkbox"/> Dry Solid	
9. IS MATERIAL A WASTE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		10. COMMON NAMES: <u>plastic</u>	
12. COMMON CHEMICAL NAME SOURCE: <input checked="" type="checkbox"/> Process Information <input type="checkbox"/> MSOS <input type="checkbox"/> Container Label <input type="checkbox"/> FMPG Lot Code		11. CHEMICAL NAMES: <u>N/A</u>	
13. SUBSTANCES SUSPECTED:		13. SIMILAR MATERIAL NAME: <u>N/A</u>	
14. SIMILAR MATERIAL LOT CODE(S): <u>N/A</u>			
<input type="checkbox"/> Aerosols <input type="checkbox"/> Cresol <input type="checkbox"/> Endrine <input type="checkbox"/> Methylene Chloride <input type="checkbox"/> TBP/Kerosene <input type="checkbox"/> Arsenic <input type="checkbox"/> m-Cresol <input type="checkbox"/> Heptachlor <input type="checkbox"/> Motor/Engine Oil <input type="checkbox"/> Tetrachloroethylene <input type="checkbox"/> Barium <input type="checkbox"/> o-Cresol <input type="checkbox"/> Hexachlorobenzene <input type="checkbox"/> Nitrobenzene <input type="checkbox"/> 1,1,1-Trichloroethane <input type="checkbox"/> Benzene <input type="checkbox"/> p-Cresol <input type="checkbox"/> Hexachloroethane <input type="checkbox"/> Other Organics <input type="checkbox"/> 2,4,5-TP (Silvex) <input type="checkbox"/> Cadmium <input type="checkbox"/> 2,4-D <input type="checkbox"/> Hexachloro-1,3-butadiene <input type="checkbox"/> Paint Stripper <input type="checkbox"/> 2,4,5-Trichlorophenol <input type="checkbox"/> Carbon Tetrachloride <input type="checkbox"/> Degreaser <input type="checkbox"/> Hydraulic Oil <input type="checkbox"/> Paint Thinner/Mineral Spirits <input type="checkbox"/> 2,4,6-Trichlorophenol <input type="checkbox"/> Chloroform <input type="checkbox"/> 1,4-Dichlorobenzene <input type="checkbox"/> Ink <input type="checkbox"/> Pentachlorophenol <input type="checkbox"/> Toxaphene <input type="checkbox"/> Chlorobenzene <input type="checkbox"/> 1,2-Dichloroethane <input type="checkbox"/> Lead <input type="checkbox"/> Perchloroethylene <input type="checkbox"/> Trichloroethylene <input type="checkbox"/> Chloroform <input type="checkbox"/> 1,1-Dichloroethylene <input type="checkbox"/> Lindane <input type="checkbox"/> Pyridine <input type="checkbox"/> Unknown <input type="checkbox"/> Chromium <input type="checkbox"/> 2,4-Dinitrotoluene <input type="checkbox"/> Mercury <input type="checkbox"/> Selenium <input type="checkbox"/> Vinyl Chloride <input type="checkbox"/> Coolants <input type="checkbox"/> Enamel <input type="checkbox"/> Methoxychlor <input type="checkbox"/> Silver <input type="checkbox"/> Xylene <input type="checkbox"/> Methyl ethyl ketone <input type="checkbox"/> Synthetic oil <input type="checkbox"/> Oil			
18. REASON FOR SUSPECTING ALL SUBSTANCES AND QUANTITY: <u>None suspected</u>			
18. SOURCE FOR REASON AND QUANTITY: (Attach MSDS if Available)			
<input type="checkbox"/> Personnel Interviews <input type="checkbox"/> AEDO Log <input type="checkbox"/> MSDS <input type="checkbox"/> Prior Evaluation of Similar Material <input type="checkbox"/> Historical Records <input checked="" type="checkbox"/> Physical Evidence <input type="checkbox"/> Container Label <input type="checkbox"/> FMPG Lot Code <input checked="" type="checkbox"/> Process Information <input type="checkbox"/> Sump Report <input type="checkbox"/> Soil Database			
18. HEALTH AND SAFETY CONCERNS/ REQUIREMENTS:		16. SIGNATURE AND DATE: <u>Paul Hunt 2-12-92</u>	
17. HAS THE "FINGERPRINT" VISUAL INSPECTION BEEN COMPLETED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		19. NUMBER OF PHASES:	
21. HAS A PAINT FILTER TEST BEEN COMPLETED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		20. FLASH POINT (IF KNOWN): (Attach Lab Results)	
22. IS IT REACTIVE? EXPLAIN: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		23. pH (IF KNOWN): (Attach Lab Results)	
22. IS IT IGHTABLE? EXPLAIN: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		24. OTHER INFORMATION: (Example: Is the Material a Product or Waste?)	
25. ADDITIONAL SOURCES OF INFORMATION:			
26. PRIMARY CONTACT INDIVIDUAL: <u>Ronal Thel</u>		EXTENSION: <u>8685</u>	
		DATE COMPLETED: <u>2/11/92</u>	

