R-030-101.1

3242

ASBESTOS SURVEY & ASSESSMENT FOR THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

02-28-1992

DIAGNOSTIC ENGINEERS/WEMCO
500
REPORT

R-030-101.1

FINAL REPORT

3242

ASBESTOS SURVEY & ASSESSMENT
FOR THE
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY

FEBRUARY 28, 1992

DIAGNOSTIC ENGINEERING INC.
5725 DRAGON WAY, SUITE 321
CINCINNATI, OHIO 45227
(513) 271-3737

3242

ASBESTOS SURVEY FINAL REPORT

FOR

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT
COMPANY OF OHIO

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO
PROJECT NO. D/278091001-1
FEBRUARY 28, 1992

ASBESTOS SURVEY FINAL REPORT

3242

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

II. IMPORTANT TERMS

III. PROJECT DESIGN & PROCEDURES

IV. LISTING OF FACILITIES SURVEYED

V. FACILITY REMOVAL PRIORITY AND COST ESTIMATES TABLE FOR RESPONSE ACTION

VI. FACILITY REMOVAL PRIORITY COST ESTIMATES TABLE FOR RESPONSE ACTION BY MATERIAL CATERGORIES

VII. FACILITY RESPONSE ACTION TABLE BY HOMOGENOUS AREA

VIII. FACILITY SURVEY TABULATION GRAPHICS

IX. GENERAL DISCUSSION, RECOMMENDATIONS AND CONCLUDING REMARKS

APPENDICES

A) INDIVIDUAL FACILITY REPORT CONCULSIONS
B) INDIVIDUAL FACILITY RESPONSE ACTION TABLES BY HOMOGENEOUS AREA
C) FACILITY COST ESTIMATES TABLES FOR RESPONSE ACTION

I. EXCUTIVE SUMMARY

3242

I. EXCUTIVE SUMMARY

3242

At the request of Westinghouse Environmental Management Company of Ohio (WEMCO), Diagnostic Engineering Inc. (DEI) conducted a comprehensive asbestos survey and assessment of the Fernald Environmental Management Project (FEMP) site located in Fernald, Ohio. This project involved a physical examination to locate and assess the condition of all asbestos-containing materials in seventy-four (74) facilities at the site. The project also included a fiber migration study which was performed to determine the extent to which the exterior Transite wallboard may be releasing asbestos fibers into the environment.

A recommended program of asbestos control has been designed based on the conditions found and associated risk of exposure to airborne asbestos. The various recommended Response Actions in this program are prioritized. Those items where conditions should be addressed at once are ranked first, followed by items that should be scheduled second; items that should be done when convenient are given third, and finally items where the material condition is to be monitored under the on going FEMP asbestos Operations and Maintenance (O&M) Program.

Individual facility reports have been prepared that provide specific information to FEMP Facility Owner's. Information from the facility reports is summarized herein. Each facility report contains pertinent information on the location and condition of asbestos-containing materials in the individual facilities. Also included in the facility reports are graphics that show both asbestos-containing material quantities in relation to condition and potential for exposure, and reduced facility drawings where sample locations and homogeneous areas are indicated. Based on information from sampling and analysis, sampled materials were then labeled as either asbestos-containing or asbestos-free.

Asbestos was located as a constituent of the thermal insulation on the heating/cooling and plumbing/process systems, Transite wallboard, resilient flooring/mastic as well as other miscellaneous materials. Some of these materials are damaged and present a possible hazard of exposure to airborne asbestos if disturbed. Other materials found appear to be stable with little immediate hazard.

The most immediate asbestos concern at FEMP is the condition of thermal system insulation (TSI) and Transite wallboard in several facilities. TSI areas of concern which necessitate immediate action are found in Buildings 3d, 3e, 4a, 7, and 12a. Transite areas of concern which necessitate immediate action are found in Buildings 2a, 2d, 5, 6, 9, and 13a. The final area of concern is in Building 10a. Following the coal bunker fire, DEI recommends that the areas affected by fire suppression activities be reassessed for altered conditions.

The development of an O&M Program was not included in this project. However, cost estimates for the development and management of an on-going O&M program are presented. Once damaged material is repaired or removed, as recommended, all remaining material should be monitored by the procedures of the O&M program.

The estimated cost for recommended Response Actions that include limited removal of material, repair of damaged material and an Operations and Maintenance Program to maintain the asbestos-containing material is $727,182. The estimated cost for the removal of all asbestos-containing materials at FEMP is $12,676,676. The estimated cost for the development and first year of the O&M program is $96,500. These are very provisional cost estimates which can vary as the extent and quantity of work performed changes. The

4

3242

estimates are based on historical averages of many varied projects. An escalation factor has not been included to compensate for the unique conditions and difficulties associated with project execution at FEMP. DEI personnel have indicated that an appropriate escalation factor for asbestos work at FEMP could be four times that found in more traditional industrial or commercial projects. A detailed listing of cost estimates and associated Response Actions for each homogeneous area are presented both by material type and individual facility.

5

Abatement Cost Summary Table, by Building

Building Information			Cost Information for Recommended Response Actions					
No.	Name	Size	Repair	Removal	Replacmt.	O&M	Total	Total Removal Cost
1a,b	Preparation Plant, Storage	65,193	1,741.50	0.00	0.00	4,138.13	5,879.63	3,344,181
2a	Ore Refinery Building	40,000	33,684.00	97,597.00	211,018.00	949.63	343,248.63	1,015,670
2b	Lime Handling Building	2,500	49.50	724.00	586.00	37.04	1,396.54	31,854
2c	Bulk Lime Handling Building	1,000	0.00	0.00	0.00	10.76	10.76	9,688
2d	Metal Dissolver Building	2,500	2,423.00	6,296.00	13,912.00	60.92	22,691.92	56,184
2e	NFS Storage Pump House	19,490	0.00	27.00	29.00	1.29	57.29	5,941
3a	Maintenance Building	9,425	7.50	0.00	0.00	94.62	102.12	79,967
3b	Ozone Building	1,050	87.00	0.00	0.00	17.92	104.92	15,416
3c	Control House	2,500	0.00	0.00	0.00	59.32	59.32	48,148
3d	NAR Towers	7,500	2,835.00	0.00	0.00	13.74	2,848.74	57,622
3e	Hot Raffinate Building	3,700	358.50	17,835.00	27,806.00	154.88	46,154.38	152,892
3f	Digestion Fume Recovery	1,250	1,032.00	12,320.00	6,160.00	3.44	19,515.44	26,584
3g	Refrigeration Building	1,250	0.00	0.00	0.00	18.87	18.87	15,528
4a	Green Salt Plant	109,400	5,196.00	3,292.00	6,730.00	682.72	15,900.72	696,687
4b	Plant 4 Warehouse	11,400	0.00	0.00	0.00	0.00	0.00	0
4c	Plant 4 Maintenance Building	3,364	0.00	0.00	0.00	57.65	57.65	46,120
5	Metals Production Plant	126,320	14,144.50	4,963.00	3,469.00	269.34	22,845.84	378,016
6	Metals Fabrication Plant	227,000	3,667.00	25,836.00	57,087.00	2,753.53	89,343.53	2,359,546
7	Plant 7	41,572	4,846.50	34,494.00	18,364.00	438.45	58,142.95	433,394
8a	Recovery Plant	77,542	1,347.00	1,482.00	1,023.00	435.02	4,287.02	437,349
8b	Maintenance Building	1,195	0.00	0.00	0.00	1.48	1.48	3,290
8c	Rotary KILN/DRUM Building	3,500	0.00	0.00	0.00	0.00	0.00	0
9	Special Products Plant	48,197	300.00	4,374.00	5,955.00	377.29	11,006.29	355,967
10a	Boiler Plant	24,682	200.00	238.00	560.00	380.71	1,378.71	630,592
10b	Boiler Plant Maintenance	2,340	0.00	0.00	0.00	0.00	0.00	0
11	Service Building	103,304	223.50	230.00	133.00	378.13	964.63	275,335
12a	Main Maintenance Building	58,831	280.50	2,135.00	1,665.00	441.03	4,521.53	391,888
12b	Cylinder Storage Building	1,375	0.00	0.00	0.00	0.00	0.00	0
12c	Lumber Storge Building	2,400	0.00	0.00	0.00	0.00	0.00	0
13a	Pilot Plant Wet Side	1,375	14,863.50	37,940.00	22,279.00	133.15	75,215.65	172,920
13b	Pilot Plant Maintenance Bldg	1,708	0.00	0.00	0.00	4.84	4.84	6,359
14	Administration Building	37,398	0.00	0.00	0.00	453.44	453.44	312,333
15	Laboratories	84,253	14,734.80	2,926.00	1,729.00	594.94	19,984.74	382,923
16a	Main Electrical Station	40,000	0.00	0.00	0.00	1.45	1.45	4,350
18b	General Sump	1,880	0.00	0.00	0.00	0.00	0.00	0
19a	Main Metal Tank Farm	2,500	0.00	0.00	0.00	0.00	0.00	0
20a	Valve/Control Building	1,296	60.00	0.00	0.00	78.54	138.54	66,196
20b	Filter/Chemical Building	1,125	0.00	0.00	0.00	8.02	8.02	18,888
20c	Cooling Towers	3,125	0.00	0.00	0.00	102.32	102.32	81,856
20e	Well House #1	100	19.50	0.00	0.00	0.08	19.58	501
20g	Well House #3	100	0.00	0.00	0.00	0.07	0.07	420
24a	Railroad Scale House	400	0.00	0.00	0.00	0.00	0.00	0

Continued

Abatement Cost Summary Table, by Building (continued)

Building Information			Cost Information for Recommended Response Actions					
No.	Name	Size S.F.	Repair	Removal	Replacmt.	O&M	Total	Total Removal Cost estimate
24b	Railroad Engine House	1,125	10.50	0.00	0.00	0.74	11.24	3,369
25a	Chlorination Building	6,500	0.00	0.00	0.00	0.62	0.62	2,881
25c	Sewage Lift Station	500	7.50	0.00	0.00	0.03	7.53	10
26a	Pump House- HP Fire Protec	2,000	0.00	0.00	0.00	0.00	0.00	0
28a	Security Building	7,500	171.00	0.00	0.00	6.37	177.37	12,078
28b	Human Resources Building	8,500	178.50	0.00	0.00	68.08	246.58	45,117
30a	Chemical Warehouse	25,900	280.00	0.00	0.00	315.44	595.44	252,356
31	Engine House/Garage	8,300	0.00	0.00	0.00	13.97	13.97	30,572
32	Magnesium Storage Building	5,375	175.50	0.00	0.00	0.65	176.15	2,864
37	Pilot Plant Annex	5,987	990.00	0.00	0.00	4.35	994.35	19,375
38	Propane Storage	1,880	0.00	0.00	0.00	1.51	1.51	6,929
39a	Incinerator Building	2,703	0.00	0.00	0.00	11.00	11.00	8,800
45	Rust Engine Building	16,120	45.00	0.00	0.00	6.15	51.15	8,290
46	Heavy Equipment Building	13,338	0.00	0.00	0.00	1.00	1.00	800
53a	OS&H Building	29,040	14.00	0.00	0.00	0.10	14.10	40
54a	6 to 4 Reduction Facility #1	14,183	480.00	0.00	0.00	42.51	522.51	65,209
54b	Pilot Plant Warehouse	3,600	0.00	0.00	0.00	0.00	0.00	0
55a	Slag Recyling Building	7,320	367.50	0.00	0.00	288.68	656.18	234,207
56	CP Storage Warehouse	8,600	0.00	0.00	0.00	0.00	0.00	0
60	Quonset Hut #1	15,000	0.00	0.00	0.00	0.00	0.00	0
61	Quonset Hut #2	2,520	0.00	0.00	0.00	0.02	0.02	8
62	Quonset Hut #3	2,520	0.00	0.00	0.00	3.72	3.72	2,976
63	KC-2 Warehouse	26,505	0.00	0.00	0.00	0.00	0.00	0
64	Thorium Warehouse	15,625	0.00	0.00	0.00	0.00	0.00	0
65	(Old) Plant 5 Warehouse	10,500	0.00	0.00	0.00	0.00	0.00	0
66	Drum Reconditioning Buildin	938	0.00	5,000.00	2,500.00	3.31	7,503.31	10,699
67	Plant 1 Thorium Warehouse	5,300	0.00	0.00	0.00	0.00	0.00	0
68	Pilot Plant Warehouse	5,000	0.00	0.00	0.00	83.00	83.00	66,200
69	Decontamination Building	3,722	498.00	0.00	0.00	6.69	504.69	17,739
71	General in-process Storage	24,214	27.00	0.00	0.00	0.09	27.09	396
77	Finish Product Warehouse	15,000	0.00	0.00	0.00	0.00	0.00	0
	Totals	**1,470,355**	**105,345.30**	**248,205.00**	**359,621.00**	**14,010.86**	**727,182.16**	**$12,676,676**

Abatement Cost Estimate Summary Table, by Material

Material Information			Cost Estimate Information for Recommended Response Actions					
Type	Quant.	Unit	Repair	Removal	Replacmt.	O&M	Total	Total Removal Cost Estimate
Acoustic Panel (2' x 4')	144	SF	100.80	0.00	0.00	0.72	101.52	432
Acoustic Tile Mastic	33,600	SF	0.00	0.00	0.00	168.00	168.00	67,200
Boiler Insulation	8,270	SF	0.00	0.00	0.00	41.35	41.35	165,400
Debris Samples	1	EA	0.00	25.00	0.00	0.00	25.00	25
Duct Insulation	7,620	SF	4,029.00	8.00	40.00	38.08	4,115.08	15,240
Duct Insulation Lagging	650	SF	750.00	0.00	0.00	3.25	753.25	6,500
Fabric/Rope	32	LF	7.00	48.00	64.00	0.08	119.08	96
Fire Retardent Clothing	54	EA	0.00	0.00	0.00	2.70	2.70	2,340
Stored Firebrick	15	SF	0.00	0.00	0.00	0.08	0.08	75
Floor Tile Mastic	101,208	SF	280.00	2,000.00	0.00	501.04	2,781.04	202,416
Flue Insulation	4	LF	0.00	0.00	0.00	0.02	0.02	128
Gasketry	418	LF	48.00	248.00	620.00	1.47	917.47	836
Heat Sheild	5	SF	3.50	0.00	0.00	0.03	3.53	25
HVAC Flexible Connector	44	EA	250.00	0.00	0.00	200.17	450.17	11,000
Insulation	100	SF	0.00	200.00	1,000.00	0.00	1,200.00	200
Joint Coumpound	33	SF	23.10	0.00	0.00	0.17	23.27	264
Other (Tar Insulation)	20	SF	14.00	0.00	0.00	0.10	14.10	40
Pipe Fitting Insulation	10,708	EA	3,382.50	5,086.00	5,455.00	52.49	13,975.99	297,608
Pipe Fitting Insul. Lagging	38	SF	15.00	0.00	0.00	0.19	15.19	380
Pipe Run Insulation	60,726	LF	17,547.00	88,090.00	59,422.00	281.14	165,340.14	1,378,524
Pipe Run Insul. Lagging	2,148	LF	436.50	600.00	180.00	10.44	1,226.94	21,480
Resilient Floor Tile (12" x 12")	3,232	SF	0.00	0.00	0.00	16.16	16.16	12,928
Resilient Floor Tile (9" x 9")	131,161	SF	12,739.30	4,000.00	0.00	655.81	17,395.11	528,692
Roof Flashing	290	SF	0.00	0.00	0.00	1.45	1.45	4,350
Smoke Stack Insulation	2,400	SF	0.00	0.00	0.00	12.00	12.00	4,800
Storage Tank/Exchanger Insul.	8,921	SF	4,309.50	3,000.00	1,500.00	43.53	8,853.03	177,100
Stg. Tank/Exchanger Lagging	4,003	SF	2,718.00	19,820.00	9,910.00	15.06	32,463.06	80,060
Transite Pipe	111	LF	166.50	0.00	0.00	0.56	167.06	1,665
Transite Sheet Material	2,424,218	SF	58,525.60	125,080.00	281,430.00	11,964.74	477,000.34	9,696,872
	Totals		105,345.30	248,205.00	359,621.00	14,010.86	727,182.16	$12,676,676

II. IMPORTANT TERMS

3242

II. IMPORTANT TERMS

ACM - Asbestos Containing Material. Material composed of asbestos of any type and in any amount greater than 1% by weight, either alone or in matrices with other materials.

