

4118

**REMOVAL SITE EVALUATION -
HEATING/VENTILATING SYSTEM BUILDING 25
A/C JANUARY 1993**

02/19/93

**DOE-FN/EPA
30
RSE**

004118

REMOVAL SITE EVALUATION
HEATING/VENTILATING SYSTEM
BUILDING 25 A/C

Fernald Environmental Management Project
U. S. Department of Energy

January 1993

RSE FOR HEATING AND VENTILATING SYSTEM FOR BUILDING 25A/25C

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REMOVAL SITE EVALUATION
HEATING/VENTILATING SYSTEMS
FOR BUILDING 25A/25C

INTRODUCTION

Building 25C is commonly known as the Sewage Lift Station Building, which pumps site wide sewage to the Sewage Treatment Plant. Building 25A's pumping system, which is located at the Sewage Treatment Plant, pumps the sewage to the various treating processes prior to discharging the effluent into the Great Miami River. The Heating and Ventilating System in both building (25A/25C) are in dilapidated condition and need to be replaced to ensure continued reliable operation.

The Removal Site Evaluation (RSE) has been completed by 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 demolition of the existing heating and ventilating systems in Building 25A/25C and replacing them with new and more efficient heating/ventilating equipment.

SOURCE AND NATURE OF THE THREAT OF A RELEASE

The construction project for building 25A/25C consist of removing approximately 2,550 lbs of construction rubble. The rubble to be removed contains above background radiological contaminants. The attached radiological survey report, and the next section identifies the levels of potential threat of release of airborne particulate to the atmosphere.

Asbestos Analytical Summary

It appears that most of the asbestos to be produced is approximately 100 lbs that will be in the form of asbestos insulation. The amount of asbestos contents based on prior testing of similar material, the age, usage or location of the materials, and knowledge of the material constituents.

Lead Analytical Summary

There are two sources of lead contamination one is emanating from the refuse metal from the exterior paint. WEMCO:EM:RCRA(FNE):92-047, "RCRA Determination and Radiological characterization for H. V. System Building 25, determined that the refuse metal covered with lead paint and the paint debris were determined to be RCRA non-hazardous waste. This determination is based upon sampling and analysis done on the paint, covering the window frame, duct, and process equipment analyzed by the TCLP method for lead. The analytical results for lead were below the TCLP regulatory level of 5.0 ppm(mg/l). The second source is lead solder in the copper tubing joints, the amount of lead in the tubing is below the TCLP regulatory level.

EVALUATION OF MAGNITUDE OF THE POTENTIAL THREAT

The material to be demolished in Building 25A/25C consists of metal pipe, metal equipment, concrete blocks, ducting, conduit and wire, window sill and window. The radiological survey of the area and material to be demolished documented

readings that ranged from 21 dpm/100cm² alpha to 831 dpm/100 cm² beta in the construction area. Based on these radiological readings, the waste is considered low level radiological waste.

The potential threat posed by radiological contamination within the work area is the airborne particulate that could be released to the atmosphere during the demolition process.

This construction project is located in the controlled area of the FEMP site. The material removed will be surveyed in accordance with SP-P-35-010 "Unrestricted Release of Materials from FMPC". If the material removed is found within free-release limits it can be removed from the site. Any material which cannot be free-released will be handled in accordance with WEMCO Site Operating Procedure SSOP-0044, "Management of Soil, Debris and Waste From a Project," issued June 19 1992.

The lead from the two sources are both found to be below the regulatory limit of 5.0 ppm and will be handled in the appropriate manner for a non-hazardous material.

The asbestos removal will follow the procedures and safe guards found in the FEMP Asbestos Abatement Plan written for this project.

In order to minimize the threat of worker exposure and the threat of airborne particulate release 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-0044.

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 the heating/ventilating systems from Building 25A/25C.

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

Actual or potential exposure to hazardous substance or pollutants or contaminant to nearby populations, animals, or food chain.

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 the heating/ventilating systems in Building 25A/25C.

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 (6) months exists 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 (6) 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 above factors, it has been determined that existing controls for the planned action are adequate and a removal action is not required.

ATTACHMENT NUMBER 2

MATERIALS EVALUATION AND CONTAINER INFORMATION BLD. 25.A

- A. Radiation Survey
- B. Locations
Figures 1,2,3, & 4
- C. RCRA Determination

MATERIALS EVALUATION AND CONTAINER INFORMATION - METAL

SECTION I				
WASTE EVALUATION	YES	UNKNOWN	NO	N
1. Free from the following: a. Grease/oils	✓			
b. Solid residues	✓			
c. Entrapped liquids	✓			
d. Internal fluids	✓			
2. Material tagged as drained				✓
3. Paint: Material free from lead-based paint or Paint covers less than 10% of materials or Material is greater than 1/16 inch thick	✓			
(ATTACHED) SEE WEIGHTED AVG. CALC.				
4. Electrical Equipment: a. Ballasts removed				✓
b. Starter caps removed				✓
c. Mercury switches removed				✓
d. Dielectric fluid removed				✓
5. Plastic/Rubber: a. Material consists of less than 20% other materials by volume (e.g. plastic, wood, or rubber parts/hardware)	✓			
6. Wood a. If wood constitutes more than 20% by volume, then wood checklist (FS-F-3465) must also be used.				