NOTE: Form shall be completed using ink or a typewriter.
NOTE: Only WACO employees shall sign this form.

(Continued on Reverse)

WFF FORM ITEM #16: RADIOLOGICAL SAFETY CONCERNS:

GENERATED WASTE ITEM MUST BE HANDLED AS A RADIOACTIVE MATERIAL, OR AS BEING POTENTIALLY CONTAMINATED WITH RADIOACTIVE MATERIAL. CONTACT RADIOLOGICAL SAFETY FOR AN RWP IF DIRECT HANDLING IS REQUIRED. DETERMINATIONS OF REMOVABLE CONTAMINATION (OR OTHER HAZARD) MAY BE REQUIRED BY RADIOLOGICAL SAFETY.

WASTE ITEMS TARGETED FOR OFFSITE DISPOSITION MUST MEET THE ACCEPTANCE CRITERIA OF THE RECEIVING FACILITY, WITH THE FACILITY LICENSED TO HANDLE SAID QUANTITIES OF WASTE RADIOACTIVITY CONTENT. THESE ITEMS MUST ALSO MEET THE TRANSPORTATION REQUIREMENTS OF 49 CFR FOR OVER THE ROAD SHIPMENT.

IF WASTE IS IN BULK FORM (ie. a liquid, powder, concrete, soils, etc.), ANALYTICAL DATA MUST ACCOMPANY EXTERIOR SURFACE CONTAMINATION MEASUREMENTS WHEN TARGETING THIS WASTE FOR UNRESTRICTED RELEASE TO COMMERCIAL TSDs OR THE PUBLIC. SHIPMENT OF THESE WASTE ITEMS MAY REQUIRE APPROVAL BY DOE.

SEALED AEROSOL CANS (completely exhausted of any interior contents), OR OTHER SOLID NON-PROCESS OR NON-RADIOACTIVE ITEMS (not in "bulk" form) CAN BE RELEASED WITHOUT RESTRICTIONS BY DIRECT EXTERNAL SURFACE CONTAMINATION SURVEYS PERFORMED BY RADIOLOGICAL SAFETY. HOWEVER, UNRESTRICTED RELEASE OF THESE WASTE ITEMS MAY REQUIRE FURTHER EVALUATION BY RADIOLOGICAL SAFETY AND NEED APPROVAL BY OTHER SITE AUTHORIZING ORGANIZATIONS.

[Handwritten Signature]
Radiological Safety Representative/Ext./date

Attachment 1

MEF # 1539
REV # 1

Plastic materials are considered to be RCRA nonhazardous if the following criteria are met:

- Does not contain any entrapped liquids,
- Spills which may occur on plastic (i.e., tarps) must be cleaned-up according to SOP-20-C-606 and FMPC-503 Procedure before disposal,
- Plastic insulation on electrical wire is not regulated (the wire must be addressed through the metals checklist).
- Plastic containers (i.e., sample jars) must be "empty" as defined by ORC 3745-51-07 in lieu of CFR 40 261.7,

(B)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste in rule 3745-51-31, 3745-51-32, or paragraph (E) of rule 3745-51-33 of the Administrative Code, is empty if:

(a) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating; and

(b) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner; or

(c)(i) No more than three percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to one hundred ten gallons in size; or

(ii) No more than 0.3 per cent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than one hundred ten gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or inner liner removed from a container that has held an acute hazardous waste listed in rule 3745-51-31, 3745-51-32, or paragraph (E) of rule 3745-51-33 of the Administrative Code is empty if:

(a) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(b) The container or inner liner has been cleansed by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(c) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

* See attached list for acutely toxic wastes.