AHERA - The Asbestos Hazard Emergency Response Act, passed by Congress in 1986 for inspecting schools for ACM and for developing Management Plans to remedy any problems. AHERA is considered to be the standard for this type of work in buildings, other than schools. Most of the sampling protocol for the Site Survey is per AHERA, as is the procedure for developing Response Actions.

ASBESTOS - The asbestiform varieties of serpentine and amphiboles. Can be either chrysotile, amosite, crocidolite, tremolite, anthophyllite, or actinolite.

BULK SAMPLES - Small pieces that have carefully been removed from any materials that are suspected to contain asbestos.

BULK SAMPLE DATA VERIFICATION - A procedure that insures that the correct number of samples have been taken for each homogeneous area; that the results of these samples make sense; that the correct number of QA samples have been taken; and that necessary action is taken if the QA results are not within acceptable limits.

CAD - Refers to the Computer Aided Design diagrams. The outline of the Facility is placed on a base layer. From this, two diagrams are developed. One diagram superimposes a layer that shows the location of all bulk samples that were taken; another diagram superimposes the location of each ACM homogeneous area.

CONDITION - The Site Survey inspectors assess the Condition of ACM as either Good, Fair, or Poor. The method for doing this is described in the FEMP Asbestos Management Plan, PL-FEMP-3002, Appendix D, Section D.1.

ENCAPSULATION - Means treating ACM with a liquid that, after proper application, surrounds or embeds asbestos fibers in an adhesive matrix to prevent fiber release.

ENCLOSURE - Means an air-tight (or as close to air-tight as is possible to construct) barrier installed between the friable asbestos and the building environment.

ERA/EVALUATION FORM - This is the key form for the Site Survey. A separate form is completed for each Homogeneous Area that records the bulk sample results; assesses the proper response action per the AHERA format; and prioritizes the response actions per the GRADE system.

FRIABLE - Means any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

GRADE SYSTEM - Refers to an algorithm that develops a "Harm Score" for ACM, which can be used to prioritize Response Actions.

HAZARD RANK - Refers to an AHERA protocol that uses Condition and Potential for Disturbance of ACM to define the proper Response Action.

3242

HOMOGENEOUS AREA - Means a material system that is uniform by color, texture, touch, construction /application date, and general appearance.

NON-FRIABLE - Means any ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

O & M PROCEDURE - Refers to Operations and Maintenance Procedures that describe training, cleaning, work practices, and periodic surveillance to maintain ACM in good condition; ensure cleanup of asbestos fibers previously released; and prevent further release by minimizing and controlling friable ACM disturbance.

PLM - Refers to the use of Polarized Light Microscopy to detect asbestos fibers in bulk samples.

POTENTIAL FOR DISTURBANCE - The Site Survey inspectors assess the Potential for Disturbance of ACM as either Low, Medium, or High. The method for doing this is described in the FEMP Asbestos Management Plan, PL-FEMP-3002, Appendix D Section D.2.

QA ANALYSIS SUMMARY FORM - This form summarizes the QA information. It indicates the QA data that is acceptable; and refers to any action that may be necessary based on unsatisfactory QA results.

REMOVAL - Means stripping ACM from its substrate. Asbestos material is separated from the underlying surface, collected, and placed in containers for burial in an approved disposal site.

REPAIR - Means returning damaged ACM to an undamaged condition or to an intact state through limited replacement and patching.

RESPONSE ACTIONS - Refers to ACM "control options" such as O & M Procedures, Repair, Encapsulation, Enclosure, or Removal.

SUSPECT MATERIALS - Refers to any materials that through education, experience, or intuition may contain asbestos fibers.

III. PROJECT DESIGN & PROCEDURES

3242

3242

III. PROJECT DESIGN & PROCEDURES

The initial asbestos survey and assessment, procedures design for the Fernald Environmental Management Project (FEMP) was presented in request for proposal no. 90087. Through the evolution and execution of the project, modifications and changes were made to the original design and procedures. These modifications and changes were presented by both WEMCO and DEI with the commitment to provide Facility Reports to Facility Owner's with functional information that has clarity and would provide a solid foundation for the successful implementation of the asbestos operations and maintenance program. The changes were approved by WEMCO before being implemented by DEI. Presented here in is a description of building areas and materials sampled, inspection and sampling procedures, assessment and hazard ranking system used.

I. AREAS SURVEYED

A complete listing of facilities surveyed is presented in Section IV of this report. Of the 101 facilities at FEMP, 74 were surveyed for this project. Some of the 101 facilities are tanks, sumps, and other structures that do not contain ACM. Other facilities such as the Invivo Building and Building 51, are new structures and were not surveyed. The total area of these buildings is approximately 1.5 million square feet. Initially all outside areas of the facility were to be included in the survey and assessment, however, early in the project, these areas were deleted from the scope-of-work. Some exterior materials, such as pipe insulation continued to be included if it was determined they were closely connected to a facility. Previous bulk material samples have been collected at FEMP. The results from previous sampling was not incorporated in this project for the following reasons:

1. The exact sample locations were not recorded.
2. The number of samples taken per homogeneous area did not meet the requirements of AHERA.
3. The percentage of asbestos content in these samples was not always reported by the laboratory.

These bulk samples were used for reference purposes only. However when existing results were made available to DEI and descrepancies were noted, DEI promptly notified WEMCO of the discrepancy.

II. ASSESSMENT PROTOCAL

The building area survey and assessments included:

1. A thorough visual review of areas to identify the locations of any suspected ACM. Potential locations were also identified from prints provided by WEMCO.

2. Identification of homogeneous and functional areas for any suspected ACM.

3. Collection of bulk samples of all suspected ACM. The sampling procedures insured that all possible layers of materials were reached, down to the subsurface (pipe, concrete, etc.).

Destructive sampling of potentially concealed materials was only performed by DEI with advance approval from WEMCO. In cases where it was impractical to obtain a bulk sample, identical materials were assumed to be ACM. These materials were then treated as ACM for assessment and cost estimate purposes.

III. MATERIALS SAMPLED

A. Friable Surfacing Materials

Bulk material samples were taken as described in the EPA document "Asbestos in Buildings - Simplified Sampling Scheme for Friable Materials", dated October, 1985. As a minimum, the following number of surfacing material samples were taken:

- Less than 3,000 square feet - 3 bulk samples
- 3,001 to 5,000 square feet - 5 bulk samples
- Greater than 5,000 square feet - 7 bulk samples

B. Thermal System Insulation

As a minimum, the following number of thermal system insulation samples were taken. As approved halfway through the project DEI did not take samples of fittings but assumed them to be positive.

Fittings - For any homogeneous area that consisted of:

- Three (3) fittings or less - 1 bulk sample
- Ten (10) fittings or less - 2 bulk samples
- Greater than ten (10) fittings - Twenty percent (20%) of the number of fittings were sampled, this was changed to no more than 10 samples per homogeneous area by WEMCO.

Piping - For any homogeneous area that consisted of:

- <10 linear feet - 1 bulk sample
- 10 - <300 linear feet - 2 bulk samples
- 300 - <l,000 linear feet - 3 bulk samples
- l,000 linear feet or greater - 5 bulk samples

C. Cementitious Wallboard - "Transite"

Twenty six of the buildings at the FEMP site are covered with Transite, including the roofs. These outside panels, and the associated inside panels (located on the inside of the outer columns and beams) have been extensively tested in previous studies. Therefore, no bulk material samples of the outside Transite material were taken other than (5) random samples requested by WEMCO. The following information for these materials, however, was documented and included in the individual facility reports and in this final report.

- Quantity estimates - either from prints or direct take-off
- Physical and hazard assessment
- Abatement cost estimates - final report only

3242

Suspect ACM Transite/Wallboard material inside a building was sampled according to the EPA "Simplified Sampling Scheme" format described above for Friable Surfacing Materials. The original RFP indicated a Transite type material was found inside certain electrical switchboards. Due to the hazard associated with sampling this material, no samples were collected and it was agreed to report it as asbestos-containing.

D. Floor Tile

Floor tile and mastic was sampled in all buildings surveyed. When the results were positive, they were listed as such on the bulk sample report; when the results were negative, they were listed as such but for all further purposes, they shall be treated as "Assumed to be Positive". This is due to the fact that conventional bulk testing procedures can often report false negatives.

Special attention in assessing under backing of sheet vinyl flooring was required. Verification of asbestos content and friability of this material was provided.

E. Other Materials

The materials listed above, surfacing materials, thermal system insulation, Transite wallboard and flooring materials were the primary materials sampled. Additional materials sampled and evaluated include refractory bricks, ropes, gaskets, HVAC flexible connectors, expansion joint material, etc. All materials sampled, including friable and nonfriable as well as asbestos-containing and non-asbestos-containing, are listed in the report conclusions section of each facility report.

IV. SAMPLING PROCEDURES

A. Personnel

All DEI personnel who collected bulk samples and perform assessments were certified in the State of Ohio as Asbestos Hazard Evaluation Specialists. In addition, all project personnel participated in FEMP site specific training that included site orientation, safety rules, radiation worker safety, nuclear criticality, thorium introduction and training that complied with OSHA 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response".

B. Equipment

Equipment needed to reach sample locations such as ladders, man lifts, scaffolding, etc. was provided by WEMCO. All equipment needed to actually take samples such as knives, coring tools, spray bottles, etc. was provided by DEI, and approved by WEMCO. DEI also provided the sample containers.

C. Sample Locations

Samples were collected and sealed with a green rewetable canvas dot or green 3" inch tape. Sample locations were marked with a yellow tag (provided by WEMCO) bearing the word "CAUTION" along with and the sample number. In addition, the tag contained instructions directing personnel to the Industrial Hygiene Department to determine the materials asbestos status.

3242

D. Sample Collection

Samples were collected using either a coring device or a knife. The sampling procedure consisted of the following steps:

Step 1. Donning of personal protective equipment
Step 2. Wetting of the surface to be sampled
Step 3 Collection of material
Step 4. Placement of material in the sample container
Step 5. Sealing of the sample location with green dot
Step 6. Cleaning up and collection of any debris generated
Step 7. Labeling of the sample container
Step 8. Entry of assessment information on the Exposure Risk Assessment form and making sample location on drawings.
Step 9. Identification of sample information on Chain-of-Custody Form
Step 10. Placement of a yellow I.D. label at the sample location

The sample numbering system used was established by WEMCO for this project as well as other FEMP asbestos sampling activities. An example of a generic sample number xx-yyyy, where xx represents the WEMCO Building No. associated with the sample and yyyy represents the distinct sample number. For example, sample number 15-3456 represents a sample collected in building 15 which is the 3456th sample in the sequential FEMP asbestos sample numbering system. All DEI sample numbers are above 2000. All WEMCO sample numbers are below 2000.

Efforts were made to keep sample numbers grouped by building. However, due to the system used, numerous facilities and homogeneous areas do not have an uninterrupted sample number sequence.

All samples were placed into containers provided by DEI and labeled with the discrete sample number associated with the sample location. At the end of each shift, the samples and the completed Chain-of-Custody record were delivered to the WEMCO Industrial Hygiene department for shipment to the laboratory for analysis. Later in the project samples were delivered directly to Radiation Safety for screening.

E. Sample Analysis

The analysis of all material samples was managed and coordinated by WEMCO. DEI was not involved in this process. After delivery of the samples to the WEMCO Industrial Hygiene Department. Then they were transfered to the appropriate department. Before being sent to the laboratory for analysis, each sample had to be "frisked" to determine if it was within acceptable radioactive levels. Once this was determined the samples were delivered to WEMCO's in-house laboratory or the independent laboratory subcontractor.

V. FRIABILITY

Throughout the evolution of methods and systems for asbestos material hazard assessment, there has been varying opinions and philosophies on the issue of friability. The definition and direction used for the project was provided by WEMCO and is consistent with commonly accepted industry standards.

A. Definition

3242

The friability of suspect ACM was determined as the bulk samples were taken. The EPA definition used for friability states that a material is considered friable when "hand pressure can crumble, pulverize, or reduce the material to powder when dry".

B. Assessment

The friability of the damaged material was assessed and documented as follows:

- *High* - Material is fluffy and/or the slightest hand pressure can dislodge it. A slight breeze may disperse the material.
- *Medium* - Material can be dislodged or scraped/crumbled by hand.
- *Low* - Material is firmly bound, difficult to scrape off by hand.
- *Non-Friable* - Cannot be reduced to powder by hand pressure.

VI. LABELS

The labeling of asbestos-containing and non-asbestos containing materials was an important component of the project. The labels provide clear information to facility personnel about the materials asbestos status and are crucial to the successful implementation of the FEMP site Operations and Maintenance Program.

Once sample results were received from WEMCO, DEI returned to each facility surveyed and affixed the appropriate label to the materials sampled. All metal clad pipe, except for the crinkled wrapped, were labeled ACM as directed by WEMO. Exceptions were made if the pipe was obviously new. DEI did not remove any labels previously placed by WEMCO personnel.

A. Pipe Insulation

All TSI areas that contain asbestos were marked with labels per OSHA Regulation 1926.58(K). These labels are on white background with black border, "danger" in red letters, all other letters in black, and read as follows;

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

All homogeneous TSI areas that do not contain ACM were marked with labels that state "Asbestos Free" in white letters on a blue background. Tanks and other vessels will be labeled by WEMCO in the method they see fit.

In summary and to avoid any confusion on the use of colors, the following applies:

- Green Spot - identifies the location from which a bulk material sample was taken
- Blue labels - identifies asbestos free piping.

3242

- Yellow tag - Identifies sample number
- Red labels - Indenitifies asbestos-containing material

VII. DOCUMENTATION

A. Exposure Risk Assessment/Evaluation Form & Bulk Sample Report

The central document in recording material and homogeneous area information was the Exposure Risk Assessment/Evaluation Form (ERA Form). The ERA Form also served as the bulk sample log for each homogeneous area where sample number, sample location, material quantities and material comments were included. The assessment portion of the ERA form includes information indicated in Section VIII below. Each original ERA form was signed by the assessor along with their State of Ohio certification number.

Once the laboratory results report and the completed data verification form for each homogeneous area was received by DEI from WEMCO the results were transcribed to the ERA forms and then entered into the computer database.

B. Sample & Homogeneous Area Locations

Graphic representations of material sample and homogeneous area locations were provided with each individual facility report. In most cases this representation was provided on reduced plans generated from Intergraph CAD/CAM facility design files provided by WEMCO. In cases where design files were not available, rough, not-to-scale drawings were provided.

The sample and homogeneous area locations were documented during the survey and assessment on reduced 81/2" x 11" drawings. This information was then placed in the CAD/CAM system for printing. Computer diskettes of modified design files have been provided for each facility surveyed where a design file was provided.

VIII. ASSESSMENTS

A. Discussion of Assessments

There are many methods of performing physical and hazard assessments for ACM. It was decided by WEMCO to use a combination of the Asbestos Hazard Emergency Response Act (AHERA) method and the Air Force Grade format for this Project. Some of the reasons for the use of this combined system follow:

- AHERA is considered to be State-of-the-Art for inspection and assessment methodologies.
- All Asbestos Hazard Evaluation Specialists in the State of Ohio are taught AHERA procedures, and are "refreshed" in them at least once each year.
- While AHERA provides an excellent framework for response actions (particularly the standard conditions that exist in schools), it is not useful for prioritizing these actions when considering the many different types of ACM situations that exist at WEMCO. Therefore, the Grade format has been used to assist in determining the response action priorities within the #3 through #7 AHERA Hazard Rankings (#1 and #2 require no Response Actions).
- Using the above procedure, it is possible to first determine the hazard rank of the ACM per AHERA, and then to take action on the worst conditions on a priority basis suggested by the Grade format.

B. AHERA

As stated in AHERA, there are two separate factors to consider when assessing asbestos conditions, they are 1) the *Current Condition* of the ACM, and 2) it's *Potential for Disturbance*. The combination of these two factors provides a hazard ranking that can be used to prioritize response actions according to various asbestos conditions.

Current Condition

AHERA recommends assessing the existing condition of ACM as either Good, Fair, or Poor.

- *Good*: ACM is considered to be in Good condition if it is better than the description of "damaged" for surfacing, thermal system insulation, and miscellaneous ACM.
- *Fair*: Any ACM that is in Fair condition has been "damaged".
- *Poor*: Any ACM that is in "Poor" condition has been "significantly damaged". To distinguish between Good and Fair friable surfacing ACM, the following applies:

  Damaged friable surfacing ACM means friable surfacing ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of the ACM into layers; separation of the ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, marks or other signs of physical injury to ACM. Asbestos debris originating from the ACM in question may also indicate damage.