SECTION II - CONTAINER INFORMATION

1. MATERIAL ORIGIN/DESCRIPTION:
 HEATING & VENTILATING UNIT IN BLDG. 25A. SEE ATTACHED
 CALCULATIONS SHEET & DRAWING 25A-7000-4-00058 FOR
 ADDITIONAL ~~SEE~~ INFORMATION

2. PACKAGING START DATE: _____ PACKAGING FINISH DATE: _____ 3. OPERATOR(S) SIGNATURE: _____ DATE: _____

4. CONTAINER NUMBER: _____ 5. CONTAINER TYPE: _____

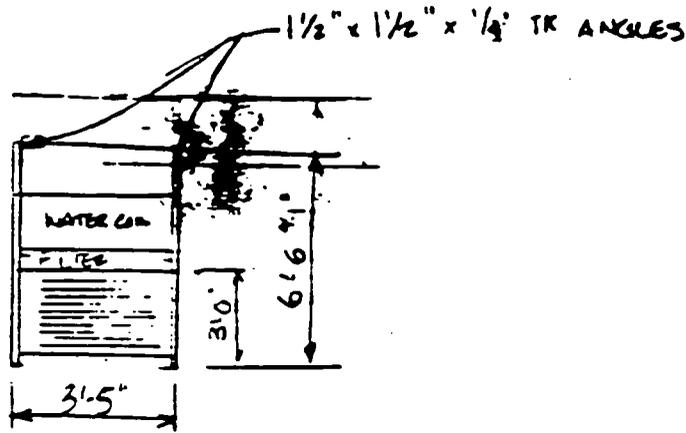
6. 65 CARD NUMBER: _____ 7. LOCATION PACKAGED: _____

8. MEF NUMBER: _____ 9. % COMBUSTIBLE: _____

APPROVED BY: _____ SUPERVISOR(S) SIGNATURE: _____ DATE: _____

* When materials are packaged that do not meet the criteria established in Section I, but have an approved MEF number, the MEF number and material must be recorded.

GENERATOR TO MAKE DISTRIBUTION:	
1 Original to Facilities and Material Evaluation	MS65
2 Copy to Waste Shipping	MS63
3 Copy to Environmental Compliance	MS65
4 Copy to Materials Control and Accountability	MS28



5/11/92
 PREPARED BY K.N. WINTZ

FOR 36" HIGH BASE SECTION - ALL OTHER SECTIONS ARE SIMILAR TO THIS SECTION. THE OTHER SECTIONS HAVE A SMALLER PER OF 16 GA MAT'L THAN USED IN THIS CALCULATION

ROLLED
 4 ANGLES ENTIRE HT = $[(1.5')(1.25') + (1.8)(.25)](36'') \cdot 4 = 99 \text{ in}^3$

WIDTH
 SIDE PANELS = $(25.75')(36'')(0.0598'')(2) = 111 \text{ in}^3$

LENGTH
 SIDE PANELS = $(40.875')(36'')(0.0598'')(2) = 176 \text{ in}^3$

FORMED ANGLES (WIDTH) $\approx (1.5')(1.345')(2)(25.75')(2 \text{ ANGLES}) = 21 \text{ in}^3$

FORMED ANGLES (LENGTH) $\approx (1.5')(1.345')(2)(40.875')(2 \text{ ANGLES}) = 34 \text{ in}^3$

FORMED ANGLES (HT) $\approx (1.5')(1.345')(2)(36'')(4 \text{ ANGLES}) = 58 \text{ in}^3$

TOTAL VOLUME = $99 + 111 + 176 + 21 + 34 + 58 = 499 \text{ in}^3$

WEIGHTED Avg = $\frac{.25(99)}{499} + \frac{0.0598(111+176)}{499} + \frac{0.1345(21+34+58)}{499}$

$0.050 \text{ in} + 0.034 \text{ in} + 0.030 \text{ in} = \boxed{0.069 \text{ in}} > 1/16''$

THIS IS A CONSERVATIVE WEIGHTED AVG. OF THE METAL THICKNESS OF THIS UNIT. HOLES WHICH EXIST IN THE 16 GA PANELS WERE NOT INCLUDED IN THIS CALCULATION. THE 16 GA MAT'L IS THE ONLY MAT'L IN THIS UNIT BELOW THE REQUIRED THICKNESS OF 1/16''.

RADIOLOGICAL SURVEY REPORT

DATE: 3-27-92	LOCATION: 25A, Dargatzis Bldg - Rinc Garden	PRINT NAME: J. Wells	S. Eckler	PAGE: 1 of 4
TIME: 1100	LEVEL: 580' - 597'	SIGNATURE: JWells, SEckler		
REASON FOR SURVEY:	To survey of digestor mtdy of Rinc Garden prior to construction of U-1 and ventilation mtdy. This survey is to be done & only if it is performed on the date.			

INSTRUMENTS								
MODEL	SERIAL NUMBER	TYPE (a. B. γ)	CALIBRATION-DUE DATE	BKGD. (cpm)	EFF/CF	MDA (dpm)	INSP./PERFORM. TEST SAT?	
							YES	NO
LB 5100	#6	α/β.γ	4/92	1.04/3.6	0.311/0.432	416/473	✓	

ITEM NUMBER	LOCATION AND/OR DESCRIPTION	DPM/100cm ² ALPHA		DPM/100cm ² BETA-GAMMA		CORRECTED DOSE RATE (MREM/HR)			
		REMOVABLE	FIXED PLUS REMOVABLE	REMOVABLE	FIXED PLUS REMOVABLE	γ	β/γ	γ	β/γ
						CONTACT	CONTACT	AT	AT
1	Heater	<MDA	<MDA	<MDA	<MDA				
2	Heater	<MDA	<MDA	<MDA	<MDA				
3	Duct	<MDA	<MDA	<MDA	<MDA				
4	Fan Assembly	<MDA	<MDA	<MDA	<MDA				
5	Fan Assembly	<MDA	<MDA	<MDA	<MDA				
6	Fan (Bottom)	<MDA	<MDA	102	<MDA				
7	Fan (Top)	<MDA	<MDA	<MDA	<MDA				
8	Pipe	<MDA	<MDA	<MDA	<MDA				
9	Pipe	<MDA	<MDA	<MDA	<MDA				
10	Miter Local Valve	<MDA	<MDA	<MDA	<MDA				
11	Heater (side)	<MDA	<MDA	<MDA	<MDA				
12	Top of Control	<MDA	<MDA	75	<MDA				
13	Heater	<MDA	<MDA	<MDA	<MDA				
14	Top	<MDA	<MDA	<MDA	<MDA				
15	Top	<MDA	<MDA	<MDA	<MDA				
16	Base	<MDA	<MDA	56	<MDA				
17	Pipe	<MDA	<MDA	<MDA	<MDA				
18	Pipe	<MDA	<MDA	<MDA	<MDA				