Number	Number	Substance
PO23	107-20-0	Acetaldehyde, chloro-
PO22	591-08-2	Acetamide, N-(3-aminobenzoyl)-
PO57	640-19-7	Acetamide, 2-fluoro-
PO58	62-74-8	Acetic acid, fluoro-, sodium salt
PO2	591-08-2	1-Acetyl-2-thiourea
PO3	107-02-8	Acrolein
PO70	116-06-3	Aldicarb
PO04	309-00-2	Aldrin
PO05	107-18-6	Allyl alcohol
PO06	10839-73-8	Aluminum phosphate (R,T)
PO07	2783-96-4	3-(Aminomethyl)-3-imidazolol
PO08	504-24-5	4-Aminopyridine
PO09	131-74-8	Ambocrom perate (R)
P119	7803-55-6	Ammonium valerate
PO99	506-61-6	Amphetamine (1-1, bicyano-C), potassium
PO10	7778-39-4	Arctic acid H ₃ AsO ₄
PO12	1327-53-3	Arctic oxide As ₂ O ₃
PO11	1303-28-2	Arctic oxide As ₂ O ₃
PO11	1303-28-2	Arctic pentoxide
PO12	1327-53-3	Arctic trioxide
PO38	692-42-2	Arzine, diethyl-
PO36	696-28-6	Arsoous dichloride, phenyl-
PO54	151-56-4	Azundine
PO67	75-55-8	Azundine, 2-methyl-
PO13	542-62-1	Barium cyanide
PO24	106-47-8	Benzamide, 4-chloro-
PO77	100-01-6	Benzamide, 4-ortho-
28	100-44-7	Benzene (chloromethyl)-
PO42	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylaminoethyl)], (R)
PO46	122-09-8	Benzmethanamine, alpha, alpha-dimethyl-
PO14	108-98-5	Benzmethiol
PO01	81-81-2*	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
PO28	100-44-7	Benzyl chloride
PO15	7440-41-7	Beryllium
PO17	598-31-2	Bromocetone
PO18	357-57-3	Brunce
3	29196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio), O-((methylamino)carbonyl) oxime
PO21	592-01-8	Calcium cyanide
PO21	592-01-8	Calcium cyanide Ca(CN) ₂
PO22	75-15-0	Carbon disulfide
PO95	75-44-5	Carbonyl dichloride
PO23	107-20-0	Chloroacetaldehyde
PO24	106-47-8	p-Chloroaniline
PO26	5344-82-1	1-(o-Chlorophenyl)thiourea
PO27	542-76-7	3-Chloropropionitrile
PO29	544-92-3	Copper cyanide
1	544-92-3	Copper cyanide Cu(CN)
PO30	—	Cyanides (soluble cyanide salts), not otherwise specified
PO31	460-19-5	Cyanogen
PO33	506-77-4	Cyanogen chloride
PO33	506-77-4	Cyanogen chloride (CN)Cl
PO34	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
PO16	542-88-1	Dichloromethyl ether
PO36	696-28-6	Dichlorophenylamine
PO37	60-57-1	Dieldrin
PO38	692-42-2	Diethylamine
PO41	311-45-5	Diethyl-p-nitrophenyl phosphate
PO40	297-97-2	O,O-Diethyl O-pyrazinyl phosphorochioate
PO43	55-91-4	Diisopropylfluorophosphate (DFP)
PO04	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5, 8,8a-hexahydro-, (1alpha,4alpha,4beta,5alpha,8beta,8beta)-
PO60	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5, 8,2a-hexahydro-, (1alpha,4alpha,4beta,5beta,8beta,8beta)-
PO37	50-57-1	2,3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2alpha,3beta,6beta,6alpha,7beta,7alpha)-
PO51	72-20-8*	2,3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2beta,3alpha,6alpha,6beta,7beta,7alpha)-, & metabolites
PO4	60-51-5	Dimethoate
PO46	122-09-8	alpha, alpha-Dimethylphenethylamine
PO47	534-52-1*	4,6-Dinitro-o-cresol, & salts
PO48	51-28-5	2,4-Dinitrophenol
PO20	88-83-7	Dioxin
PO85	152-16-9	Diphosphoramide, octamethyl-
111	107-49-3	Diphosphoric acid, tetramethyl-