It should be clear from the above definition that there is a broad span of condition between Good and Fair. In the spirit of AHERA, there are degrees of minor disturbance that fall short of the "damage" criteria. The material does not have to be in perfect condition to be rated Good.

To distinguish between Fair and Poor friable surfacing ACM, the assessor understood that the definition of significant damage (Poor) is restrictive. Only the truly poor condition situations were so rated.

- Significantly damaged friable surfacing ACM means the damage is extensive and severe.

To be "extensively" damaged, the ACM had to have either 10% distributed or 25% localized damage. However, "significantly" damaged ACM had to also be "severely" damaged, which can in some cases involved delamination or other factors that, in the assessor opinion meant there was no way of restoring it to an undamaged condition.

- Significantly damaged friable surfacing ACM must refer to the most severely damaged areas where the damage is also widespread. Damage that is widespread or only severe is of concern, but should not necessarily require a response action of the same magnitude as those situations where both are present.

The assessment of Physical Condition is exactly the same for Friable Miscellaneous ACM.

The Physical Condition assessment for Thermal System Insulation is somewhat different:

- Damaged or significantly damaged thermal system ACM means thermal system ACM on pipes, boilers, tanks, ducts, and other thermal insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water stained, gouged, punctured, missing or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges, or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris originating from the ACM in question may also indicate damage.

Note that there is only one category which includes both significant damage (Poor) and damage (Fair). The same discrimination between significantly damaged and damaged applies here as it did to the surfacing materials. The damage must be both extensive and severe, and generally is not practical to repair, to justify a significantly damaged assessment.

As with surfacing materials and miscellaneous materials, there is some forgiveness for a less-than-perfect condition for Thermal System Insulation before it is assessed as damaged. The factor which should be used by the inspector to distinguish between Good and Fair is whether or not fibers have been released.

- This definition allows that, even though the insulation is marred, scratched, or otherwise marked, it may not be, in the judgement of the inspector, damaged so as to release fibers.

Potential for Disturbance

There are three factors that can influence the Potential for Disturbance; accessibility, influence of vibration, and potential for air erosion. Each was assessed separately and assigned a rating of High, Moderate, or Low. The overall rating for the Potential for Disturbance is then the worst of these three assessments.

Low: Means that the ACM does not qualify for the "Potential for Damage" category. Being just slightly above a zero chance of damage would not qualify for "Potential for Damage".

Medium: Means that there is a "Potential for Damage". Potential damage means circumstances in which: 1) Friable ACM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities. 2) There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage".

The Medium rating was only given after careful consideration of the circumstances, such as future use of the facility.

3242

High: Means that there is a "potential for significant damage". The definition for "potential for significant damage" contains items 1) and 2) above, and adds: 3) The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or, under certain circumstances, vibration or air erosion.

In order to determine the "Potential for Disturbance", an assessment of the accessibility, influence of vibration, and potential for air erosion was made using the above criteria. The resulting "Potential for Disturbance" represents the worst of the three assessments. Using the following as an example:

- Accessibility - Low
- Influence of Vibration - High
- Potential for Air Erosion - Medium

The overall Potential for Disturbance would be High, since this is the worst rating of the three factors.

The above information was entered into Sections (x) and (y) of the "Exposure Risk Assessment/Evaluation Form" for each homogeneous area within each functional area. This was necessary according to AHERA because, as an example, a homogeneous pipe insulation may pass through several functional areas that have completely different "Potentials for Disturbance".

C. Air Force Grade System

The GRADE System evaluates ACM in terms of Exposure and Damage. From the numerical values of these two categories, a Harm Score is calculated. The Harm Score can then be used to prioritize response actions.

Exposure Factor

The GRADE System assigns a numerical value, according to the severity of existing conditions, to these variables:

- Friability
- Amount of visible surface area
- Wall texture
- Ventilation
- Air movement
- Activity
- Floor texture
- Barriers
- Population
- Outside/Inside variable (WEMCO specific)

A brief description of each variable is listed below.

•Friable: Described above in Section V.

•Area: Amount of visible surface area of damaged or friable material.

•Walls: Includes ceiling and refers to the ability of the walls to hold fibers for re-entrainment. If more than one type, score the roughest. If the wall material is exposed friable asbestos, score as rough.

(4) Rough - Difficult to clean with a HEPA vacuum.
(3) Pitted - Difficult to clean with a damp cloth but able to clean with a HEPA vacuum.
(2) Moderate - Can be cleaned with a damp cloth.
(1) Smooth - Easily cleaned with a damp cloth.

•Ventilation:

(5) The interior of the supply duct or plenum is coated or littered with friable material or is within 5 feet of a supply diffuser or fan and the condition of the material may result in fibers being entrained into the airflow.
(2) The interior of the return air duct or plenum is coated or littered with friable material and is part of a recirculating system.
(1) Air being supplied to the room is (1) drawn from an area where the potential for asbestos fiber release is possible, or (2) part of a recirculating system where fibers may be drawn into the system.
(0) None of the above applies.

•Air Movement:

This refers to the general air movement in the room or area that may affect the friable surface or damaged material.

(5) Material is subjected to routine turbulent or abrupt air movement.
(2) Material is exposed to perceptible or occasional air streams.
(0) No perceptible air flow in the room or area.

•Activity: Refers to forces acting on the surface covered; i.e. vibrational, water or steam, etc.

(5) High - Friable surface or damaged material is subject to constant vibration (Mechanical Rooms).
(2) Medium - Occasional vibration.
(0) Low - Administrative office, library, classroom, storage room, stairway or corridor, waiting room, etc.

•Floor:
(4) Carpet or extremely rough surface difficult to clean by HEPA vacuum or by a damp cloth
(2) Seamed or rough surface.
(1) Smooth continuous surface.

•Barriers: If both A and B apply, score the one with the highest rating. Check all that apply. (Maximum of 4 points)

A. Refers to sprayed-on or trowelled-on material on ceiling or walls.

(1) Suspended ceiling or accessible secondary wall
(2) Encapsulation or covered with non-asbestos material
(3) Railing or chicken wire
(4) None

B. Pipe, boiler, duct, or other surface or damaged materials. Percent of total exposed and visible to the occupants.

(1) Less than 25%
(2) Between 25 % and 50%
(3) Between 50% and 75%
(4) Greater than 75%

•Location:

(2) Outside surface of a building, outside pipe insulation, etc.
(1) Any ACM located inside a building.

•Population: This involves defining the average occupancy and outside visitor traffic of a room or area based on an 8 hour per day exposure.

(1) Less than 9, or for corridors
(2) Greater than 10, but less than 200
(3) Greater than 201 but less than 500
(4) Greater than 501 but less than 1,000
(5) Greater than 1,000 (includes medical facility and food preparation areas, regardless of population)

Damage: The variables that determine Damage follows:

- Physical damage
- Water damage
- Proximity to items for repair
- Type of material
- Potential for contact
- Asbestos content

A brief description of each variable is listed below.

•Physical: Assess damage based on visible evidence of work surface accumulation or the condition of the sprayed-on or trowelled-on surface materials.

(5) High - Dislodged pieces are evident on work surfaces.
(4) Moderate - There is evidence of visible material fallout.
(2) Low - There is some evidence of material fallout.
(1) Minimal - There are isolated and very small areas of material damage or fallout.

•Water:

(3) Yes - Visible water damage.
(0) No - No water damage.

•Proximity to items for repair: If both A and B apply, score the one with the highest rating. (Check all that apply. Maximum of three points.) How far is the material from routine maintenance areas?

A. Sprayed-on or trowelled-on. Could the material be damaged by routine maintenance?

(3) Less than 1 foot or a ceiling panel contaminated with ACM must be removed.
(2) 1 foot or greater, less than 5 feet
(1) 5 feet or greater
(0) 5 feet or greater, and no routine maintenance

B. Pipe, Boiler, or Duct Insulation: Could damage occur as a result of routine maintenance?

(3) A ceiling panel contaminated with ACM must be removed.
(1) Yes
(0) No

•Type of Material: If area or room contains numerous categories of material, the friable material with the largest area was scored. Checked all other categories that were found.

(0-4) Other material, i.e. wallboard, ceiling tile or floor tile with exposed friable ends, abrasions, etc.
(1) Boiler and/or pipe.
(3) HVAC - Suspected ACM on exterior of ducts.
(4) Ceilings or walls.

•Potential for Contact by Occupants: How far is the friable sprayed-on, trowelled-on, or damaged material from the the room or area occupants heads? Regardless of whether there is a barrier. High, medium, and low refer to the chance of the room or area personnel actually disturbing the ACM.

Less than 10 feet	Greater than 10 feet
(8) High	(5) High
(5) Medium	(3) Medium
(2) Low	(0) Low

•Asbestos Content: The percentage for the material within the highest probability of becoming airborne.

(0) Less than 1%
(1) Equal to or greater than 1%, and up to 30%
(3) Greater than 30%, and up to 50%
(5) Greater than 50%

D. Exposure Risk Assessment/Evaluation Form

The above information was entered into Sections (a) through (p) of the "Exposure Risk Assessment/Evaluation Form".

The data from the "Overall Ratings" of Items (x). and (y) of the ERA form was used in the WINGZ relational database program.

IX. HAZARD ASSESSMENT

A. Hazard Ranks

The first step in determining the Hazard Assessment was to classify all ACM into one of the seven different AHERA Hazard Rank categories. This was done from items (x) and (y) of the ERA Form, according to the format shown in Classifications for Hazard Potential.

B. Damage Categories

The Hazard Ranks were then converted to AHERA Damage Categories according to the format shown in the Response Actions Based on Hazard Ranking. These Damage Categories are:

(7) Significantly damaged
(6) Damaged + potential for significant damage
(5) Damaged + potential for damage
(4) Damaged
(3) Potential for significant damage
(2) Potential for damage
(1) No problem

C. Harm Scores

It was the intent of WEMCO to have the Response Actions for the first five categories above prioritized according to the Harm Scores of the Grade System. The potential for damage and no problem categories do not require response actions other than O&M. Therefore, the Harm Scores were calculated from the ERA Forms as follows:

- Add Items (a) through (j). This is the Exposure Factor Total (E).
- Add Items (k) through (p). This is the Damage Total (D).
- Calculate the Harm Score (H) as follows:

$$(H) = 12.0324 - (0.1683 \times D) - (0.1693 \times E)$$

This was entered as the Harm Score (H) on the ERA form. Using these Harm Scores, the response actions for all ACM within the first five AHERA damage categories mentioned above were prioritized. If the Harm Scores were the same for different ACM homogeneous areas, a unique hazard priority number was assigned to each material according to the criteria that is judged to be most appropriate.

X. FACILITY WALK THROUGHS

After each individual facility report was issued, and reviewed by WEMCO, the facility was walked by DEI and WEMCO. Walk throughs were required as defined in the original RFP no. 90087. During these facility walks, the following items were addressed:

1. The accuracy of the report text compared to actual conditions,
2. Agreement between bulk sample locations as presented in the ERA forms, CAD diagrams and physical tagging,
3. Agreement between homogeneous areas as presented in the ERA forms, CAD diagrams and actual field locations and boundaries,
4. Accuracy of material quantity estimates.

At the completion of each facility walk, WEMCO completed a checklist of deficiencies, if any. Each check list contained the facilities name and number, date of walk, personnel present during walk through and any discrepancies found during the walk through. Descrepancies or anomalies found during the walks were remedied by DEI and the revisions were included in revised copies of the facility reported or were reported to the Asbestos Coordinator in letter format for inclusion in the facility files.

XI. PROJECT DATABASE

The project data base was created in Filemaker Pro version 1.0V2 update program, distributed by Claris Corporation. DEI designed the database functions and layouts specifically for the WEMCO project. Those layouts include ERA forms, Response Action Table, and Cost Estimates. The data complied for the final report will be delivered on a Syquest 45 megabytes disk cartridge.

IV. LISTING OF FACILITIES SURVEYED

IV. LISTING OF FACILITIES SURVEYED

1A	Preparation Plant
1B	Plant Storage Building
2A	Ore Refinery Plant
2B	Lime Handling Building
2C	Bulk Lime Handling Building
2D	Metal Dissolver Building
2E	NFS Storage and Pump House
3A	Maintenance Building
3B	Ozone Building
3C	Control House
3D	NAR Towers
3E	Hot Raffinate Building
3F	Digestion Fume Recovery
3G	Refrigeration Building
4A	Green Salt Plant
4B	Plant 4 Warehouse
4C	Plant 4 Maintenance Building
5	Metals Production Plant
6	Metals Fabrication Plant
7	Plant 7
8A	Recovery Plant
8B	Maintenance Building
8C	Rotary KILN/DRUM Reconditioning Building
9	Special Products Plant
10A	Boiler Plant
10B	Boiler Plant Maintenance Building
11	Service Building
12A	Main Maintenance Building
12 B	Cylinder Storage Building
12C	Lumber Storage Building
13A	Pilot Plant Wet Side
13B	Pilot Plant Maintenance Building
14	Administration Building
15	Laboratories
16A	Main Electrical Station
18B	General Sump
19A	Main Metal Tank Farm
20A	Valve/Control Building
20B	Filter/Chemical Building
20C	Cooling Towers
20E	Well House #1
20G	Well House #3
24A	Railroad Scale house
24B	Railroad Engine House
25A	Chlorination Building
25C	Sewage Lift Station
26A	Pump house - HP Fire Protection
28A	Security Building
28B	Human Resources Building

30A	Chemical Warehouse
31	Engine House/Garage
32	Magnesium Storage Building
37	Pilot Plant Annex
38	Propane Storage
39A	Incinerator Building
45	Rust Engine Building
46	Heavy Equipment Building
53A	OS&H Building
54A	6 to 4 Reduction Facility #1
54B	Pilot Plant Warehouse
55A	Slag Recycling Building
56	CP Storage Warehouse
60	Quonset Hut #1
61	Quonset Hut #2
62	Quonset Hut #3
63	KC-2 Warehouse
64	Thorium Warehouse
65	(Old) Plant 5 Warehouse
66	Drum Reconditioning Building
67	Plant I Thorium Warehouse
68	Pilot Plant Warehouse
69	Decontamination Building
71	General in-process Storage Warehouse
77	Finish Product Warehouse

V. FACILITY REMOVAL PRIORITY AND COST ESTIMATES FOR RESPONSE ACTION

3242

V. FACILITY REMOVAL PRIORITY AND COST ESTIMATES FOR RESPONSE ACTION

Cost estimates for Recommended Response Actions are based on type, quantity, description and condition of the asbestos-containing material. DEI has estimated costs associated with each Recommended Response Action based on average costs (1991 Dollars) commonly encountered for similar work completed recently in this geographical area. In addition, the physical location of asbestos-containing material within the building and individual room/space and any other complicating factors which could affect the cost of the response was considered. These complications could include such situations as pipe work located above a suspended ceiling which would have to be removed and replaced, areas where access is limited or confined by the quantity of furniture present, or areas of delicate electronic equipment which would require special protection against water used in the asbestos removal. While the quantity of material in each area is significant to the costs, the setting up of necessary isolation and personal hygiene facilities to protect the asbestos workers and neighboring persons from airborne asbestos released during the abatement work will require a certain effort, regardless of whether it is a 5-foot length of pipe insulation or 2,500 square feet of sprayed-on acoustical ceiling finish to be removed or repaired.

The costs are <u>not</u> based on detailed engineering analysis of individual buildings. No engineering design of the facilities or utilities was undertaken during the survey phase. Consequently, the accuracy generally associated with cost estimates resulting from a detailed engineering design cannot be ascribed to the estimates presented. The costs for "replacement" materials are calculated separately, and are based on normal materials and normal replacement procedures.

In estimating removal and replacement construction costs, a direct comparison is made to jobs bid at local prevailing wages and awarded to a qualified and capable company on a least cost basis. In the cost estimation tables, construction costs for Recommended Response Actions are presented in the following order: "Repair Cost $", "Removal Cost $", Replacement Cost $", O & M Cost $" and "Total Cost $" for each Homogeneous Area.