NO.	DISTRIBUTION OF COPIES
1	Radiological Safety Supervisor
2	Facility Supervisor
3	Operable Unit Manager

NOTIFICATION OF SURVEY RESULTS					
SUPERVISOR NOTIFIED	TIME	DATE	NOTIFIED BY	REVIEWED BY	DATE

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

Date: 10/17/91 LOCATION: DIGESTER BLDG. ASST: _____
 Time: 140Z LEVEL: SEWAGE PLT. 35A D. Barber Page 1 of 2
 REASON FOR SURVEY: ROUTINE SPECIAL REQUEST RWP INCIDENT

COMMENTS:
QUARTERLY SURVEY
 FOLLOW-UP SURVEY ATTACHED YES NO
 SURVEY MAP ATTACHED YES NO

INSTRUMENTS				
MODEL	SERIAL NUMBER	CALIBRATION DATE	BKRD.	EFF.
<u>3</u>	<u>77180</u>	<u>DUE 4/92</u>	<u>100</u>	<u>10</u>
<u>LB5100</u>	<u>#2</u>	<u>DUE 11/91</u>	<u>0.64</u>	<u>0.2</u>
"	"	"	<u>1.66</u>	<u>0.4</u>

ANALYZE FOR: ALPHA BETA-GAMMA OTHER _____
 TYPE OF SURVEY: CONTAMINATION RADIATION OTHER _____

ITEM NUMBER	GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr)				DPM ALPHA		DPM BETA-GAMMA	
			Y	B/Y	Y	B/Y	100 CMP	PROBE	100 CMP	PROBE
			CONTACT	CONTACT	3 FT.	3 FT.				
<u>1</u>		<u>HEATER VENT</u>					<u><MDA</u>		<u>80</u>	<u><5i</u>
<u>2</u>		<u>FLOOR</u>							<u><MDA</u>	<u>3k</u>
<u>3</u>		<u>FIRE PUMP</u>								<u><5i</u>
<u>4</u>		<u>FURNACE</u>								
<u>5</u>		<u>↓</u>								
<u>6</u>		<u>PUMP</u>							<u>120</u>	<u>↓</u>
<u>7</u>		<u>MOTOR</u>							<u>55</u>	<u>7.5</u>
<u>8</u>		<u>REFRIGERATOR</u>							<u><MDA</u>	<u><5k</u>
<u>9</u>		<u>SINK</u>							<u>45</u>	
<u>10</u>		<u>VALVE</u>							<u>60</u>	
<u>11</u>		<u>WATER HEATER</u>							<u><MDA</u>	
<u>12</u>		<u>LOCK & TAG CABINET</u>								<u>↓</u>
<u>13</u>		<u>ELECTRIC BOX</u>							<u>60</u>	
<u>14</u>		<u>↓ ↓</u>							<u><MDA</u>	
<u>15</u>		<u>FLOOR</u>							<u>75</u>	
<u>16</u>		<u>↓</u>							<u>145</u>	<u>↓</u>

NO.	DISTRIBUTION OF COPIES
<u>1</u>	<u>Radiological Safety Technician Supervisor</u>
<u>2</u>	<u>Radiological Safety Engineer</u>
<u>3</u>	<u>Facility Supervisor</u>

NOTIFICATION OF SURVEY RESULTS					
SUPERVISOR NOTIFIED	TIME	DATE	NOTIFIED BY	REVIEWED BY	DATE

FMPC
INDUSTRIAL RADIOLOGICAL SAFETY TRAINING - RADIOLOGICAL SAFETY
RADIOLOGICAL SURVEY REPORT (CONTINUATION SHEET)

ITEM NUMBER	GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr)				DPM ALPHA		DPM BETA-GAMMA	
			CONTACT	CONTACT	3 FT.	3 FT.	100 CM ² PROBE	100 CM ² PR		
17		FLOOR					<MDA		194	
18							↓		115	
19							70		174	
20							61		95	
21		↓					52		165	
22		FLOOR GRATE					<MDA		75	
23		↓ ↓					61		125	
24		VALVE					<MDA		<MDA	
25		TABLE								
26		↓								
27		TRASH CAN								
28		SINK								
29		LEDGE								
30		WINDOW SILL								
31		LADDER					↓		↓	
32		HEATER					61		214	
33		GAS METER					<MDA		<MDA	
34		FLOOR							55	
35									95	
36									55	
37									55	
38		↓							<MDA	
39		DOOR (TOP)							↓	
40		I-BEAM							↓	