Hazardous Waste Number	Chemical Abstracts Number	Substance
P039	298-04-4	Duquoin
P049	541-53-7	Duhalobrom
P050	115-79-7	Endonitil
P088	145-73-3	Eadokhal
P051	72-20-8	Eadna
P051	72-20-8	Eadna, & metabolites
P042	31-43-4	Epinerpane
P031	460-19-5	Ethanediamine
P064	16752-77-5	Ethanimidocarboc acid, N-[(methylamino)carboonyloxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Fampbar
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fulminic acid, mercury(2-) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbohydrazide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Iodine
P007	2763-96-4	(2H)-Isotiazolone, 5-(aminomethyl)-
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis(chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methylsarcosine
P071	298-00-0	Methyl parathion
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl Ni(CO) ₄ (T-4)
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN) ₂
P075	54-11-5*	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO ₂
P081	55-63-0	Nitrophenol (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO ₄ (T-4)
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo(2.2.1)heptane, 2,3-dicarboxylic acid
P089	56-28-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-3	Phenol, 2,4-dinitro-
P047	534-52-1*	Phenol, 2-methyl-4,6-dinitro-, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P5	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester

Hazardous Waste Number	Chemical Abstract Number	Substance
P039	298-04-4	Phosphorodithioic acid, O,O-dimethyl S-(2-(ethylthioethyl)) ester
P044	298-02-2	Phosphorodithioic acid, O,O-dimethyl S-(ethylthioethyl) ester
P044	50-51-5	Phosphorodithioic acid, O,O-dimethyl S-(2-(methylamino)-2-oxoethyl) ester
P043	55-91-4	Phosphorothioic acid, bis(1-methylethyl) ester
P049	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-mercaptoethyl) ester
P040	297-87-2	Phosphorothioic acid, O,O-diethyl O-pyrazolyl ester
P097	52-85-7	Phosphorothioic acid, O-(4-(dimethylaminosulfonylphenyl) O,O-dimethyl) ester
P071	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-mercaptoethyl) ester
P110	73-00-2	Plumbane, tetraethyl-
P098	51-50-8	Potassium cyanide
P098	51-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)- O-(methylamino) carbonyloxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2-Propanediol, innitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propyleneimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	54-11-5*	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S), & salts
P114	12039-52-0	Selenious acid, diethallium (1-1) salt
P103	603-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide Na(CN)
P107	1314-96-1	Strontium sulfide
P107	1314-96-1	Strontium sulfide SrS
P108	57-24-9*	Strychnidin-10-one, & salts
P118	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	57-24-9*	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, diethallium (1-1) salt
P109	3689-24-5	Tetraethylthiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetraantromethane (R)
P062	757-58-4	Thiophosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl ₂ O ₃
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidocarbonic diamide [(H ₂ NXC(S)) ₂ NH]
P014	102-98-5	Thiobenzol
P116	78-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P123	8001-35-2	Thiourea
P118	75-70-7	Trichloromethaneethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V ₂ O ₅
P120	1314-62-1	Vanadium pentoxide
P084	2549-40-0	Vinylamide, N-methyl-N-nitroso-
P001	81-81-2*	Warfarin, & salts, when present at concentrations greater than 0.3%
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN) ₂
P122	1314-84-7	Zinc phosphide Zn ₃ P ₂ (R, TL, when present at concentrations greater than 10%)

* Number given for parent compound only

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (toxicity) and R (reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.]