The asbestos abatement construction costs are intended to include the industry norm, necessary preparation and restoration work, including moving and storing fixtures and furniture. However, the costs given within this report do not take into consideration the nature of activities and performing work in a nuclear environment. In addition, no estimate is included for the dislocation costs associated with having an area sealed-off, or with the costs associated with inconvenience of temporarily relocating occupants. These costs will be variable and will depend on the function of each area and whether or not it would be necessary to maintain full services during asbestos removal. The estimation of such disturbance costs are generally beyond the scope of current estimating procedure.

It is noted that costs for all asbestos work have varied significantly in the last year because of the recession, reduction in amount of work being undertaken, problems of obtaining realistic insurance, and the need to comply with increasing requirements and licensing procedures of Federal, State and Local regulations. Accordingly, a factor has been included in all DEI estimates for asbestos abatement work to account for the uncertainties of asbestos construction work and this factor has been incorporated in the estimated costs given in the tables.

The detailed estimated costs for Recommended Response Actions of asbestos abatement are based on the use of outside contractors. It is cautioned that costs could vary widely depending on scope, time allowed for the work, work location with associated logistics, and if the work is phased. For Engineering Costs add 10 percent to the Construction Costs. For Industrial Hygiene/Monitoring Costs add 15 percent to the Construction Costs

Cost Estimate

The costs of implementing the recommended in-house operations and maintenance (O&M) program to maintain and monitor asbestos-containing materials present at the FEMP site are difficult to estimate. There will be costs to purchase equipment, train staff, and conduct on going repairs. In addition, there will be costs for contracted services for routine monitoring and laboratory analysis of samples. All of these costs can be estimated fairly accurately for the initial year of the program. After the initial year, these costs will vary depending upon frequency of repair or removal of asbestos-containing material, breakdown of equipment, increased regulations by Local, State and Federal authorities, etc. In addition, labor costs associated with the program are difficult to estimate. These will vary widely depending on who performs the work, new employees hired specifically for this purpose, current employees given the additional responsibility, or an outside consultant. The number of hours per week to be devoted to the program, and whether employees are covered by existing collective bargaining agreements are other factors which could affect real costs.

The following table represents estimated costs of conducting on going O&M for the purpose of maintaining and controlling the material in good condition.

Estimated Costs for Recommended Operations and Maintenance Program at the Fernald Environmental Management Project

Initial Set-Up Costs (if required)

Training:			
2-hour Awareness Training for All Affected Staff		$	1,200.00
5-day Training in Asbestos Abatement Procedures and Practices, 6 Staff			6,000.00
	Subtotal	$	7,200.00
Equipment:			
HEPA-Filtered Vacuum Cleaners		$	6,000.00
UNICUBEs to access ceiling			4,000.00
Asbestos Waste Bags			2,000.00
Duct Tape and 6-mil Polyethylene Sheeting			2,000.00
Personal Protective Equipment			4,000.00
Miscellaneous: Rags, Buckets, Mops, etc.			2,000.00
2,000 CFM Variable Speed HEPA-Filtered Blower			1,500.00
Portable Shower Unit and Filtration System			1,600.00
	Subtotal	$	23,100.00

Annual Operating Costs

3242

Annual Operating Costs

Administration: Recordkeeping, Data Entry (estimate*)		$ 21,000.00
Medical Surveillance		1,800.00
Inspection Labor (estimate*)		27,000.00
	Subtotal	$ 49,800.00
Outside Services:		
Professional Consultation & Air Sampling		$ 9,000.00
Equipment Service and Replacement		1,800.00
Disposal Costs		5,600.00
	Subtotal	$ 16,400.00

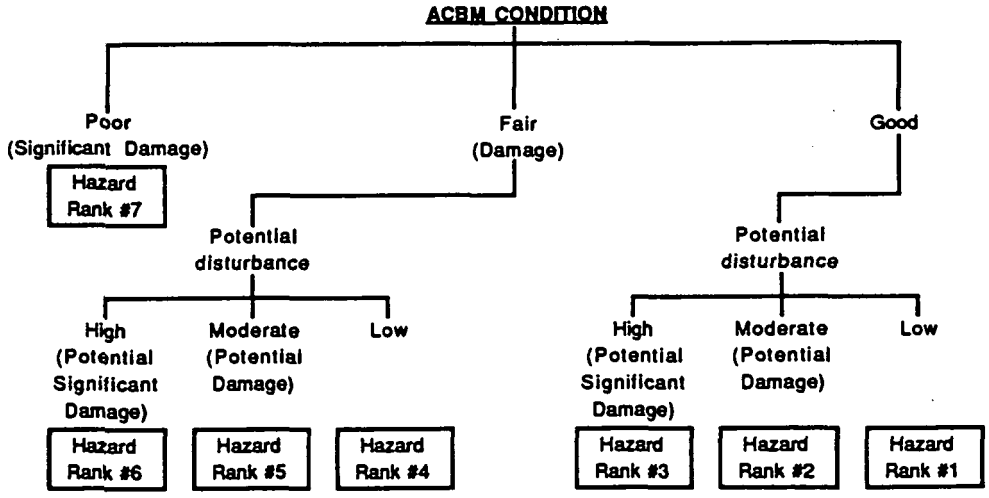
ESTIMATED COST FOR INITIAL SET-UP AND FIRST YEAR OF THE OPERATIONS AND MAINTENANCE PROGRAM $ 96,500.00

* It is difficult to assign a cost to the labor element of the program. It is best that the Westinghouse Environmental Management Company (WEMCO) review this figure and adjust according to their accounting procedures. DEI recommends, based upon our experiences at the facility, that WEMCO adjust DEI's cost tables by at least a 4 multiplier. The O&M cost listed in the cost tables is the O&M costs after recommended repair, removal and replacement has been complete.

DEFINITIONS OF FACILITY REMOVAL PRIORITY AND COST ESTIMATES FOR RESPONSE ACTION

3242

Homogeneous Area Number	A number assigned to an area of ACM that is uniform in color and texture. The first digits indicates the Building Number.
Sample No.	Numerical order of samples taken.
Location/Function	The area and/or equipment from which the sample is taken.
Floor/Level	Bsmt, Mezz, Penths, Roof, 1, 2, 3, LL, UL represent basement, mezzanine, penthouse, roof, first floor/level, second floor/level, third floor/level, lower level, upper level, etc., respectively.
Material/Description	Spray-applied fireproofing/ceiling materials, pipe or equipment insulation/lagging, ceiling panels/tiles, resilient floor tile/sheeting, plaster, "Transite" panels, etc.
Positive/Negative	P – material containing greater than 1% asbestos; N – equal or less than 1% asbestos.
Asbestos Content, %, Type	Chrysotile, Amosite and/or Crocidolite, and their percentages. N/D denotes no asbestos detected during analysis.
Friability	Nonfriable – Material can not be reduced to powder by hand pressure, is well bound, will not release fibers during any appropriate end use, handling, storage or transportation; may or may not become friable during deterioration, demolition or renovation activities. Friable – Material can be broken, crumbled, pulverized or reduced to powder by hand pressure when dry. The degree of friability is assessed as follows: High - Material is fluffy and/or the slightest hand pressure can dislodge it. A slight breeze may disperse the material. Medium - Material can be dislodged or scraped/crumbled by hand. Low - Material is firmly bound, difficult to scrape off by hand.
WEMCO Hazard Rank	The classification of material into seven (7) different WEMCO hazard categories based on the following decision tree:



3242

WEMCO Removal Priority — The priorities of Response Actions based upon the WEMCO Hazard Rank.

WEMCO Damage Category — The visual assessment of damage of the material based upon the variables of physical damage, water damage, proximity to items for repair, type of material, potential for damage and the asbestos content.

Recommended Response Action — The appropriate response action require by WEMCO based upon the Hazard Rank and Damage Categories according to the following table:

HAZARD RANK	REMOVAL PRIORITY	DAMAGE CATEGORIES	RESPONSE ACTIONS REQUIRED
7	1	Significantly Damaged	Evacuate or isolate the area if needed. Remove the ACBM (or enclose or encapsulate if sufficient to contain fibers). Repair of thermal system insulation is allowed if feasible and safe.. O&M required for all friable ACBM.
6	2	Damaged + Potential for Significant Damage	Evacuate or isolate the area if needed. Remove, enclose, encapsulate, or repair to correct damage. Take steps to reduce potential for disturbance. O&M required for all friable ACBM.
5	3	Damaged + Potential for Damage	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACBM.
4	4	Damaged	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACBM.
3	5	Potential for Significant Damage	Evacuate or isolate the area if needed. Take steps to reduce potential for disturbance. O&M required for all friable ACBM.
2	6	Potential for Damage	O&M required for all friable ACBM.
1	7	No problem	O&M required for all friable ACBM, but measures need not be as extensive as above.

Note: AHERA does not account for combinations of current and potential damage (i.e. hazard ranks #5 and 6). The response actions shown are combinations of those required for each condition.

Note: Sample sequencing error, cross-contamination, or other sampling irregularities will result in a void sample.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	3.4211	3e-33	Transite Sheet Material	Delaminated section north wall by overhead door	2,376	S.F.		9504.00	21384.00		30888.00
1	3.4241	02a-039	Transite Sheet Material	Sample taken by column B-8	5000	S.F.		20000.00	45000.00		65000.00
1	4.2686	2d-012	Transite Sheet Material	Entire south wall between Plant 2a & 2d	1,520	S.F.		6080.00	13680.00		19760.00
1	4.9448	02a-019	Pipe Run Insulation	(4" O.D.) Horizontal steam line	46	L.F.		1012.00	598.00		1610.00
1	5.617	10a-033	Gasketry	Gasket	100	L.F.		200.00	500.00		700.00
1	5.621	10a-040	Gasketry	White woven gasket	4	L.F.		8.00	20.00		28.00
1	5.7853	02a-006	Storage Tank / Exchanger Insulation	Condensate in between tank F1-2 and F1-26	130	S.F.		2600.00	1300.00		3900.00
1	5.7863	02a-038	Insulation	Insulation in northeast corner building, transite	100	S.F.		200.00	1000.00		1200.00
1	6.1229	15-138	Pipe Run Insulation	(6" O.D.) Condensate line straights by west wall between	107	L.F.		2354.00	1391.00		3745.00
1	6.2932	02a-020	Pipe Fitting Insulation	(4" O.D.) Steam line fitting on west side of room	1	EA.		27.00	29.00		56.00
1	6.2972	02a-051	Pipe Run Insulation	(6" O.D.) Vertical sump water line by column D-17	55	L.F.		1210.00	715.00		1925.00
1	6.4585	06-031	Transite Sheet Material	Transite	6250	S.F.		25000.00	56250.00		81250.00
1	6.4585	8a-043	Pipe Run Insulation	(20" O.D.) Process line	45	L.F.		1350.00	945.00		2295.00
1	6.4605	09-059	Pipe Fitting Insulation	(6" O.D.) Nitric acid line elbow	4	EA.		108.00	116.00		224.00
1	6.4625	66-06	Storage Tank / Exchanger Lagging	Sample taken on North end of tank	250	S.F.		5000.00	2500.00		7500.00
1	6.4635	02a-025	Pipe Run Insulation	Vertical steam line in south outer building	5	L.F.		110.00	65.00		175.00
1	6.4635	02a-025	Pipe Run Insulation	(3" O.D.) Vertical steam run, west wall	15	L.F.		330.00	195.00		525.00
1	6.4645	09-040	Pipe Run Insulation	(4" O.D.) Hot water lines leading to heaters	28	L.F.		616.00	364.00		980.00
1	6.4675	09-022B	Transite Sheet Material	Transite ceiling	500	S.F.		2000.00	4500.00		6500.00
1	6.6268	012a-004	Pipe Fitting Insulation	(4" O.D.) By pipe shop	5	EA.		135.00	145.00		280.00
1	6.6318	06-202	Pipe Fitting Insulation	(6" O.D.) Hot water elbow, west side of plant	6	EA.		162.00	174.00		336.00
1	6.6348	3e-16	Debris samples from floor	Northwest corner	1	EA		25.00	0.00		25.00
1	6.6378	011-030	Pipe Fitting Insulation	Cold water line valve	1	EA.		10.00	3.00		13.00
1	6.9674	15-108	Pipe Run Insulation	Pipe insulation run, north tunnel, west side	26	L.F.		572.00	338.00		910.00
1	6.9694	02a-052	Pipe Fitting Insulation	(6" O.D.) Process water elbow by column D-17	4	EA.		108.00	116.00		224.00
1	6.9714	07-044	Resilient Floor Tile (9" X 9")	(9" X 9") Resilient floor tile, red	1000	S.F.		4000.00	0.00		4000.00
1	6.9714	07-044	Floor Tile Mastic	Floor tile mastic, black	1000	S.F.		2000.00	0.00		2000.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	7.1357	06-163	Pipe Fitting Insulation	(6" O.D.) Refer to 2334, steam elbow	1	EA.		27.00	29.00		56.00
1	7.1377	13a-015	Pipe Run Insulation	(3" O.D.) Condensate line	12	LF.		264.00	156.00		420.00
1	7.1377	13a-016	Pipe Fitting Insulation	(3" O.D.) Condensate fitting	2	EA.		54.00	58.00		112.00
1	7.1377	09-003B	Pipe Run Insulation	(3" O.D.) Steam line, above roll up door	75	LF.		1650.00	975.00		2625.00
1	7.1387	05-089	Pipe Fitting Insulation	(6" O.D.) Steam line fitting, next to column 4F	3	EA.		81.00	87.00		168.00
1	7.1397	07-031	Pipe Run Insulation	(4" O.D.) Condensate line insulation	30	LF.		660.00	390.00		1050.00
1	7.304	4a-102	Pipe Run Insulation	Pipe Run Insulation in containment, preventing	720	LF.		2880.00	6480.00		9360.00
1	7.304	06-023B	Pipe Fitting Insulation	(2" to 4" O.D.) Condensate tank	14	EA.		378.00	406.00		784.00
1	7.307	4a-040	Gasketry	Cloth gasket from reactor 6	2	EA.		4.00	10.00		14.00
1	7.4713	02a-075	Transite Sheet Material	Interior transite, middle of building; no samples taken,	18,000	S.F.		72000.00	162000.00		234000.00
1	7.4723	05-027	Pipe Run Insulation	(8" O.D.) 150 pound steam line, between column 17F and 18F,	158	LF.		3950.00	3002.00		6952.00
1	7.4753	07-006	Pipe Run Insulation	(4" O.D.) Ammonia line insulation	425	LF.		9350.00	5525.00		14875.00
1	7.4763	012a-048	Pipe Run Insulation	(8" O.D.) Steam line by heater at catwalk	80	LF.		2000.00	1520.00		3520.00
1	7.4763	07-008	Pipe Run Insulation	(4" O.D.) Condensate line insulation	5	LF.		110.00	65.00		175.00
1	7.6436	4a-096	Storage Tank / Exchanger Insulation	HF recovery tank in the HF recovery room by the southwest	20	S.F.		400.00	200.00		600.00
1	7.6446	07-005	Pipe Fitting Insulation	(3" O.D.) Ammonia line fitting insulation	83	EA.		2241.00	2407.00		4648.00
1	7.6476	07-024	Pipe Run Insulation	(6" O.D.) Service water line insulation	43	LF.		946.00	559.00		1505.00
1	7.8099	06-135	Pipe Fitting Insulation	Refer to sample 2314, pump pit	1	EA.		27.00	29.00		56.00
1	7.8139	07-049	Pipe Run Insulation	(4" O.D.) Condensate line insulation	405	LF.		8910.00	5265.00		14175.00
1	7.8159	07-030	Pipe Run Insulation	(4" O.D.) Steam line insulation	126	LF.		2772.00	1638.00		4410.00
1	7.9802	3f-01	Storage Tank / Exchanger Lagging	Sample taken bottom of tank #1	616	S.F.		12320.00	6160.00		18480.00
1	7.9802	4a-045	Duct Insulation	(24" O.D.) flue exhaust pipe at column 4B	4	S.F.		8.00	40.00		48.00
1	7.9812	07-004	Pipe Run Insulation	(4" O.D.) Steam line insulation	35	LF.		770.00	455.00		1225.00
1	8.1495	2e-005	Pipe Fitting Insulation	(4" O.D.) Elbow, Damaged, debris on floor, condensate line	1	EA.		27.00	29.00		56.00
1	8.1495	13a-002A	Pipe Run Insulation	(6" O.D.) Steam line insulation, by column Q1	1595	LF.		35090.00	20735.00		55825.00
1	8.1505	10a-010	Fabric / Rope	Replacement rope gasket material on stool in maintenance	10	LF.		30.00	40.00		70.00
1	8.1505	07-001	Pipe Run Insulation	(4" O.D.) Steam line insulation	5	LF.		110.00	65.00		175.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.1535	8a-021	Pipe Run Insulation	(3" O.D.) Water line off of hot water heater	6	LF.		132.00	78.00		210.00
1	8.3148	05-024	Gasketry	Gasket on blower flange	1	S.F.		2.00	5.00		7.00
1	8.3188	3e-26	Pipe Run Insulation	(6" O.D.) Condensate line, south wall	80	LF.		1760.00	1040.00		2800.00
1	8.4851	05-067	Pipe Run Insulation Lagging	(8" O.D.) Steam line lagging	60	LF.		600.00	180.00		780.00
1	8.4881	13a-013	Storage Tank / Exchanger Lagging	Lagging off of tank D1	125	S.F.		2500.00	1250.00		3750.00
1	8.4881	06-122	Pipe Run Insulation	Vertical run at tocco furnace	6	LF.		132.00	78.00		210.00
1	8.6554	3e-09	Pipe Run Insulation	(8" O.D.) Steam line	210	LF.		5250.00	3990.00		9240.00
1	8.6564	13a-020	Gasketry	Rope gasket	16	LF.		32.00	80.00		112.00
1	8.6564	06-065B	Pipe Fitting Insulation	(2" O.D.) Elbow near column C14	4	EA.		108.00	116.00		224.00
1	8.6574	2b-008	Fabric / Rope	1" Rope TSI, west end	6	LF.		18.00	24.00		42.00
1	8.6574	07-020	Pipe Run Insulation	(10" O.D.) Steam line insulation	105	LF.		2625.00	1995.00		4620.00
1	8.6584	3e-27	Pipe Fitting Insulation	(6" O.D.) Condensate elbow at north wall	28	EA.		756.00	812.00		1568.00
1	8.8247	05-039	Pipe Run Insulation	(4" O.D.) 150 pound steam line, near column 10A, branch off of	15	LF.		330.00	195.00		525.00
1	8.8257	2b-006	Pipe Run Insulation	(8" O.D.) Line	25	LF.		625.00	475.00		1100.00
1	8.994	3e-06	Pipe Fitting Insulation	(4" O.D.) Tank elbow, at south end	20	EA.		540.00	580.00		1120.00
1	8.995	2d-007	Pipe Fitting Insulation	(4" O.D.) Elbow process water	2	EA.		54.00	58.00		112.00
1	9.1643	2d-001	Pipe Fitting Insulation	(4" O.D.) Elbow Steam line	6	EA.		162.00	174.00		336.00
1	9.3266	011-056	Pipe Run Insulation	(4" O.D.)	10	LF.		220.00	130.00		350.00
1	9.3296	06-137	Gasketry	(12" O.D.) Loose used gasket in pump pit	1	LF.		2.00	5.00		7.00
1	9.3326	2b-014	Pipe Fitting Insulation	(6" O.D.) Steam, elbow at air handler, upper level	3	EA.		81.00	87.00		168.00
2	6.2952	011-054	Pipe Fitting Insulation	(3"OD) Steam line elbow	3	EA.	4.50			0.02	4.52
2	6.2952	06-078	Pipe Run Insulation	(8" O.D.) Steam line by restroom	5	LF.	7.50			0.03	7.53
2	6.9684	06-076	Pipe Fitting Insulation	(8" O.D.) Steam elbow by restroom	2	EA.	3.00			0.01	3.01
2	7.1347	3d-08	Pipe Run Insulation	(4" O.D.) Horizontal steam line, tar wrapped	30	LF.	45.00			0.15	45.15
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, tar wrapped	12	LF.	18.00			0.06	18.06
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, tar wrapped	24	LF.	36.00			0.12	36.12
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.)Vertical steam line, tar wrapped	12	LF.	18.00			0.06	18.06