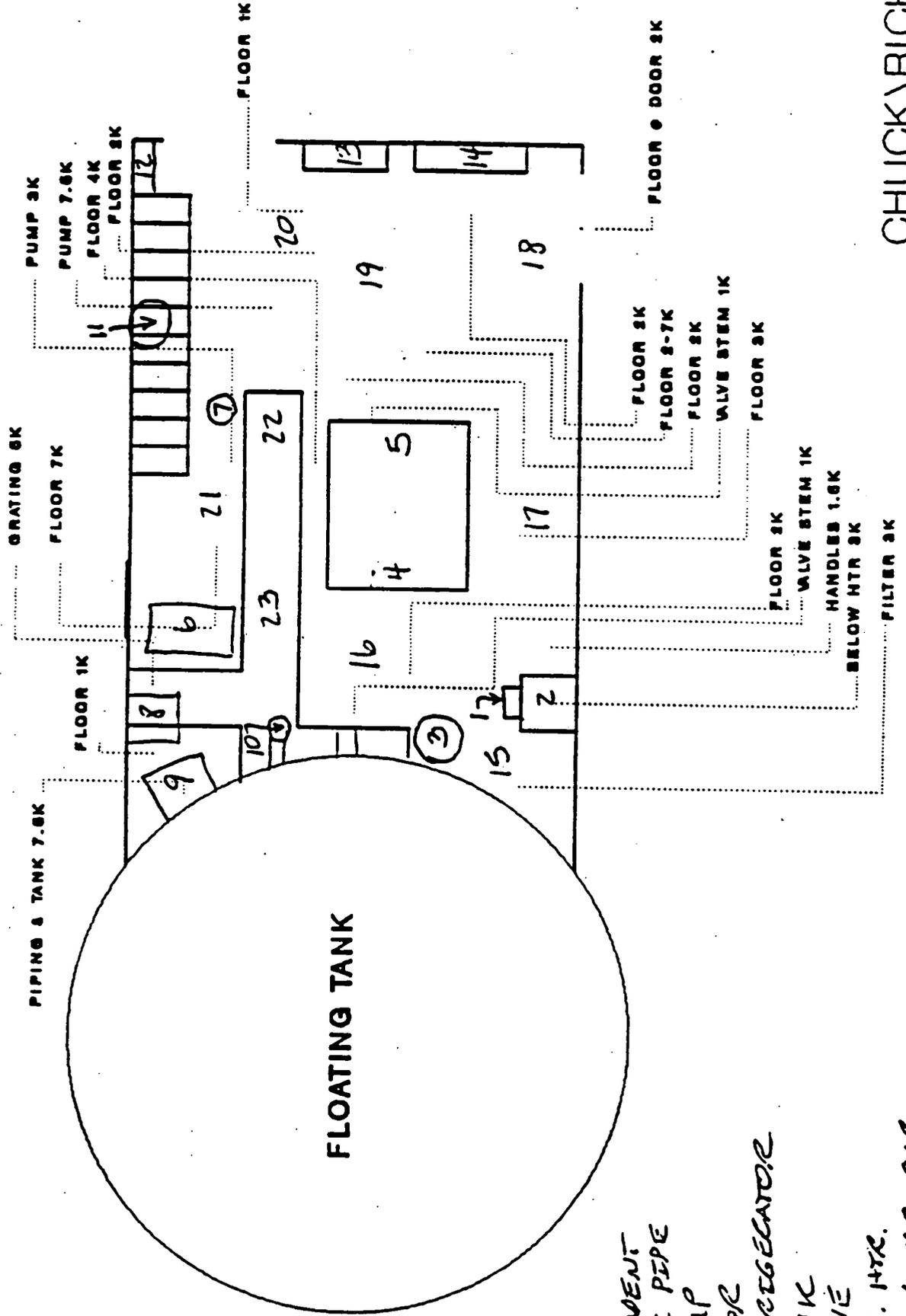
FRI MAR 27, 1992
GROUP C SYSTEM #6 SPEARS

SAMPLE NUMBER	GROSS ALPHA	GROSS BETA	DPM ALPHA	DPM BETA	TIME OF COUNT
1	1	2	3	0	16:20:43
2	0	3	-3	5	16:21:26
3	2	3	9	5	16:22:08
4	3	4	15	10	16:22:51
5	0	4	-3	10	16:23:34
6	7	24	41	102	16:24:16
7	2	9	9	33	16:24:59
8	0	6	-3	19	16:25:41
9	0	4	-3	10	16:26:24
10	0	1	-3	-3	16:27:06
11	2	2	9	0	16:27:49
12	3	18	15	75	16:28:31
13	0	6	-3	19	16:29:14
14	2	8	9	28	16:29:57
15	1	4	3	10	16:30:39
16	3	14	15	56	16:31:22
17	1	7	3	24	16:32:04
18	2	8	9	28	16:32:47
19	0	1	-3	-3	16:33:29
20	4	9	22	33	16:34:12
21	4	15	22	61	16:34:55
22	1	9	3	33	16:35:37
23	3	19	15	79	16:36:20
24	3	7	15	24	16:37:02
25	1	8	3	-28	16:37:45

OPERATION COMPLETE

FIRST FLOOR DIGESTER

Figure 3, Bld. 25.A.