Industry and EPA hazardous waste no.	Hazardous waste	Hazard code
FO20	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol).	(H)
FO21	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of [sic] manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol or of intermediates used to produce its derivatives [sic].	(H)
FO22	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
FO23	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.)	(H)
FO26	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
FO27	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)	(H)

DEFINITION OF SOLID WASTE - WORKSHEET

3791

This worksheet documents evaluation of this material to determine if it is regulated under RCRA as solid waste under 40 CFR 261.2/OAC 3745-51-02.

A. WASTE STREAM IDENTIFICATION	
1. MEF #: <u>1539</u>	2. WTC <u>003</u> SRC <u>1A</u> (see MEF for IS digit list)
3. EVALUATOR: <u>Matthew Tepe</u>	4. DATE: <u>2-15-92</u>

To be regulated as a hazardous waste, a material must first meet the definition of solid waste. Solid wastes are defined as materials that are being "discarded," unless the material is specifically excluded from the definition of solid waste. Materials are considered to be discarded when they are abandoned, recycled in certain manners, or when they are defined by the EPA as inherently waste-like. Section B must be completed to document the status of the material with respect to the definition of solid waste.

B. DEFINITION OF SOLID WASTE						
Meets the criteria	Evaluation Criteria					
<input checked="" type="checkbox"/> <u>yes</u> <input type="checkbox"/> <u>no</u>	The material is being abandoned by being disposed of, burned or incinerated, or accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated. - 40 CFR 261.2(b)/OAC 3745-51-02(B)					
<input type="checkbox"/> <u>yes</u> <input checked="" type="checkbox"/> <u>no</u>	If the material is being recycled (i.e., used, reused, or reclaimed) - or accumulated, stored, or treated before recycling - it may be subject to regulation as solid waste. Identify the material type and the type of management for the material by circling the appropriate entry in the table below:					
	Material Type	Type of Management				
		(i) Use consisting disposal (261.2(c)(1)/3745-51-02(C)(1))	(ii) Energy recovery/fuel (261.2(c)(2)/3745-51-02(C)(2))	(iii) Reclamation (261.2(c)(3)/3745-51-02(C)(3))	(iv) Speculative accumulation (261.2(c)(4)/3745-51-02(C)(4))	(v) Exceptional circumstances activities only (261.2(c)(5)/3745-51-02(C)(5))
	Spent Materials	(M)	(M)	(M)	(M)	(N)
	Sludges (listed in 261.31 or 261.32/OAC 3745-51-31 or 3745-51-32)	(M)	(M)	(M)	(M)	(N)
	Sludges exhibiting a characteristic	(M)	(M)	(M)	(M)	(N)
	By-products (listed in 261.31 or 261.32/OAC 3745-51-31 or 3745-51-32)	(M)	(M)	(M)	(M)	(N)
	By-products exhibiting a characteristic	(M)	(M)	(M)	(M)	(N)
	Commercial chemical products (listed in 261.33/OAC 3745-51-33)	(M)	(M)	(M)	(M)	(N)
	Scrap metal	(M)	(M)	(M)	(M)	(N)
If the material type/management combination are identified by (Y) then the material is subject to regulation as solid waste. If the material type/management combination are identified by (N) then the material is not subject to regulation as solid waste. Any recycled materials determined not to be regulated as solid waste require additional written documentation supporting their regulatory status. - 40 CFR 261.2(f)/OAC 3745-51-02(F)						
<u>Additional required documentation attached.</u>						
<input checked="" type="checkbox"/> <u>yes</u> <input type="checkbox"/> <u>no</u>	The material is inherently waste-like (i.e., identified as hazardous waste F020 - F023, F026 or F027 - 40 CFR 261.2(d)/OAC 3745-51-02(D))					

EXCLUSIONS TO THE DEFINITION OF SOLID WASTE

The material is subject to a specific exclusion from the definition of solid waste under 40 CFR 261.4/OAC 3745-51-04. See the attached form EXCLUSIONS TO THE DEFINITION OF SOLID AND HAZARDOUS WASTE.