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
2	8.8267	3e-10	Pipe Fitting Insulation	(6" O.D.) Steam elbow, by light	25	EA.	37.50			0.13	37.63
3	4.2636	15-109	Duct Insulation	HVAC duct insulation, air handle between S-8 and S-9, middle of	120	S.F.	180.00			0.60	180.60
3	5.9566	02a-028	Pipe Run Insulation	(3" O.D.) Water line, metal-jacketed	21	LF.	31.50			0.11	31.61
3	5.9596	011-050	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	44	EA.	66.00			0.22	66.22
3	6.1219	3d-01	Storage Tank / Exchanger Lagging	Black tar tank wrap	1812	S.F.	2718.00			9.06	2727.06
3	6.2852	05-063	HVAC Flexible Connector	(12" X 24" X 2") Woven	1	EA.	50.00			0.01	50.01
3	6.2922	06-194	Pipe Fitting Insulation	(2" O.D.) Condensate, elbow by pickling,white exposed material	6	EA.	9.00			0.03	9.03
3	6.2922	06-194	Pipe Fitting Insulation	(2" O.D.) Condensate elbow, by entrance G-90, exposed material	2	EA.	3.00			0.01	3.01
3	6.4605	4a-017	Storage Tank / Exchanger Insulation	Tank insulation from the inside of tank 7	1100	S.F.	1650.00			5.50	1655.50
3	6.4625	011-038	Storage Tank / Exchanger Insulation	Hot water tank #1 west end is torn	85	S.F.	127.50			0.43	127.93
3	6.4625	02a-009	Storage Tank / Exchanger Insulation	Condensate tank insulation	110	S.F.	165.00			0.55	165.55
3	6.6308	15-136	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow by west wall between rooms S-8	15	EA.	22.50			0.08	22.58
3	6.6318	02a-007	Pipe Run Insulation	(4" O.D.) Vertical condensate line by tank, metal-jacketed	555	LF.	832.50			2.78	835.28
3	6.7991	01-005	Pipe Run Insulation	(4" O.D.) Water line	256	LF.	384.00			1.28	385.28
3	6.8001	28b-005	Pipe Fitting Insulation	(4" O.D.) Elbow, south wall by double doors	46	EA.	69.00			0.23	69.23
3	7.1377	02a-055	Storage Tank / Exchanger Insulation	Top of tank D1-208	162	S.F.	243.00			0.81	243.81
3	7.1407	02a-003	Pipe Fitting Insulation	(4" O.D.) Steam line elbow on unit E-2948	20	EA.	30.00			0.10	30.10
3	7.304	28b-001	Pipe Run Insulation	(3" O.D.) Horizontal steam line, north wall	25	LF.	37.50			0.13	37.63
3	7.305	15-137	Pipe Run Insulation	(10" O.D.) Condensate line straights, elbow by overhead	151	LF.	226.50			0.76	227.26
3	7.305	15-139	Pipe Run Insulation	(10" O.D.) Steam line straight by west wall by overhead material	102	LF.	153.00			0.51	153.51
3	7.306	15-112	Pipe Fitting Insulation	(12" O.D.) Chilled water system valve-south mechanical, central.	12	EA.	18.00			0.06	18.06
3	7.306	15-112	Pipe Fitting Insulation	(6" O.D.) Chilled water system. Elbow in corrosion room by	2	EA.	3.00			0.01	3.01
3	7.4713	10a-034	HVAC Flexible Connector	No samples taken, would jeopardize boiler integrity. Flex	4	EA.	200.00			0.02	200.02
3	7.4753	012a-019	Pipe Run Insulation	(4" O.D.) Abandoned line	50	LF.	75.00			0.25	75.25
3	7.4753	09-011A	Pipe Run Insulation	(10" O.D.) High pressure steam line, recently wrapped	198	LF.	297.00			0.99	297.99
3	7.6386	15-062	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, on south side of hall	1840	S.F.	1288.00			9.20	1297.20
3	7.6416	28b-014	Pipe Fitting Insulation	(3" O.D.) Condensate elbow	2	EA.	3.00			0.01	3.01

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	7.6426	02a-048	Pipe Fitting Insulation	(3" O.D.) Condensate elbow by column C-17	56	EA.	84.00			0.28	84.28
3	7.6426	15-126	Pipe Fitting Insulation	(8" O.D.) Hot water return to heat exchanger, elbow	8	EA.	12.00			0.04	12.04
3	7.6436	06-086	Pipe Fitting Insulation	(4" O.D.) Air line elbow	7	EA.	10.50			0.04	10.54
3	7.8089	01-006	Pipe Fitting Insulation	(4" O.D.) Water line	25	EA.	37.50			0.13	37.63
3	7.8109	09-057	Pipe Fitting Insulation	(10" O.D.) Abandoned line valve	2	EA.	3.00			0.01	3.01
3	7.9802	13a-001	Pipe Fitting Insulation	(6" O.D.) Steam line tee fitting	100	EA.	150.00			0.50	150.50
3	7.9812	4a-100	Pipe Run Insulation	(4" O.D.) steam condensate line on the west side of the electrical	60	LF.	90.00			0.30	90.30
3	7.9842	4a-023	Storage Tank / Exchanger Insulation	Tank insulation from tank by column 6C	200	S.F.	300.00			1.00	301.00
3	8.1465	05-076	Pipe Run Insulation	(6" O.D.) Process water line next to column 6A	194	LF.	291.00			0.97	291.97
3	8.1465	05-078	Pipe Run Insulation	(6" O.D.) Condensate line, next to 2B	480	LF.	720.00			2.40	722.40
3	8.1495	03b-01	Pipe Run Insulation	(2" O.D.)	50	LF.	75.00			0.25	75.25
3	8.1535	02a-037	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by D-17	33	EA.	49.50			0.17	49.67
3	8.3188	03a-06	Pipe Fitting Insulation	(2" O.D.) by sink, south west corner	5	EA.	7.50			0.03	7.53
3	8.3188	15-134	Pipe Fitting Insulation	(3" O.D.) Steam system elbow - South mechanical room, west	106	EA.	159.00			0.53	159.53
3	8.3188	15-134	Pipe Fitting Insulation	(6" O.D.) Steam system elbow in corrosion room by HVAC	12	EA.	18.00			0.06	18.06
3	8.3208	4a-022A	Gasketry	Woven gasketry wrapped around steam line	10	LF.	15.00			0.05	15.05
3	8.4841	02a-053	Pipe Run Insulation	(32" O.D.) Vent pipe, D1-204, by W.M.C.O. sample A0223,	130	LF.	195.00			0.65	195.65
3	8.4851	15-041	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white and dark blue streaks, in	3399	S.F.	2379.30			17.00	2396.30
3	8.4861	3f-02	Storage Tank / Exchanger Insulation	Sample taken at bottom of tank #1	616	S.F.	924.00			3.08	927.08
3	8.4861	012a-003	Pipe Run Insulation	(4" O.D.)	137	LF.	205.50			0.69	206.19
3	8.4861	06-045B	Pipe Fitting Insulation	(8" O.D.) Steam elbow	7	EA.	10.50			0.04	10.54
3	8.4861	15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run, south mechanical room,	315	LF.	472.50			1.58	474.08
3	8.4861	15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run in corrosion room running	112	LF.	168.00			0.56	168.56
3	8.4871	3f-03	Pipe Fitting Insulation	(6" O.D.)	72	EA.	108.00			0.36	108.36
3	8.4871	4a-086	Pipe Fitting Insulation	(2" O.D.) conduit line elbow on reactor 4 by column 3A	12	EA.	18.00			0.06	18.06
3	8.4881	03b-02	Pipe Fitting Insulation	(2" O.D.) elbow, north west corner	8	EA.	12.00			0.04	12.04
3	8.4891	4a-031	Pipe Fitting Insulation	(2" O.D.) emergency water line elbow by column 6D	18	EA.	27.00			0.09	27.09

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	8.4891	4a-083	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 8	500	S.F.	750.00			2.50	752.50
3	8.6554	06-045A	Pipe Run Insulation	(8" O.D.)	30	LF.	45.00			0.15	45.15
3	8.8227	15-120	Pipe Fitting Insulation Lagging	AHU unit-Condensate fittings (canvas wrapped material) south	10	S.F.	15.00			0.05	15.05
3	8.8237	8a-010	Pipe Fitting Insulation	(6" O.D.) 90 degree condensate fitting by column A2	50	EA.	75.00			0.25	75.25
3	8.8237	8a-011	Pipe Run Insulation	(6" O.D.) Condensate line above pumps	765	LF.	1147.50			3.83	1151.33
3	8.8247	3e-07	Pipe Run Insulation	(4" O.D.) Tank line, at south end	60	LF.	90.00			0.30	90.30
3	8.8247	06-198	Pipe Fitting Insulation	(3" O.D.) Waste water elbow, north end of tank	35	EA.	52.50			0.18	52.68
3	8.8247	06-198	Pipe Fitting Insulation	Waste water fitting, east side	5	EA.	7.50			0.03	7.53
3	8.8257	37-02	Pipe Run Insulation	(4" O.D.) Steam line	660	LF.	990.00			3.30	993.30
3	8.8267	05-003	Pipe Run Insulation	(8" O.D.) Condensate line, near column 28B	340	LF.	510.00			1.70	511.70
3	8.8267	07-047	Pipe Run Insulation	(4" O.D.) Steam line insulation	776	LF.	1164.00			3.88	1167.88
3	8.995	05-004	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow, near column 26E	24	EA.	36.00			0.12	36.12
3	8.996	3e-22	Pipe Run Insulation	(8" O.D.) Steam line at south wall	50	LF.	75.00			0.25	75.25
3	9.1613	13a-011	Pipe Run Insulation	No samples were taken, lines not accessible	385	LF.	577.50			1.93	579.43
3	9.1623	06-179	Pipe Fitting Insulation	(4" O.D.) Steam elbow, above chalkboard	15	EA.	22.50			0.08	22.58
3	9.1643	07-035	Pipe Run Insulation	(6" O.D.) Steam line insulation	157	LF.	235.50			0.79	236.29
3	9.1643	07-050	Pipe Fitting Insulation	(4" O.D.) Service water line fitting insulation	36	EA.	54.00			0.18	54.18
3	9.1653	06-117	Pipe Fitting Insulation	(6" O.D.) Steam elbow	20	EA.	30.00			0.10	30.10
3	9.3306	13a-009	Pipe Run Insulation	No samples were taken, lines not accessible	380	LF.	570.00			1.90	571.90
3	9.3316	06-061	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, north AHU catwalk	60	EA.	90.00			0.30	90.30
3	9.3326	3e-29	Pipe Fitting Insulation	(8" O.D.) Abandoned steam elbow at south wall	4	EA.	6.00			0.02	6.02
3	9.3336	07-009	Pipe Run Insulation	(5" O.D.) Service water line insulation	135	LF.	202.50			0.68	203.18
3	9.3336	07-018	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	11	EA.	16.50			0.06	16.56
3	9.3336	07-022	Pipe Run Insulation	(4" O.D.) Condensate line insulation	52	LF.	78.00			0.26	78.26
3	9.4989	01-020	Duct Insulation	Heater duct insulation on column 6c & 7c	880	S.F.	1320.00			4.40	1324.40
3	9.4989	8a-019	Pipe Fitting Insulation	(4" O.D.) 90 degree water fitting by east end, column D8	31	EA.	46.50			0.16	46.66
3	9.5019	4a-006	Pipe Run Insulation	(6" O.D.) vertical treated water line, metal jacketed, by NE	75	LF.	112.50			0.38	112.88