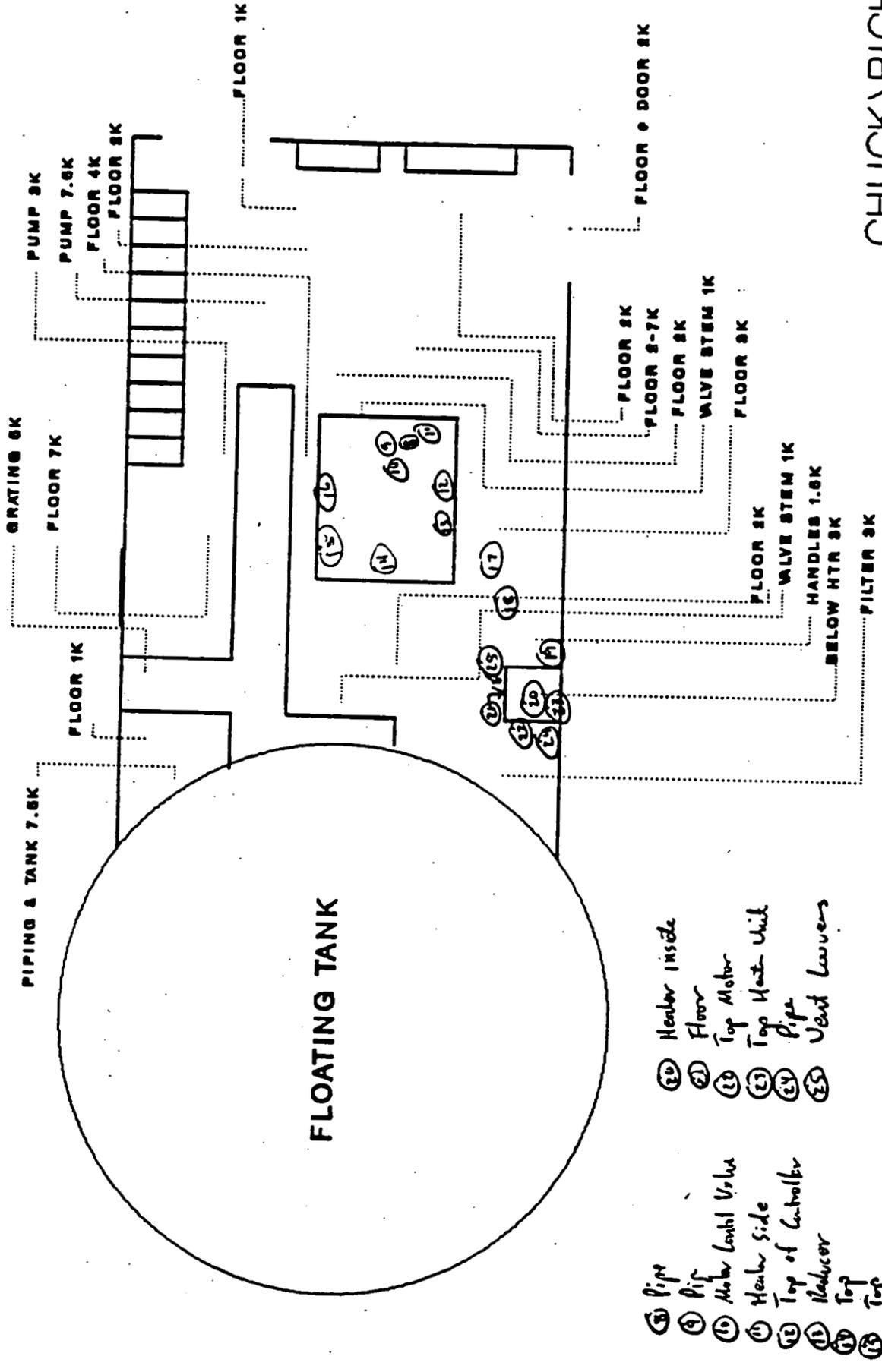


- 1- HTR. VENT
- 3- FREE PIPE
- 6- PUMP
- 7- MOTOR
- 8- REFRIGERATOR
- 9- SINK
- 10- VALVE
- 11- WTR. HTR.
- 12- LOCK & TAG CAB.
- 13- FIRE BOX

CHUCK RICH

FIRST FLOOR DIGESTER

Figure 4. Bld. 25. A.



CHUCK RICH

- | | |
|-------------------------|---------------------|
| (1) Pipe | (20) Header Inside |
| (2) Pipe | (21) Floor |
| (3) Motor Control Valve | (22) Top Motor |
| (4) Header Side | (23) Top Water Wick |
| (5) Top of Controller | (24) Pipe |
| (6) Header | (25) Vent Louvers |
| (7) Top | |
| (8) Top | |
| (9) Base | |
| (10) Pipe | |
| (11) Pipe | |



From: C. G. Rieman (6828) WEMCO:EM(FME):92-217

Date: July 14, 1992

Subject: RCRA DETERMINATION AND RADIOLOGICAL CHARACTERIZATION FOR THE H & V SYSTEMS - BUILDING 25A

To : H. J. Draxler

- Ref:
1. WEMCO Site Standard Operating Procedure, SSOP-44, "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 FMPC"
 3. Environmental Compliance Spill/Release Incident Tracking Report, Dated April 1, 1992
 4. Upset Condition Documentation, issued September 18, 1990
 5. WEMCO Document No. WEMCO:EC&QA(OU3/FME):91-390, "Metal Coated With Lead Base Paint", Dated October 23, 1991

This memo transmits the RCRA determination and radiological characterization for the H & V Systems, Building 25A construction project. The waste to be generated consists of metal (30 cubic feet - 86 pounds), process equipment (95 cubic feet - 1806 pounds), windows (14 cubic feet - 650 pounds), cardboard and paper packing materials, rubber and plastic.

PROCESS KNOWLEDGE

This construction area is located east of the site in the uncontrolled area, outside of the production area of the FEMP, however, because of the trash incinerator located in the area where radiological contaminated materials were burned, the area is now designated as a controlled area. The trash burner has not been designated a Hazardous Waste Management Unit (HWMU).

The demolition will include removal of the existing heating and ventilating unit, exhaust fan, finned tube heater, associated ductwork, piping, and one window.

This construction area inside Building 25A has not been used to process uranium, thorium or any other hazardous waste. There were no reported spills/releases in the area per References 3 and 4.

Process knowledge indicates that lead (Pb) based paints were routinely used to maintain the metal waste to be generated from this project.

Since OAC 3745-51-20(C) {40 CFR 261.20(c)} states that the entire waste must be evaluated, the methodology for evaluating metal coated with lead base paint was developed and submitted to Ohio EPA for approval, Reference 5. A verbal concurrence has been received. The metal waste from this project will use this methodology to evaluate the lead content of the metal waste. The Materials Evaluation and Container Information - Metal Check Sheet, Attachment Number I, indicated that the metal waste is greater than 1/16 inch thick and is acceptable as nonhazardous waste for lead content as specified in Reference 5.

The plastic waste to be generated, will be plastic sheets used as dust barricades and plastic bags to package any radiological contaminated waste.