The material is NOT subject to a specific exclusion from the definition of solid waste under 40 CFR 261.4/OAC 3745-51-04.

REGULATORY STATUS OF THE MATERIAL WITH RESPECT TO THE DEFINITION OF HAZARDOUS WASTE

The material is regulated under RCRA as solid waste.

The material is not regulated under RCRA as solid waste.

This worksheet documents evaluation of this material to determine if it is a listed hazardous waste under 40 CFR 261 Subpart DOAC 3745-51-30 to 33.

A. WASTE STREAM IDENTIFICATION	
1. MEF#: <u>1539</u>	2. MTC <u>003</u> SRC <u>A2</u> (see MEF for IS Gpt for code)
3. EVALUATOR: <u>Matthew Tapp</u>	4. DATE: <u>2-15-92</u>

Usage of listed spent solvents at the facility requires explicit evaluation of each waste stream to determine if it meets the listing description of a spent solvent or is regulated as a listed spent solvent by virtue of the mixture or derived from rules. No other listed hazardous waste from non-specific (F-listed; 40 CFR 261.31/OAC 3745-51-31) or specific sources (K-listed; 40 CFR 261.32/OAC 3745-51-32) have been identified at the FEMP to date, however, each waste stream must also be explicitly evaluated to determine if any other F or K listings are potentially applicable. Certain wastes at the FEMP meet the listing description for discarded commercial chemical products, off-specification species, container residues, and spill residues thereof (P or U-listed; 40 CFR 261.33/OAC 3745-51-33) either directly or by virtue of the mixture or derived from rules. Therefore each waste stream must be explicitly evaluated to determine if any P or U listings apply to the waste stream. These evaluations are documented in sections B through D below.

B. LISTED SPENT SOLVENTS	
This waste stream <u>does</u> (circle one) <u>does not</u> contain spent solvents listed under 40 CFR 261.31/OAC 3745-51-31 that were used for their solvent properties, and contained, before use, a total of ten percent or more (by volume) of the following solvent constituents:	
<input type="checkbox"/> acetone (F003) <input type="checkbox"/> benzene (F005) <input type="checkbox"/> n-butyl alcohol (F003) <input type="checkbox"/> carbon disulfide (F005) <input type="checkbox"/> carbon tetrachloride (F001) <input type="checkbox"/> chlorobenzene (F002) <input type="checkbox"/> creosote (and cresylic acid) (F004) <input type="checkbox"/> cyclohexanone (F003) <input type="checkbox"/> 1,2-dichlorobenzene (F002) <input type="checkbox"/> 2-thoxyethanol (also called ethylene glycol monoethyl ether) (F005) <input type="checkbox"/> ethyl acetate (F003) <input type="checkbox"/> ethylbenzene (F003) <input type="checkbox"/> ethyl ether (F003) <input type="checkbox"/> isobutanol (F005)	<input type="checkbox"/> methylene chloride (F001, F002) <input type="checkbox"/> methyl ethyl ketone (F003) <input type="checkbox"/> methyl isobutyl ketone (F003) <input type="checkbox"/> nitrobenzene (F004) <input type="checkbox"/> 2-nitropropane (F005) <input type="checkbox"/> pyridine (F003) <input type="checkbox"/> tetrachloroethylene (F001, F002) <input type="checkbox"/> toluene (F005) <input type="checkbox"/> 1,1,1-trichloroethane (F001, F002) <input type="checkbox"/> 1,1,2-trichloroethane (F002) <input type="checkbox"/> 1,1,2-trichloro-1,1,2-trifluoroethane (F002) <input type="checkbox"/> trichloroethylene (F001, F002) <input type="checkbox"/> trichlorotrifluoroethane (F002) <input type="checkbox"/> xylene (F003)
1. <u>note for determination: The material is plastic liners, tarps, etc, and does not contain any spent solvents</u>	