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	9.5019	4a-006	Pipe Run Insulation	(3" O.D.) horizontal treated water line by column 6D	30	LF.	45.00			0.15	45.15
3	9.6692	3e-28	Pipe Run Insulation	(8" O.D.) Abandoned steam line at south wall	70	LF.	105.00			0.35	105.35
3	9.6702	07-011	Pipe Run Insulation	(10" O.D.) Steam line insulation	105	LF.	157.50			0.53	158.03
3	9.6702	07-014	Pipe Run Insulation	(6" O.D.) Service water line insulation	56	LF.	84.00			0.28	84.28
3	9.6702	07-023	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	19	EA.	28.50			0.10	28.60
3	9.8375	07-016	Pipe Run Insulation	(4" O.D.) Potable water line insulation	25	LF.	37.50			0.13	37.63
3	10.0048	13a-010	Pipe Fitting Insulation	No samples were taken, fittings not accessible	11	EA.	16.50			0.06	16.56
3	10.0048	13a-012	Pipe Fitting Insulation	No samples were taken, fittings not accessible	18	EA.	27.00			0.09	27.09
3	10.1741	54-040	Pipe Run Insulation	(4" O.D.) Dead line in refrigeration area, could not access	320	LF.	480.00			1.60	481.60
4	6.9704	02a-002	Pipe Run Insulation	(4" O.D.) Horizontal steam line in between tanks D1-7 and D1-8,	150	LF.	225.00			0.75	225.75
4	7.4743	05-007	Pipe Fitting Insulation	(2" O.D.)	26	EA.	39.00			0.13	39.13
4	7.6356	15-082	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, in hall outside room S-1	1840	S.F.	1288.00			9.20	1297.20
4	7.6396	13a-023	Transite Sheet Material	No samples taken per scope of work assumed positive	18,000	S.F.	12600.00			90.00	12690.00
4	7.9812	05-056A	Heat Shield	Gloves at column 11F	1	S.F.	0.70			0.01	0.71
4	7.9812	05-056B	Heat Shield	Rope gasket, 1/4" X 1" flat ribbon, at column 11F	4	S.F.	2.80			0.02	2.82
4	7.9812	06-077	Transite Sheet Material	Smooth interior wall	3000	S.F.	2100.00			15.00	2115.00
4	8.1435	15-095	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, off white with black spec, in hall outside of room W-4	2508	S.F.	1755.60			12.54	1768.14
4	8.1435	15-101	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with green streaks, in room W-28	2285	S.F.	1599.50			11.43	1610.93
4	8.1465	05-060	Transite Sheet Material	Transite walls, office 05-24, at column 9G	1668	S.F.	1167.60			8.34	1175.94
4	8.1475	28b-002	Pipe Run Insulation Lagging	(2" O.D.) North wall steam line	46	S.F.	69.00			0.23	69.23
4	8.1485	06-047	Pipe Fitting Insulation	(8" O.D.) Steam tee at column C29 platform	41	EA.	61.50			0.21	61.71
4	8.1485	06-151	Pipe Fitting Insulation	(2" O.D.) Water line	5	EA.	7.50			0.03	7.53
4	8.1525	4a-075	Duct Insulation Lagging	Air handling unit lagging by column 8D	500	S.F.	750.00			2.50	752.50
4	8.3128	15-021	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, tan with red, brown and orange streaks, in southeast	300	S.F.	210.00			1.50	211.50
4	8.3138	05-062	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	11	EA.	16.50			0.06	16.56
4	8.3158	05-008	Pipe Run Insulation	(2" O.D.) Steam line, office 05-27	70	LF.	105.00			0.35	105.35
4	8.3158	15-045	Duct Insulation	Duct insulation taken in center wing hall outside lab C-43	536	S.F.	804.00			2.68	806.68

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.3168	02a-073	Transite Sheet Material	No sample taken, material assessed	25,000	S.F.	17500.00			125.00	17625.00
4	8.3168	06-118	Pipe Run Insulation	(6" O.D.) Abandoned line leading to tocco furnace	25	LF.	37.50			0.13	37.63
4	8.4841	069-003	Pipe Run Insulation	(4" O.D.) metal jacket	282	LF.	423.00			1.41	424.41
4	8.4851	53-003	Other	Tar on insulation fasteners,sample taken south	20	S.F.	14.00			0.10	14.10
4	8.4851	05-013	Acoustic Panel (2' X 4')	(2' X 4') Ceiling panel, hole and fissure	144	S.F.	100.80			0.72	101.52
4	8.4851	05-044	Pipe Fitting Insulation	(6" O.D.) Potable water line elbow, near column 11F	6	EA.	9.00			0.03	9.03
4	8.4851	05-057A	Transite Sheet Material	Transite on wall columns 13F and 10F	1460	S.F.	1022.00			7.30	1029.30
4	8.4851	15-039	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with beige streaks, in southwest	1055	S.F.	738.50			5.28	743.78
4	8.4871	02a-074	Transite Sheet Material	Interior transite west side of building; no samples taken,	20,000	S.F.	14000.00			100.00	14100.00
4	8.4881	4a-076	Duct Insulation	Blow fan insulation by column 7C	100	S.F.	150.00			0.50	150.50
4	8.4881	05-014	Transite Sheet Material	Transite walls from column 25 to column 29	1000	S.F.	700.00			5.00	705.00
4	8.4891	02a-061	Pipe Fitting Insulation	(10" O.D.) Steam line elbow - A-12	10	EA.	15.00			0.05	15.05
4	8.4891	02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-10	10	EA.	15.00			0.05	15.05
4	8.4891	02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - A-11	40	EA.	60.00			0.20	60.20
4	8.4891	02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - C-11	20	EA.	30.00			0.10	30.10
4	8.4891	02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-11	20	EA.	30.00			0.10	30.10
4	8.4891	2d-010	Transite Sheet Material	South interior transite wall	3440	S.F.	2408.00			17.20	2425.20
4	8.6544	02a-031A	Pipe Fitting Insulation	(4" O.D.) Steam line valve in south corner	21	EA.	31.50			0.11	31.61
4	8.6544	05-049	Transite Sheet Material	1/4" Transite corridor wall addition from 10A to 7A	900	S.F.	630.00			4.50	634.50
4	8.6554	05-048	Transite Sheet Material	1/4" Walls and ceiling	8140	S.F.	5698.00			40.70	5738.70
4	8.6564	71-002	Pipe Run Insulation	(3" O.D.)Water line by south wall	18	LF.	27.00			0.09	27.09
4	8.6564	28a-010	Pipe Run Insulation	(4" O.D.) Line in womens bath room #110	84	LF.	126.00			0.42	126.42
4	8.6564	28a-011	Pipe Fitting Insulation	(4" O.D.) Elbow above hot water heater in womens rest room #110	2	EA.	3.00			0.01	3.01
4	8.6564	28a-012	Pipe Fitting Insulation	(4" O.D.) Elbow in womens rest room #110	8	EA.	12.00			0.04	12.04
4	8.6564	06-055B	Pipe Fitting Insulation	(6" O.D.) Condensate elbow near column C23	8	EA.	12.00			0.04	12.04
4	8.6594	07-051	Pipe Run Insulation	(4" O.D.) Service water line insulation	306	LF.	459.00			1.53	460.53
4	8.8177	05-064	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, green	400	S.F.	280.00			2.00	282.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92**

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.8177	05-064	Floor Tile Mastic	Floor tile mastic, black	400	S.F.	280.00			2.00	282.00
4	8.8207	15-036	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, light brown with white and brown streaks, in	192	S.F.	134.40			0.96	135.36
4	8.8217	05-037	Pipe Run Insulation	(8" O.D.) 150 pound steam line, near column 14	350	L.F.	525.00			1.75	526.75
4	8.8247	30-005	Transite Sheet Material	Transite Wall	400	S.F.	280.00			2.00	282.00
4	8.8247	4a-072	Pipe Run Insulation	(3" O.D.) potable water line column 5F	40	L.F.	60.00			0.20	60.20
4	8.8257	15-051	Pipe Fitting Insulation	(4" O.D.) Water line fitting in room N-22, west wall	83	EA.	124.50			0.42	124.92
4	8.8267	4a-049	Pipe Fitting Insulation	(10" O.D.) Steam line elbow at 58	25	EA.	37.50			0.13	37.63
4	8.8267	07-019	Duct Insulation	Duct Insulation	480	S.F.	720.00			2.40	722.40
4	8.99	05-038	Pipe Fitting Insulation	(8" O.D.) 150 pound steam line elbow, near column 11F	15	EA.	22.50			0.08	22.58
4	8.99	15-052	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, on north side of room	4095	S.F.	2866.50			20.48	2886.98
4	8.991	05-069	Pipe Run Insulation	(3" O.D.) Steam line riser, near column 4E	610	L.F.	915.00			3.05	918.05
4	8.991	05-070	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 2D	63	EA.	94.50			0.32	94.82
4	8.992	02a-054	Pipe Fitting Insulation	(32" O.D.) Vent pipe elbow on tank D1-206	13	EA.	19.50			0.07	19.57
4	8.992	06-171	Pipe Run Insulation	(10" O.D.) Steam line	40	L.F.	60.00			0.20	60.20
4	8.992	06-175	Pipe Fitting Insulation	(4" O.D.) Water elbow, at east wall	12	EA.	18.00			0.06	18.06
4	8.993	28a-009	Pipe Run Insulation	(4" O.D.) Line corner of womens bath room #110	20	L.F.	30.00			0.10	30.10
4	8.993	06-051A	Pipe Fitting Insulation	Main steam line fitting at column C18	173	EA.	259.50			0.87	260.37
4	8.993	06-139	Fabric / Rope	Valve packing rope, north corner of pump pit	10	L.F.	7.00			0.05	7.05
4	8.994	20e-001	Pipe Run Insulation	(12" O.D.) Water Line	13	L.F.	19.50			0.07	19.57
4	8.994	069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	25	EA.	37.50			0.13	37.63
4	8.994	13a-019	Gasketry	Door gasket	16	L.F.	24.00			0.08	24.08
4	8.994	4a-068	Pipe Run Insulation	(6" O.D.) lines from tank between reactors 2 and 3	30	L.F.	45.00			0.15	45.15
4	8.994	069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	25	EA.	37.50			0.13	37.63
4	8.994	07-007	Storage Tank / Exchanger Insulation	Light gas surge tank insulation	100	S.F.	150.00			0.50	150.50
4	8.994	07-026	Duct Insulation	Duct Insulation	480	S.F.	720.00			2.40	722.40
4	8.995	02a-050	Pipe Fitting Insulation	(6" O.D.) Process water elbow by green gauge panel	22	EA.	33.00			0.11	33.11
4	8.996	2d-002	Pipe Run Insulation	(4" O.D.) Steam line	10	L.F.	15.00			0.05	15.05

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.1583	05-051	Transite Pipe	(4" O.D.) Transite flue at remelt, near furnace column 6D	56	L.F.	84.00			0.28	84.28
4	9.1593	15-058	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, on northwest side	135	S.F.	94.50			0.68	95.18
4	9.1603	011-027	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	17	EA.	25.50			0.09	25.59
4	9.1603	32-001	Pipe Fitting Insulation	(4" O.D.) Steam line fitting	3	EA.	4.50			0.02	4.52
4	9.1603	06-173	Pipe Run Insulation	(4" O.D.) Water line, at east wall	40	L.F.	60.00			0.20	60.20
4	9.1613	05-041	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow, near column 11B	4	EA.	6.00			0.02	6.02
4	9.1623	4a-048	Pipe Run Insulation	(10" O.D.) Steam line by column 5B	150	L.F.	225.00			0.75	225.75
4	9.1623	06-161	Pipe Fitting Insulation	(6" O.D.) Steam elbow	19	EA.	28.50			0.10	28.60
4	9.1623	06-165	Pipe Run Insulation	(2" O.D.) Steam line bypass	40	L.F.	60.00			0.20	60.20
4	9.1633	2b-005	Pipe Fitting Insulation	(4" O.D.) Steam line, elbow	33	EA.	49.50			0.17	49.67
4	9.1633	45-018	Pipe Run Insulation	(3" O.D.) Abandoned straight line	30	L.F.	45.00			0.15	45.15
4	9.1633	4a-053	Pipe Run Insulation	(6" O.D.) Unknown line around the perimeter of the 6th floor. B-1	150	L.F.	225.00			0.75	225.75
4	9.1633	4a-084	Pipe Run Insulation	(3" O.D.) pipe line by column 2A	40	L.F.	60.00			0.20	60.20
4	9.1633	06-087B	Pipe Run Insulation	(2" O.D.) Steam line, metal clad	10	L.F.	15.00			0.05	15.05
4	9.1643	07-046	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	146	EA.	219.00			0.73	219.73
4	9.3286	05-057	Pipe Run Insulation	(4" O.D.) Water line riser, at column 12G	2	L.F.	3.00			0.01	3.01
4	9.3296	32-003	Pipe Run Insulation	(4" O.D.) Steam line pipe run insulation	12	L.F.	18.00			0.06	18.06
4	9.3296	32-006	Pipe Run Insulation	(4" O.D.) Water line pipe run insulation, gray	95	L.F.	142.50			0.48	142.98
4	9.3296	06-019B	Pipe Fitting Insulation	(8" O.D.) Steam; some metal clad	125	EA.	187.50			0.63	188.13
4	9.3296	06-019B	Pipe Fitting Insulation	(2" to 4" O.D.) 2 of 5 are metal clad	5	EA.	7.50			0.03	7.53
4	9.3296	06-029A	Pipe Run Insulation	(4" O.D.) Process water	45	L.F.	67.50			0.23	67.73
4	9.3296	06-051B	Pipe Run Insulation	(10" O.D.) At column C18	173	L.F.	259.50			0.87	260.37
4	9.3306	13a-003B	Pipe Run Insulation	(4" O.D.) Cooling water return line	6	L.F.	9.00			0.03	9.03
4	9.3316	07-048	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	35	EA.	52.50			0.18	52.68
4	9.3326	24b-002	Pipe Fitting Insulation	(5" O.D.)	7	EA.	10.50			0.04	10.54
4	9.3326	20a-005	Pipe Run Insulation	(10" O.D.) Green line, center section	40	L.F.	60.00			0.20	60.20
4	9.3336	07-012	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	17	EA.	25.50			0.09	25.59

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.3336	07-013	Pipe Run Insulation	(4" O.D.) Condensate line insulation	35	L.F.	52.50			0.18	52.68
4	9.3336	07-032	Pipe Run Insulation	(4" O.D.) Service water line insulation	45	L.F.	67.50			0.23	67.73
4	9.3336	07-037	Pipe Run Insulation	(4" O.D.) Condensate line insulation	77	L.F.	115.50			0.39	115.89
4	9.4969	05-052	Gasketry	8" Gasket	1	L.F.	1.50			0.01	1.51
4	9.4989	05-065	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 5G	31	EA.	46.50			0.16	46.66
4	9.4999	02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - A-8	3	EA.	4.50			0.02	4.52
4	9.4999	02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-11	20	EA.	30.00			0.10	30.10
4	9.4999	02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-10	20	EA.	30.00			0.10	30.10
4	9.4999	02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - C-10	20	EA.	30.00			0.10	30.10
4	9.4999	4a-046	Duct Insulation	(18" O.D.) exhasust lines from reactor 12-A5	40	S.F.	60.00			0.20	60.20
4	9.4999	4a-047	Duct Insulation	Exhaust Insulation from reactor 12-A5	50	S.F.	75.00			0.25	75.25
4	9.4999	4a-079	Transite Sheet Material	Transite sheet material with inner insulation air cell around freight	600	S.F.	420.00			3.00	423.00
4	9.4999	4a-081	Pipe Fitting Insulation	(2" O.D.) Insulated conduit elbow going into reactor 8	50	EA.	75.00			0.25	75.25
4	9.4999	05-006	Pipe Fitting Insulation	(4" O.D.) Potable water line tee, near column 26E	8	EA.	12.00			0.04	12.04
4	9.5009	25c-01	Gasketry	(10"O.D.) Gasket pipe	5	L.F.	7.50			0.03	7.53
4	9.5009	55a-004	Pipe Run Insulation Lagging	(4" O.D.) South Wall	245	S.F.	367.50			1.23	368.73
4	9.5009	07-042	Pipe Run Insulation	(3" O.D.) Potable water line insulation	103	L.F.	154.50			0.52	155.02
4	9.6652	05-047	Transite Pipe	(4" O.D.) Transite exhaust flue generator 11 and 12, near	55	L.F.	82.50			0.28	82.78
4	9.6672	05-046	Joint Compound	(4" O.D.) Transite pipe joint generator 11 and 12, near	33	S.F.	23.10			0.17	23.27
4	9.6672	06-138	Resilient Floor Tile (9" X 9")	Black	75	S.F.	52.50			0.38	52.88
4	9.6672	06-138	Resilient Floor Tile (9" X 9")	White	75	S.F.	52.50			0.38	52.88
4	9.6682	13a-005	Pipe Run Insulation	(4" O.D.) Cooling water supply line on cooling water tank	585	L.F.	877.50			2.93	880.43
4	9.6692	3e-18	Pipe Run Insulation	(8" O.D.) At half-level	30	L.F.	45.00			0.15	45.15
4	9.6692	4a-095	Pipe Fitting Insulation	(4" O.D.) HF recovery line elbow in the HF recovery room by the	4	EA.	6.00			0.02	6.02
4	9.6692	15-111	Pipe Run Insulation	Pipe insulation run by column S-15 running north to south	3	L.F.	4.50			0.02	4.52
4	9.8345	05-040	Pipe Run Insulation	(6" O.D.) Condensate line, near column 10A	297	L.F.	445.50			1.49	446.99
4	9.8355	32-007	Pipe Fitting Insulation	(3" O.D.) Water line elbow, gray	7	EA.	10.50			0.04	10.54