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

The work clothes to be generated (anti-C clothing, rubber gloves, etc.) will be used for worker protection if required.

The WEMCO Maintenance Department will drain the fluids and gas from the equipment prior to disposal. The EC&QA department will certify that the equipment is drained prior to disposal.

SAMPLING AND ANALYSIS

Based upon process knowledge and the nature of the waste to be generated from this project, no sampling was required.

RADIOLOGICAL CHARACTERIZATION

Based upon the nature of the waste to be generated, radiological characterization will be determined by the Radiological Safety Group for disposal per Reference 1 and 2.

RCRA DETERMINATION

The metal waste to be generated (heating and ventilating unit, exhaust fan, finned tube heater, ductwork piping and window) is RCRA nonhazardous (a.k.a. non-RCRA) based upon process knowledge.

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

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 II contains the list of acutely toxic wastes.

No materials have been identified that 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 261.21 to 24) or the revised Toxicity Characteristic under 40 CFR 261.24.

SUMMARY

The waste from this project (metal, process equipment, window, cardboard and paper, rubber and plastic) can be disposed of as RCRA nonhazardous (a.k.a. non-RCRA), per Reference 1 and 2 as determined by the Radiological Safety Group.

If any other materials are generated from this project, an additional RCRA determination will be required for proper disposal.

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
Environmental Management

CGR:tmk

w/attachments

c:	J. E. Clements	J. L. Trujillo
	L. S. Farmer	T. J. Walsh
	C. L. Griffin	K. N. Wintz
	J. E. Harmon	
	L. A. Hurst	Central Files
	H. J. Knue	FME Files
	L. B. Ko	
	S. J. Lund	
	L. M. March	
	B. S. Perkins	
	M. W. Salisbury	
	J. M. Sattler	
	S. G. Schneider	
	A. C. Snider	
	R. A. Thiel	

ATTACHMENT 3

MATERIALS EVALUATION AND CONTAINER INFORMATION BLD. 25.C

- A. Radiation Survey
- B. Locations
Figures 1 & 2
- C. RCRA Determination

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

Date: 12-4-91 LOCATION: Bldg 25-C RST: ...
 Time: 1600 LEVEL: 580' T. WAITERS Page 1 of 3

REASON FOR SURVEY: ROUTINE SPECIAL REQUEST RWP INCIDENT

COMMENTS:
 Sewage Lift Station Bldg 25-C "Yearly"
 Frisk Survey

INSTRUMENTS			
MODEL	SERIAL NUMBER	CALIBRATION DATE	BKRD.
LB 5100	5	1-92	α, 32, βx 4.12
Indium 2	38328	6-92	CF=3.8

ANALYZE FOR: ALPHA BETA-GAMMA OTHER
 TYPE OF SURVEY: CONTAMINATION RADIATION OTHER

MDA α = 20 βx = 28
 FOLLOW-UP SURVEY ATTACHED YES NO
 SURVEY MAP ATTACHED YES NO

ITEM NUMBER	GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr)				DPM ALPHA		DPM BETA-GAM	
			γ	β/γ	γ	β/γ	100 CM ²	PROBE	100 CM ²	PI
			CONTACT	CONTACT	3 FT.	3 FT.				
1	Sewage Lift STA. Bldg 25-C	FLOOR					< MDA	< MDA	< MDA	
2		STAIR PLATFORM					< MDA	< MDA	< MDA	
3		FLOOR					< MDA	< MDA	< MDA	
4		Floor @ Valve stand					< MDA	< MDA	< MDA	
5		FLOOR					< MDA	< MDA	< MDA	
6		Inside old valve					70	187	3	
7		Window sill					< MDA	53	< MDA	
8		STEEL ACCESS PLATE					< MDA	< MDA	< MDA	
9		FLOOR					< MDA	< MDA	< MDA	
10		Top of Tool box					< MDA	43	< MDA	
11		Inside Tool box					< MDA	39	< MDA	
12		Window sill					< MDA	< MDA	< MDA	
13		FLOOR					< MDA	< MDA	< MDA	
14		ELEC. PANEL					< MDA	< MDA	< MDA	
15		FLOOR					< MDA	< MDA	< MDA	
16		ELEC. PANEL					< MDA	< MDA	< MDA	