C. OTHER LISTED WASTES FROM NON-SPECIFIC AND SPECIFIC SOURCES	
This waste stream <u>does</u> (circle one) <u>does not</u> meet the listing description of a listed hazardous waste from a non-specific or specific source (i.e., F or K-listed waste), either directly or by virtue of the mixture or derived from rules.	
Hazardous waste codes identified, if any:	
Rationale for determination: <u>This material cannot be mixed with hazardous waste and is not derived from any HWMLU.</u>	

D. LISTED DISCARDED COMMERCIAL CHEMICAL PRODUCTS	
This waste stream <u>does</u> (circle one) <u>does not</u> meet the listing description of a listed discarded commercial chemical products, off-specification species, container residues, and spill residues thereof (i.e., P and U-listed wastes), either directly or by virtue of the mixture or derived from rules.	
Hazardous waste codes identified, if any:	
1. <u>note for determination: Material is not a commercial chemical product.</u>	

HAZARDOUS WASTE CHARACTERISTICS - WORKSHEET

3791

This spreadsheet documents evaluation of this material to determine if it exhibits any of the characteristics of hazardous waste under 40 CFR 261.240 OAC 3745-51-24.

A. WASTE STREAM IDENTIFICATION		
1. HMF#: <u>1539</u>	2. MTC <u>003</u> sec <u>A4</u> (see HMF for IS Gp's for codes)	
3. EVALUATOR <u>Matthew Tapp</u>	4. DATE: <u>2-15-92</u>	
B. IGNITABILITY (D001)		
Exhibits the Characteristic	Evaluation Criteria	Rationale
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is a liquid, with flash point less than 140 F - 261.21(a)(1)OAC 3745-51-21(A)(1)	Is Not a Liquid
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard - 261.21(a)(2)OAC 3745-51-21(A)(2)	Is Not Reactive
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is an ignitable compressed gas as defined in 49 CFR 173.300 - 261.21(a)(3)OAC 3745-51-21(A)(3)	Is Not a Gas
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is an oxidizer as defined in 49 CFR 173.151 - 261.21(a)(4)OAC 3745-51-21(A)(4)	Is Not an Oxidizer
C. CORROSIVITY (D002)		
Exhibits the Characteristic	Evaluation Criteria	Rationale
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is aqueous and has pH of less than or equal to 2 - 261.22(a)(1)OAC 3745-51-22(A)(1)	Is Not Liquid
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is aqueous and has pH of greater than or equal to 12.5 - 261.22(a)(1)OAC 3745-51-22(A)(1)	Is Not Liquid
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is a liquid and corrodes steel (SAE 1020) at a rate greater than 1/4 inch per year at a test temperature of 130 F as determined by the NACE test method - 261.22(a)(2)OAC 3745-51-22(A)(2)	Is Not Liquid
D. REACTIVITY (D003)		
Exhibits the Characteristic	Evaluation Criteria	Rationale
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is normally unstable and readily undergoes violent change without detonating - 261.23(a)(1)OAC 3745-51-23(A)(1)	Is Not a Reactive Substance
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It reacts violently with water - 261.23(a)(2)OAC 3745-51-23(A)(2)	"
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It forms potentially explosive mixtures with water - 261.23(a)(3)OAC 3745-51-23(A)(3)	"
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment - 261.23(a)(4)OAC 3745-51-23(A)(4)	"
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment - 261.23(a)(5)OAC 3745-51-23(A)(5)	"
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement - 261.23(a)(6)OAC 3745-51-23(A)(6)	"
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure - 261.23(a)(7)OAC 3745-51-23(A)(7)	"
<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	It is a forbidden explosive as defined in 49 CFR 171.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.58 - 261.23(a)(8)OAC 3745-51-23(A)(8)	"

MATERIAL EVALUATION REVIEW

Newly Generated Waste Final Determination

MEF No.: 1539

MTC: 003 SRC: N/A

PREPARED BY: _____ DATE: _____

REVIEW:

TECHNICAL: *[Signature]* DATE: 2-12-92

EXTERNAL: *[Signature]* DATE: 2-12-92

MANAGEMENT: *[Signature]* DATE: 2/13/92

COMMENTS:(Initial any comments made below):

*R ** - Must complete the Determination worksheets