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.8365	05-104	Pipe Run Insulation	(6" O.D.) 150 pound steam line, near column 26E	70	LF.	105.00			0.35	105.35
4	9.8365	05-001	Pipe Run Insulation	(6" O.D.) 150 pound steam, line near column 29C	80	LF.	120.00			0.40	120.40
4	9.8375	06-207	Pipe Run Insulation	(5" O.D.) steam line by column B-3 Assumed per WEMCO	15	LF.	22.50			0.08	22.58
4	10.0048	13a-008	Pipe Fitting Insulation	No samples were taken, fittings not accessible	8	EA.	12.00			0.04	12.04
4	10.0068	07-017	Pipe Run Insulation	(4" O.D.) Service water line insulation	35	LF.	52.50			0.18	52.68
4	10.0068	8a-014	Pipe Run Insulation	(3" O.D.) Potable water line	52	LF.	78.00			0.26	78.26
5	6.1249	09-050	Transite Sheet Material	Transite wall, no sample taken	48,200	S.F.				241.00	241.00
5	6.1249	09-051	Transite Sheet Material	Transite wall, West side	14,000	S.F.				70.00	70.00
5	6.9624	012a-001	Pipe Run Insulation	Over (10" O.D.) By west exit	670	LF.				3.35	3.35
5	7.311	09-049B	Transite Sheet Material	Corrigated interior transite wall, north end	3000	S.F.				15.00	15.00
5	8.1565	09-048B	Transite Sheet Material	Smooth transite wall by north roll up door	7400	S.F.				37.00	37.00
5	8.3218	06-099	Pipe Run Insulation	(2" O.D.) Condensate line, metal clad	26	LF.				0.13	0.13
5	8.8217	012a-010	Resilient Floor Tile (9" X 9")	Green tile with white specks	90	S.F.				0.45	0.45
5	8.991	15-068	Duct Insulation	Duct on west side of in HVAC room S-1	236	S.F.				1.18	1.18
5	8.995	10a-011	Storage Tank / Exchanger Insulation	Tank insulation	100	S.F.				0.50	0.50
5	9.1633	09-025	Pipe Run Insulation	(2" O.D.) Vertical hot water line leading into heater	50	LF.				0.25	0.25
5	10.1751	4a-016	Pipe Run Insulation	(4" O.D.) steam line by tank 7	54	LF.				0.27	0.27
6	5.7873	3d-02A	Pipe Run Insulation	(4" O.D.) Steam line	250	LF.				1.25	1.25
6	6.2922	02a-040	Transite Sheet Material	Most transite in good repair, few patches of broken and	78,000	S.F.				390.00	390.00
6	6.4615	02a-072	Transite Sheet Material	West side of plant 2a	38000	S.F.				190.00	190.00
6	6.4645	02a-004	Pipe Run Insulation	(2" O.D.) Horizontal black process water line leading to	173	LF.				0.87	0.87
6	6.6288	06-190	Transite Sheet Material	North side of plant	10800	S.F.				54.00	54.00
6	6.9654	30-006	Transite Sheet Material	Exterior transite, No samples taken per scope of work	62,500	S.F.				312.50	312.50
6	6.9654	10a-004	Pipe Run Insulation	(6" O.D.) Vertical steam line insulation	550	LF.				2.75	2.75
6	6.9664	3c-12	Transite Sheet Material	No samples taken	7,610	S.F.				38.05	38.05
6	6.9674	05-022	Transite Sheet Material	1/4" Transite wallboard	2800	S.F.				14.00	14.00
6	7.1407	02a-008	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by rollup door	52	EA.				0.26	0.26

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	7.302	15-063	Floor Tile Mastic	Mastic, south side of hall outside of room N-24	1840	S.F.				9.20	9.20
6	7.304	05-079	Transite Sheet Material	Corregated wall panel, next to elevator at column 1E	3809	S.F.				19.05	19.05
6	7.305	2c-01	Pipe Run Insulation	(3" O.D.) Black lagging with white insulation	60	L.F.				0.30	0.30
6	7.4723	01-008	Pipe Fitting Insulation	(3" O.D.) Water line fitting	15	EA.				0.08	0.08
6	7.4723	06-044	Transite Sheet Material	Smooth cement wallboard, west wall	11,500	S.F.				57.50	57.50
6	7.4733	3d-04A	Pipe Run Insulation	(4" O.D.) Sump water insulation	450	L.F.				2.25	2.25
6	7.6406	8a-032	Transite Sheet Material	Interior transite by roll-up door	2,000	S.F.				10.00	10.00
6	7.6416	10a-041	Pipe Run Insulation	(3" O.D.) Steam line going into heaters	23	L.F.				0.12	0.12
6	7.6416	01-021	Transite Sheet Material	Transite wall between columns 2F, E3	55260	S.F.				276.30	276.30
6	7.6426	06-046	Resilient Floor Tile (9" X 9")	Green in quality control office	300	S.F.				1.50	1.50
6	7.6446	31-001	Pipe Fitting Insulation	(2" O.D.) steam system	37	EA.				0.19	0.19
6	7.6446	31-002	Pipe Run Insulation	(6" O.D.) steam system	540	L.F.				2.70	2.70
6	7.8109	05-097	HVAC Flexible Connector	Cloth like material (24" X 24"x4")	26	EA.				0.13	0.13
6	7.8119	06-072	Pipe Run Insulation	Water line outside restroom	60	L.F.				0.30	0.30
6	7.9772	020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	10232	S.F.				51.16	51.16
6	7.9772	020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	10232	S.F.				51.16	51.16
6	7.9782	3g-004	Transite Sheet Material	No Samples Taken, assumed positive, exterior	2,360	S.F.				11.80	11.80
6	7.9792	2b-015	Transite Sheet Material	Transite, no samples taken	4,900	S.F.				24.50	24.50
6	7.9792	3e-32	Transite Sheet Material	No samples taken, Assumed positive	17,850	S.F.				89.25	89.25
6	7.9802	06-068	Pipe Run Insulation	Water line	20	L.F.				0.10	0.10
6	7.9802	06-070	Pipe Fitting Insulation	Water fitting by restroom	16	EA.				0.08	0.08
6	7.9812	02a-047	Pipe Run Insulation	(3" O.D.)	59	L.F.				0.30	0.30
6	7.9832	2d-011	Transite Sheet Material	Transite, No Samples Taken	8,680	S.F.				43.40	43.40
6	8.1445	15-025	HVAC Flexible Connector	Duct in hall outside room E-7, 85 S.F.	1	EA.				0.01	0.01
6	8.1455	04c-004	Transite Sheet Material	No samples taken	8,530	S.F.				42.65	42.65
6	8.1465	06-209	Pipe Fitting Insulation	(6" O.D.) Steam elbows assumed positive per WEMCO	41	EA.				0.21	0.21
6	8.1485	4a-090	Transite Sheet Material	Material not sampled per Scope-of-Work exterior Transite	80090	S.F.				400.45	400.45

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.1485	15-129	Pipe Run Insulation	(2" O.D.) Hot water return system straight runs. Room R-18,	70	LF.				0.35	0.35
6	8.1495	15-118	Duct Insulation	Fan unit - Elevated duct core sample near north wall of south	160	S.F.				0.80	0.80
6	8.4831	05-036	Transite Sheet Material	Corregated Transite wall	646	S.F.				3.23	3.23
6	8.4841	10a-026	Gasketry	On boiler stoker	12	EA.				0.06	0.06
6	8.4851	01-004	Pipe Fitting Insulation	(4" O.D.) Condensate return line, Tee fitting	27	EA.				0.14	0.14
6	8.4851	01-010	Pipe Fitting Insulation	(4" O.D.) 150# Steam line fitting	13	EA.				0.07	0.07
6	8.4851	06-014	Storage Tank / Exchanger Insulation	Condensate tank	50	S.F.				0.25	0.25
6	8.4851	15-127	Pipe Run Insulation	(2" O.D.) Cold water system - straight run. Room R-18	70	LF.				0.35	0.35
6	8.4851	15-130	Pipe Fitting Insulation	(2" O.D.) Hot water return system Elbow, room R-16, (elevated line,	10	EA.				0.05	0.05
6	8.4851	15-131	Pipe Run Insulation	(3" O.D.) Hot water supply system - straight runs. Room R-18,	70	LF.				0.35	0.35
6	8.4851	15-132	Pipe Fitting Insulation	(3" O.D.) Hot water supply system - Elbow, room R-16, (elevated	10	EA.				0.05	0.05
6	8.4861	68-004	Transite Sheet Material	Transite; no samples taken	16,000	S.F.				80.00	80.00
6	8.6514	03a-13	Transite Sheet Material	No samples taken Per scope of work. Assumed	17,360	S.F.				86.80	86.80
6	8.6524	01-003	Pipe Run Insulation	(4" O.D.) Condensate return line	545	LF.				2.73	2.73
6	8.6534	03a-12	Transite Sheet Material	Interior transite walls	960	S.F.				4.80	4.80
6	8.6544	01-001	Pipe Run Insulation	(4" O.D.) 150# Steam Line	785	LF.				3.93	3.93
6	8.6544	06-017B	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	9	EA.				0.05	0.05
6	8.6544	06-017B	Pipe Fitting Insulation	(4" O.D.)Condensate elbow	9	EA.				0.05	0.05
6	8.6574	45-007	Pipe Fitting Insulation	(6" O.D.) Steam line valve at air handling unit	35	EA.				0.18	0.18
6	8.6574	45-008	Pipe Run Insulation	(8" O.D.) Steam Line at Air Handling Unit	40	LF.				0.20	0.20
6	8.6574	4a-013	Pipe Run Insulation	(6" O.D.) vertical ammonia line by west side double doors	85	LF.				0.43	0.43
6	8.8207	01-007	Storage Tank / Exchanger Insulation	Condensate holding tank insulation	66	S.F.				0.00	0.00
6	8.8217	05-095	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, by column 28F	1995	EA.				9.98	9.98
6	8.8217	15-080A	Duct Insulation	HVAC duct insulation in room S-22 by northeast corner	3000	S.F.				15.00	15.00
6	8.8227	06-059	Pipe Fitting Insulation	(6" O.D.) Steam elbow, south AHU catwalk	173	EA.				0.87	0.87
6	8.8237	01-002	Pipe Fitting Insulation	(6" O.D.) 150# Steam line fitting	49	EA.				0.25	0.25
6	8.8237	8a-002	Pipe Run Insulation	(12" O.D.) Steam line, metal jacketed by column D9	1360	LF.				6.80	6.80

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.8237	15-114	Pipe Run Insulation	(4" O.D.) Cooling water supply and return, elevated line	57	LF.				0.29	0.29
6	8.8247	06-095B	Pipe Run Insulation	(4" O.D.) Steam line, metal clad	92	LF.				0.46	0.46
6	8.8257	8a-005	Pipe Fitting Insulation	(6" O.D.) Process water line fitting by column D9	45	EA.				0.23	0.23
6	8.991	31-004	Resilient Floor Tile (9" X 9")	Medium green w/ white/black splotches	700	S.F.				3.50	3.50
6	8.992	03a-04	Pipe Fitting Insulation	(3" O.D.) south west corner by sink	7	EA.				0.04	0.04
6	8.992	03b-04	Transite Sheet Material	No samples taken per scope of work. Assumed positive	3,525	S.F.				17.63	17.63
6	8.992	15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run. South	40	LF.				0.20	0.20
6	8.992	15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run in corrosion	17	LF.				0.09	0.09
6	8.993	06-050	Resilient Floor Tile (12" X 12")	Break room	150	S.F.				0.75	0.75
6	8.993	15-064	Pipe Fitting Insulation	(4" O.D.) Steam line fitting by eas wall in HVAC room S-1	45	EA.				0.23	0.23
6	8.993	15-065	Pipe Run Insulation	(4" O.D.) Steam line insulation by west wall in HVAC room S-1	83	LF.				0.42	0.42
6	8.993	15-066	Pipe Fitting Insulation	(3" O.D.) Condensate line fitting by northwest corner of HVAC	6	EA.				0.03	0.03
6	8.993	15-067	Pipe Run Insulation	(3" O.D.) Condensate line insulation by northwest wall in	12	LF.				0.06	0.06
6	8.993	15-072	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in nort wall of HVAC room S-22	300	EA.				1.50	1.50
6	8.993	15-077	Pipe Run Insulation	(4" O.D.) Condensate line insulation on floor. West side of	22	LF.				0.11	0.11
6	8.995	025a-01	Pipe Fitting Insulation	(3" O.D.) 90 degree fitting	35	EA.				0.18	0.18
6	8.995	025a-02	Pipe Run Insulation	(3" O.D.) Vertical line	88	LF.				0.44	0.44
6	8.997	09-001A	Pipe Run Insulation	(6" O.D.) Condensate line, on heating unit	10	LF.				0.05	0.05
6	8.997	09-002A	Pipe Fitting Insulation	(6"O.D.)Condensate line elbow	4	EA.				0.02	0.02
6	9.1603	05-092	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting, between column 2F and	90	EA.				0.45	0.45
6	9.1603	8a-004	Pipe Run Insulation	(3" O.D.) Potable water line, meta jacketed by Column 7B	284	LF.				1.42	1.42
6	9.1603	15-116	Storage Tank / Exchanger Insulation	Heat exchanger tank insulation. South mechanical room, north	56	S.F.				0.28	0.28
6	9.1603	15-123	Pipe Fitting Insulation	(4" O.D.) A.C. condensate pump elbow. Off A.C. condenser	5	EA.				0.03	0.03
6	9.1623	01-018	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting	22	EA.				0.00	0.00
6	9.1633	4a-092	Pipe Run Insulation	(8" O.D.) steam line, metal jacketed, by reactor 1	1120	LF.				5.60	5.60
6	9.1643	8a-015	Pipe Run Insulation	(4" O.D.) Steam line by gauge door at column C1	220	LF.				1.10	1.10
6	9.3276	05-093	Pipe Run Insulation	(3" O.D.) Condensate return line, by column 2D	345	LF.				1.73	1.73