NOTIFICATION OF SURVEY RESULTS					
SUPERVISOR NOTIFIED	TIME	DATE	NOTIFIED BY	REVIEWED BY	DATE
				MC	12/20/91

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

SEWAGE LIFT STATION BLDG 25-C

UPPER LEVEL

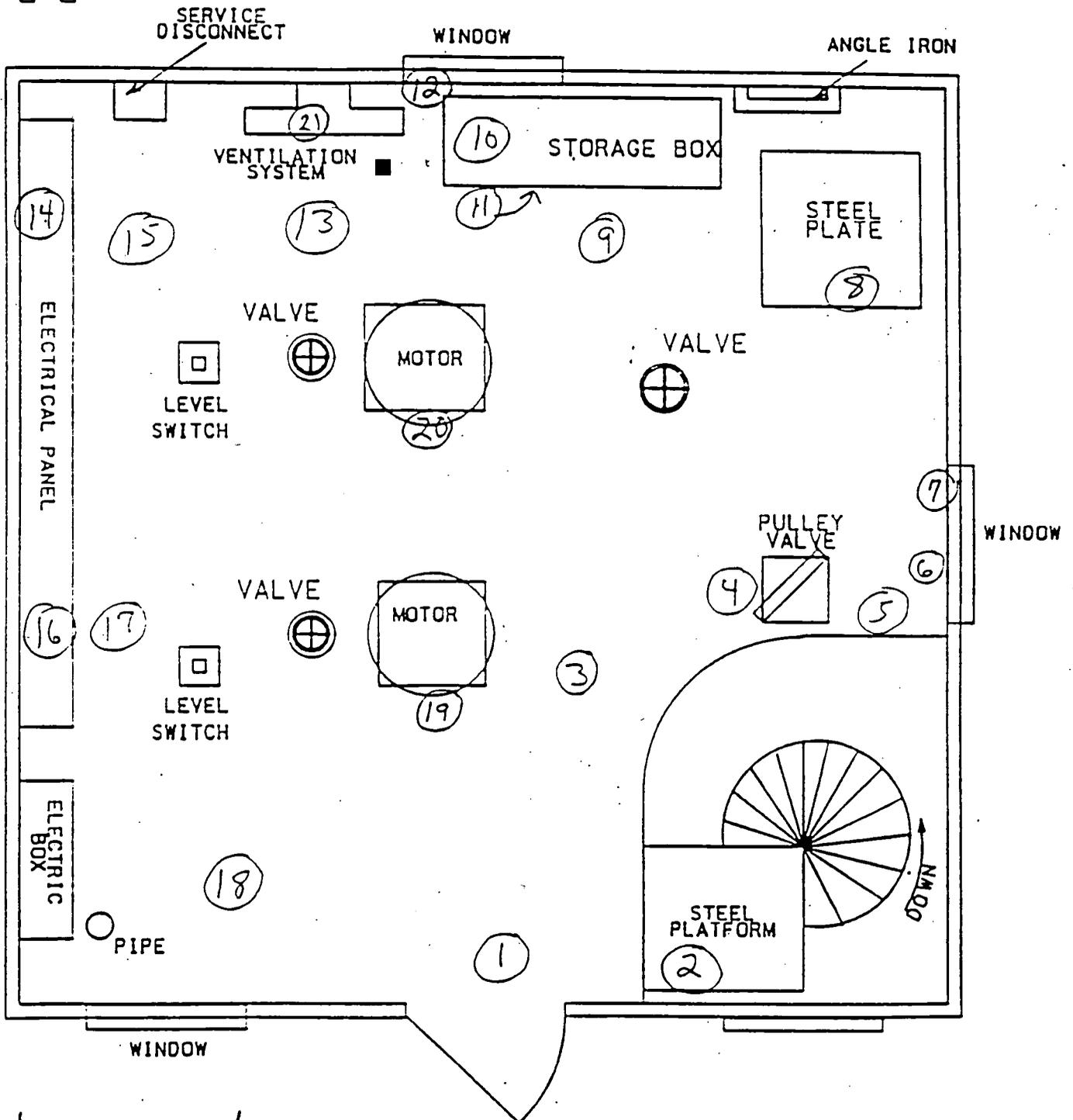


Figure 1.

SEWAGE LIFT STATION
BLDG 25-C



LOWER LEVEL

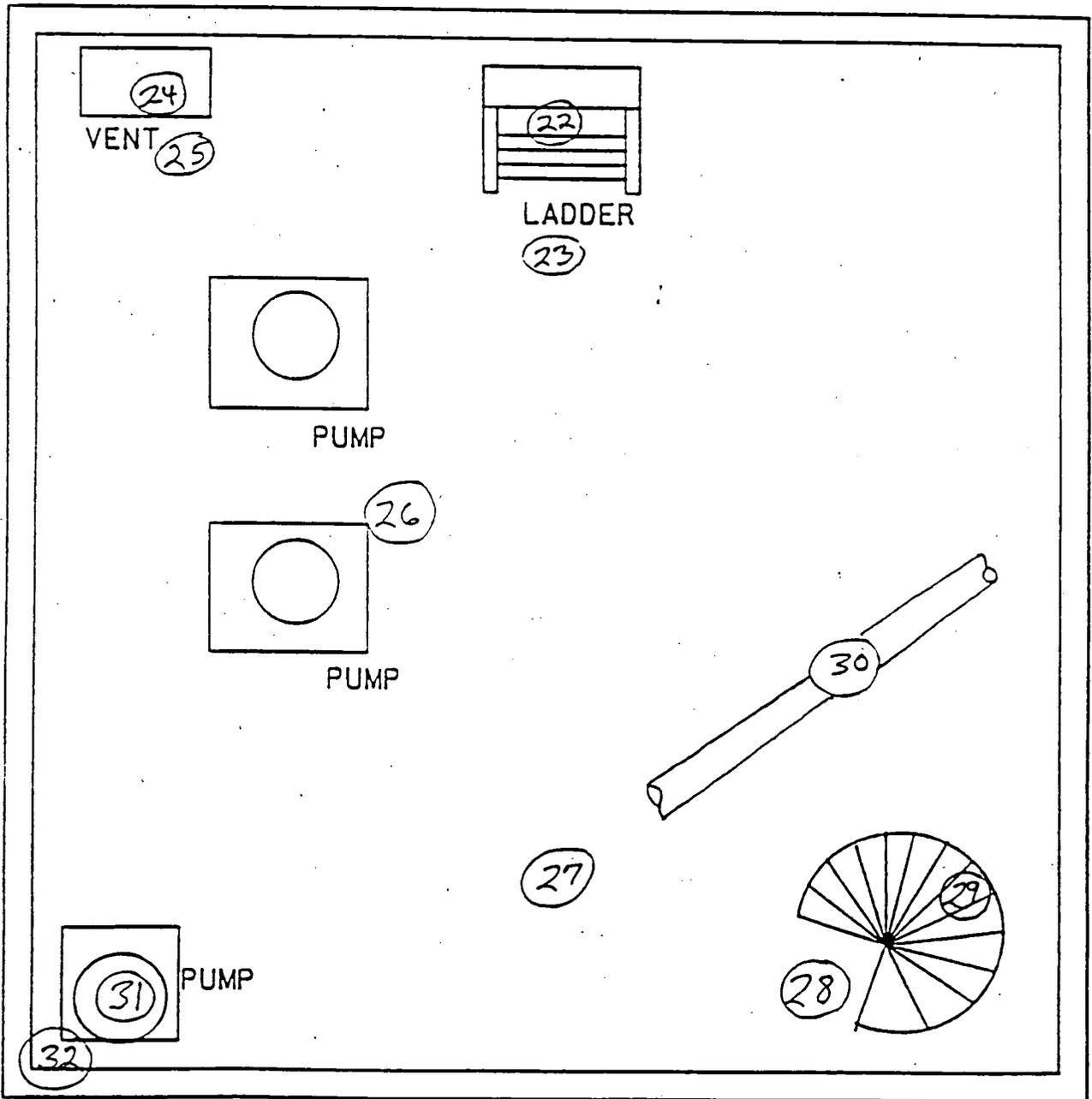


Figure 21



From: J. P. Erfman (6085)

WEMCO:EM:RCRA(FME):92-095

Date: October 16, 1992

Subject: RCRA DETERMINATION AND RADIOLOGICAL CHARACTERIZATION FOR BUILDING 25C
HEATING AND VENTILATION SYSTEM

To : H. J. Draxler

- Ref:
1. WEMCO Site Standard Operating Procedure, SSOP-0044, "Management of Soil, Debris and Waste From a Project," issued June 19, 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 September 1, 1992
 4. Upset Condition Documentation, issued September 18, 1990
 5. DOE-2152-91, R. E. Tiller to P. Pardi, Ohio EPA, "Characterization of Metal Coated With Lead Based Paint," dated September 16, 1991
 6. Site-Wide Characterization Report, dated August 1992

This memo transmits the RCRA determination and radiological characterization for the Heating and Ventilation System in Building 25C. The waste to be generated consists of 300 pounds of rubble (concrete block), 104 pounds of metal, 114 pounds of process equipment, 66 pounds of conduit & wire, plastic, paper, rubber, cardboard and protective clothing.

PROCESS KNOWLEDGE

This construction project is located in the controlled area of the FEMP, inside Building 25C, commonly known as the Sewage Lift Station Building. The building was never used to process or store uranium or thorium.

There were no reported releases/spills in the construction area per Reference Number 3 and 4.

This construction work scope includes the removal of the existing heating and ventilating unit, exhaust fan, and finned tube heater, and removal of associated ductwork and piping as required to install new equipment.

The liquids in the process equipment will be removed and disposed of by the appropriate WEMCO Operating Procedures. The Quality Assurance Group will certify that all liquids have been removed prior to disposal.

The rubble will consist of painted concrete block from a wall to allow the removal of the ductwork. This paint may be lead based, so reference number 5 will be used to determine if the concrete waste is RCRA hazardous.

The plastic waste will be for packing radiologically contaminated waste.

The paper and cardboard will be packing materials from the new equipment to be installed.

The protective clothing (anti-c's, rubber gloves, etc.) will be generated if required for radiological protection.

SAMPLING AND ANALYSIS

Two paint samples were obtained from the ductwork and submitted for TCLP Pb. Both samples were within the regulatory limits.

RADIOLOGICAL CHARACTERIZATION

Prior to demolition, a radiological survey of the area was conducted in accordance with WEMCO Site Standard Operating Procedure, SSOP-0044. Radiological surface readings were taken inside building 25C on the walls, floor, window sill, and equipment. These readings ranged from 21 dpm/100cm² alpha to 831 dpm/100cm² beta in the construction area. Based on these radiological readings and FEMP standard practice governing waste generated from controlled areas, the waste is considered low level radioactive waste and must be managed in accordance with WEMCO Site Standard Operating Procedure SSOP-0044.

RCRA DETERMINATION

The asbestos waste (transite siding and pipe insulation) to be generated is RCRA non-hazardous (a.k.a. non-RCRA), if it meets the conditions specified in MEF Number 1572, dated February 24, 1992.

The plastic waste (sheeting and bags) to be generated is RCRA non-hazardous (a.k.a. non-RCRA), if it meets the conditions specified in MEF Number 1539, dated February 11, 1992.

The paper and cardboard waste (packing materials and packing boxes) to be generated is RCRA non-hazardous (a.k.a. non-RCRA), if it meets the conditions specified in MEF Number 1673, dated April 10, 1992.

The protective clothing (Anti-c, rubber gloves, etc) to be generated is RCRA non-hazardous (a.k.a. non-RCRA), if it meets the conditions specified in MEF Number 1722, dated June 25, 1992.

The rubble waste (concrete block) to be generated from this project is RCRA non-hazardous (a.k.a. non-RCRA). This determination is based on process knowledge of the material and the methodology to calculate total lead content of the waste per reference number 5.

For the metal waste generated, based upon process knowledge and the information presented above, the waste is not a listed hazardous waste under 40 CFR 261.31 to 33 and does not exhibit any characteristic of hazardous waste as defined under 40 CFR 261.21 to 24. Hence, the metal waste generated from the Heating and Ventilation project may be discarded as RCRA non-hazardous (a.k.a. non-RCRA) waste. The waste is regulated as a solid waste pursuant to 40 CFR 261.2(a)(2)(i) and low level radioactive waste (LLRW) under DOE Order 5820.2A.

SUMMARY

It is F&ME's intention to provide radiological and RCRA determinations of construction waste prior to its generation. F&ME believes that these determinations properly represent the waste or waste streams discussed herein. The determinations apply only to waste listed on the Construction Waste Identification/Disposition (CWID) Form dated February 10, 1992. Any additional waste must be evaluated independently and requires the issuance of a separate determination letter.

The waste will have to be monitored by the Radiological Safety Group for proper radiologically disposition per Reference Numbers 1 and 2.

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



J. P. Erfman
Facilities and Materials Evaluation
RCRA Programs

JPE:bbs

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