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	9.3276	05-094	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, on heater by column 26F	115	EA.				0.58	0.58
6	9.3296	4a-080	Transite Sheet Material	Interior transite sheeting material by column 1E	46500	S.F.				232.50	232.50
6	9.3296	15-073	Pipe Run Insulation	(4" O.D.) Steam line insulation by main entrance to HVAC room	1465	LF.				7.33	7.33
6	9.3296	15-076	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting by north wall in HVAC room S-22	17	EA.				0.09	0.09
6	9.3316	01-016	Pipe Fitting Insulation	(8" O.D.) 150# Pound Steam line fitting to heater	8	EA.				0.04	0.04
6	9.3326	3e-23	Pipe Fitting Insulation	(8" O.D.) Steam elbow	9	EA.				0.05	0.05
6	9.3326	4a-028	Pipe Run Insulation	(6" O.D.) vertical steam line by column F-1	330	LF.				1.65	1.65
6	9.4989	01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.21	0.21
6	9.4989	01-017	Pipe Run Insulation	(4" O.D.) 150# Pound Steam Line next to Column 6C	30	LF.				0.15	0.15
6	9.5009	012a-049	Pipe Fitting Insulation	(5" O.D.) Steam elbow, by ladder at catwalk	20	EA.				0.10	0.10
6	9.5009	012a-049	Pipe Fitting Insulation	(3" O.D.) Steam elbow, at catwalk	20	EA.				0.10	0.10
6	9.5009	54-031	Pipe Fitting Insulation	(5" O.D.) Cooling water return line elbow above condensate tank	25	EA.				0.13	0.13
6	9.5009	54-032A	Pipe Run Insulation	(4" O.D.) Cooling water return line above water pumps	40	LF.				0.20	0.20
6	9.5009	54-021	Pipe Fitting Insulation	Over (10" O.D.) steam line fitting on main line in steam room	57	EA.				0.29	0.29
6	9.5009	8a-017	Pipe Run Insulation	(3" O.D.) Condensate line on catwalk, south side of heater	100	LF.				0.50	0.50
6	9.6682	20g-01	Pipe Run Insulation	(12" O.D.) Water line	14	LF.				0.07	0.07
6	9.6692	3e-19	Pipe Fitting Insulation	(3" O.D.) Elbow leading from 8" O.D. line	7	EA.				0.04	0.04
6	9.8375	20a-004	Transite Sheet Material	Interior transite panels in transformer, no samples taken	250	S.F.				1.25	1.25
6	9.8375	54-028	Pipe Run Insulation	(4" O.D.) Cooling water supply line over water pumps	80	LF.				0.40	0.40
6	9.8375	54-033	Pipe Run Insulation	(4" O.D.) Potable water line left of stairs	379	LF.				1.90	1.90
6	9.8375	54-037	Pipe Run Insulation	(4" O.D.) Condensate line by condensate tank	71	LF.				0.36	0.36
6	9.8375	8a-016	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting on catwalk by column C1	14	EA.				0.07	0.07
6	9.8375	8a-018	Pipe Fitting Insulation	(4" O.D.) 90 degree fitting on catwalk, south side of heater	10	EA.				0.05	0.05
6	10.0048	8a-020	Pipe Run Insulation	(4" O.D.) Process water line by column D8	212	LF.				1.06	1.06
6	10.5107	54-041	Pipe Fitting Insulation	(4" O.D.) Dead line elbow in refrigeration area, could not	12	EA.				0.06	0.06
6	10.5127	8a-006C	Pipe Run Insulation	(4" O.D.) Process water line by column 5a	60	LF.				0.30	0.30
7	4.9398	012a-033	Transite Sheet Material	Transite, No samples taken assumed to be positive.	67,000	S.F.				335.00	335.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	6.6278	10a-018A	Pipe Run Insulation	(6" O.D.) Vertical water line	1400	LF.				7.00	7.00
7	6.6298	012a-030	Pipe Run Insulation	(3" O.D.) Vertical by door 125+	20	LF.				0.10	0.10
7	6.6318	02a-036	Pipe Run Insulation	(3" O.D.) Horizontal condensate line over tank by column C-15	321	LF.				1.61	1.61
7	6.6328	10a-017	Pipe Fitting Insulation	(12" O.D.) Steam line tee on heat exchanger	370	EA.				1.85	1.85
7	6.8001	10a-019	Pipe Fitting Insulation	(4" O.D.) Water line valve	270	EA.				1.35	1.35
7	6.8001	02a-041	Pipe Run Insulation	(8" O.D.) Steam line in south side of the building near column A-6,	650	LF.				3.25	3.25
7	6.9644	10a-037	Transite Sheet Material	Transite wall no samples taken assumed positive	52,583	S.F.				262.92	262.92
7	6.9644	04c-005	Transite Sheet Material	Interior transite	3000	S.F.				15.00	15.00
7	6.9674	8a-025	Transite Sheet Material	West side of building	68,750	S.F.				343.75	343.75
7	7.1327	3d-05	Pipe Fitting Insulation	(4" O.D.) Sump water line insulation elbow, by WEMCO	104	EA.				0.52	0.52
7	7.1337	012a-034	Transite Sheet Material	Transite, exterior west side of building	12,000	S.F.				60.00	60.00
7	7.1377	06-136	Transite Sheet Material	Cement board by central exit door	46,000	S.F.				230.00	230.00
7	7.1387	10a-029	Boiler Insulation	Boiler plate insulation	270	S.F.				1.35	1.35
7	7.301	10a-035	SmokeStack Insulation	Smoke stack insulation	2400	S.F.				12.00	12.00
7	7.302	011-033	Pipe Run Insulation	(6" O.D.) Horizontal steam line north-south metal jacketed	450	LF.				2.25	2.25
7	7.303	20a-011	Transite Sheet Material	Exterior Transite, no sample taken, assumed positive	12,960	S.F.				64.80	64.80
7	7.305	09-008	Pipe Fitting Insulation	(6" O.D.) Steam line fitting	24	EA.				0.12	0.12
7	7.4683	15-141	HVAC Flexible Connector	Flexible connector on HVAC's. No samples taken, material	10	EA.				200.00	200.00
7	7.4723	10a-030	Flue Insulation	Boiler flue insulation	4	LF.				0.02	0.02
7	7.4723	55a-009	Transite Sheet Material	Exterior No Samples Taken, assumed to be positive	11800	S.F.				59.00	59.00
7	7.4723	10a-042	Transite Sheet Material	Interior transite	2010	S.F.				10.05	10.05
7	7.4723	20b-013	Transite Sheet Material	All interior walls are transite	1000	S.F.				5.00	5.00
7	7.4783	02a-030	Pipe Run Insulation	(4" O.D.) Vertical steam line by north window, metal-jacketed	505	LF.				2.53	2.53
7	7.4783	06-196	Pipe Run Insulation	(4" O.D.) Vertical waste water, metal clad, on east side of plant	11	LF.				0.06	0.06
7	7.4783	06-196	Pipe Run Insulation	(4" O.D.) Waste water line, east side of tank	110	LF.				0.55	0.55
7	7.6356	15-075	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in northwest corner of	10640	S.F.				53.20	53.20
7	7.6406	16a-002	Roof Flashing	Transite Flashing Material, Assumed Positive	250	S.F.				1.25	1.25

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	7.6406	16a-002	Roof Flashing	Transite Flashing Material, Assumed Positive	250	S.F.				1.25	1.25
7	7.6426	01-024	Transite Sheet Material	No samples taken	768,700	S.F.				3843.50	3843.50
7	7.6436	2c-02	Transite Sheet Material	Exterior transite	1,392	S.F.				6.96	6.96
7	7.6436	06-213	Transite Sheet Material	No samples taken	458,900	S.F.				2294.50	2294.50
7	7.8069	011-003	Resilient Floor Tile (9" X 9")	Green / white stripes (9"x9")	25000	S.F.				125.00	125.00
7	7.8099	011-048	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	51	EA.				0.26	0.26
7	7.8099	15-047	Pipe Run Insulation	(4" O.D.) Line in room N-26, south wall	226	L.F.				1.13	1.13
7	7.8109	02a-012	Transite Sheet Material	Inner wall by west exit	1950	S.F.				9.75	9.75
7	7.8119	05-090	Transite Sheet Material	Smooth Transite wall, by elevator	5316	S.F.				26.58	26.58
7	7.8119	07-052	Transite Sheet Material	Transite siding	16,800	S.F.				84.00	84.00
7	7.8129	06-185	Transite Sheet Material	Cement board	4000	S.F.				20.00	20.00
7	7.9762	14-013	Floor Tile Mastic	Black in room 109	18195	S.F.				90.98	90.98
7	7.9762	15-098	Floor Tile Mastic	Black mastic in room W-18	680	S.F.				3.40	3.40
7	7.9772	011-034	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	18	EA.				0.09	0.09
7	7.9772	15-001	Pipe Fitting Insulation	(6" O.D.) Steam line fittings in room E-3 of southeast corner	149	EA.				0.75	0.75
7	7.9772	15-002	Pipe Run Insulation	(4" O.D.) Room E-3 northwest corner	645	L.F.				3.23	3.23
7	7.9772	15-003	Pipe Fitting Insulation	(4" O.D.) Condensate line fittings in southeast corner of room E-3	31	EA.				0.16	0.16
7	7.9772	15-048	Pipe Run Insulation	(4" O.D.) Southwest corner of room N-42A	670	L.F.				3.35	3.35
7	7.9782	05-010	Transite Sheet Material	Transite wall, office 05-27	960	S.F.				4.80	4.80
7	7.9782	8a-023	Transite Sheet Material	East end wall on men's bathroom	3812	S.F.				19.06	19.06
7	7.9782	15-124	Duct Insulation	Fan/blower duct insulation by column R-18 in corrosion room	360	S.F.				1.80	1.80
7	7.9792	3d-06	Pipe Fitting Insulation	(3" O.D.) Steam line insulation elbow, near WEMCO sample #	27	EA.				0.14	0.14
7	7.9792	15-026	Pipe Run Insulation	(5" O.D.) West side by center hallway entrance	16	L.F.				0.08	0.08
7	7.9802	012a-022	Pipe Run Insulation	(4" O.D.) Hot water line	150	L.F.				0.75	0.75
7	7.9802	02a-010	Pipe Run Insulation	(2" O.D.) Horizontal steam line by D1-4 and D1-5	145	L.F.				0.73	0.73
7	7.9802	05-084	Transite Sheet Material	Transite wall, South of elevator wall	3836	S.F.				19.18	19.18
7	7.9812	2c-03	Transite Sheet Material	Transite walls	700	S.F.				3.50	3.50

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.1415	15-074	Floor Tile Mastic	Black mastic in northwest corner of room S-9	10640	S.F.				53.20	53.20
7	8.1435	10a-002	Storage Tank / Exchanger Insulation	(7' x 12') Plant air dryer tank	377	S.F.				1.89	1.89
7	8.1435	15-007	Resilient Floor Tile (9" X 9")	(9" X 9") Green tile with white streaks in room E-5	1760	S.F.				8.80	8.80
7	8.1435	15-014	Floor Tile Mastic	Black mastic sampled outside of room E-25	300	S.F.				1.50	1.50
7	8.1435	15-054	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown w/ white and dark brown streaks, on the E.side	1000	S.F.				5.00	5.00
7	8.1435	15-055	Floor Tile Mastic	Mastic, black, on east side of room N-42A by the entrance	1000	S.F.				5.00	5.00
7	8.1435	15-102	Floor Tile Mastic	Mastic in room W-28	2285	S.F.				11.43	11.43
7	8.1465	011-002	Floor Tile Mastic	Black mastic	11000	S.F.				55.00	55.00
7	8.1465	16a-001	Roof Flashing	Transite Flashing Material	40	S.F.				0.20	0.20
7	8.1465	05-072A	Pipe Run Insulation	(4" O.D.) Potable water line, next to column 2E	562	LF.				2.81	2.81
7	8.1465	06-210	Pipe Fitting Insulation	(4" O.D.) Steam elbows assumed Positive per WEMCO	7	EA.				0.04	0.04
7	8.1475	28b-019	Duct Insulation	Air duct	120	S.F.				0.60	0.60
7	8.1475	8a-022	Transite Sheet Material	Corrugated, by walk-thru door, column A5	6400	S.F.				32.00	32.00
7	8.1475	02a-079	Pipe Run Insulation	(5" O.D.) metal jacketed	200	LF.				1.00	1.00
7	8.1495	31-011	Pipe Fitting Insulation	(2" O.D.) hot water	5	EA.				0.03	0.03
7	8.1515	06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	30	LF.				0.15	0.15
7	8.1515	06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	20	LF.				0.10	0.10
7	8.1515	06-193	Pipe Run Insulation	(4"O.D.) Condensate, north side by empty tank	12	LF.				0.06	0.06
7	8.1515	06-193	Pipe Run Insulation	(2"O.D.) Condensate line, west side, cloth clad	15	LF.				0.08	0.08
7	8.3128	012a-026	Resilient Floor Tile (9" X 9")	Green with white and black specks	3700	S.F.				18.50	18.50
7	8.3128	15-020	Floor Tile Mastic	Mastic sampled in the southeast corner of room E-25	336	S.F.				1.68	1.68
7	8.3128	15-022	Floor Tile Mastic	Mastic in southeast corner of room E-23	300	S.F.				1.50	1.50
7	8.3128	15-097	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, in center of room	620	S.F.				3.10	3.10
7	8.3128	15-103	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in room W-28	620	S.F.				3.10	3.10
7	8.3128	15-104	Floor Tile Mastic	Black mastic in room W-28	620	S.F.				3.10	3.10
7	8.3128	15-100	Floor Tile Mastic	Black mastic on north side of room W-18	200	S.F.				1.00	1.00
7	8.3148	011-001	Resilient Floor Tile (9" X 9")	Grey Floor Tile (9"x9")	11000	S.F.				55.00	55.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.3148	012a-016	Duct Insulation Lagging	Lagging of fiberglass wrapped duct	150	S.F.				0.75	0.75
7	8.3148	3c-02	Floor Tile Mastic	Brown	2000	S.F.				10.00	10.00
7	8.3148	05-018	Pipe Run Insulation	(4" O.D.) Branch line off of (6" O.D.) condensate return line,	260	L.F.				1.30	1.30
7	8.3148	05-020B	Pipe Run Insulation	(3" O.D.) Potable water line, near column 19E, metal jacketed	75	L.F.				0.38	0.38
7	8.3158	069-002	Pipe Fitting Insulation	(8" O.D.) steam line elbow, metal jacket N.E. heating unit	66	EA.				0.33	0.33
7	8.3158	05-071	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, at North end of men's rest	42	EA.				0.21	0.21
7	8.3158	05-077	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, North of column 6A	25	EA.				0.13	0.13
7	8.3158	15-027	Pipe Run Insulation	(6" O.D.) West side by center hallway entrance	16	L.F.				0.08	0.08
7	8.3158	15-049	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in southwest corner of room N-26	92	EA.				0.46	0.46
7	8.3158	15-084	Pipe Fitting Insulation	(2" O.D.) Water line fitting above drinking fountain in east hall	12	EA.				0.06	0.06
7	8.3158	15-087	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in room W-18 by exit door	46	EA.				0.23	0.23
7	8.3158	15-091	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation fitting in hall across	86	EA.				0.43	0.43
7	8.3168	012a-032B	Resilient Floor Tile (9" X 9")	Black tile with white specks	96	S.F.				0.48	0.48
7	8.3168	02a-033	Pipe Fitting Insulation	(16" O.D.) Tank feed elbow between columns C-18 and	6	EA.				0.03	0.03
7	8.3168	05-073	Pipe Fitting Insulation	(4" O.D.) Sump water line, South of column 5F	5	EA.				0.03	0.03
7	8.3168	54-024	Transite Sheet Material	Interior walls north side of plant	5160	S.F.				25.80	25.80
7	8.3188	8b-002	Pipe Fitting Insulation	(4" O.D.) Elbow North Side of Wall East Corner	20	EA.				0.10	0.10
7	8.3188	13b-002	Pipe Fitting Insulation	(4" O.D.) Steam elbow, center	17	EA.				0.09	0.09
7	8.3188	45-004	Transite Sheet Material	Interior Transite wall	1070	S.F.				5.35	5.35
7	8.3188	05-098	Transite Sheet Material	South side of plant 5, No samples taken Assumed positive	1,768	S.F.				8.84	8.84
7	8.3188	55a-010	Transite Sheet Material	No samples taken	36,000	S.F.				180.00	180.00
7	8.3208	10a-001	Storage Tank / Exchanger Insulation	(7' x 12') Blow down tank	377	S.F.				1.89	1.89
7	8.3208	09-022A	Pipe Fitting Insulation	(2" O.D.) Hot water line fitting leading to heater, recently	10	EA.				0.05	0.05
7	8.3228	09-042	Transite Sheet Material	West interior transite wall by vertical pipe	544	S.F.				2.72	2.72
7	8.4801	15-008	Floor Tile Mastic	Black mastic in room E-5	1760	S.F.				8.80	8.80
7	8.4801	15-009	Resilient Floor Tile (9" X 9")	(9" X 9") Tile in hall by door to south courtyard biege and grey	1600	S.F.				8.00	8.00
7	8.4801	15-010	Floor Tile Mastic	Black mastic by door to south courtyard	1600	S.F.				8.00	8.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.4801	15-044	Floor Tile Mastic	Mastic in the southwest corner of room C-10	2112	S.F.				10.56	10.56
7	8.4831	011-023	Pipe Run Insulation	(24" O.D.) Steam line	75	LF.				0.38	0.38
7	8.4831	14-012	Resilient Floor Tile (9" X 9")	Black West hall	9098	S.F.				45.49	45.49
7	8.4831	14-012	Resilient Floor Tile (9" X 9")	White West hall	9098	S.F.				45.49	45.49
7	8.4841	28b-027	Pipe Fitting Insulation	Steam elbows above drop ceiling; not accessible	7	EA.				0.04	0.04
7	8.4841	069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	465	LF.				2.33	2.33
7	8.4841	3c-01	Resilient Floor Tile (9" X 9")	Green (9"x9")	2000	S.F.				10.00	10.00
7	8.4841	05-019	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, by caged equipment	13	EA.				0.07	0.07
7	8.4841	069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	465	LF.				2.33	2.33
7	8.4851	28b-016	Pipe Fitting Insulation	(4" O.D.) Steam elbow, line	14	EA.				0.07	0.07
7	8.4851	28b-025	Resilient Floor Tile (12" X 12")	(12"x12") Blue/gray	1184	S.F.				5.92	5.92
7	8.4851	012a-025	Resilient Floor Tile (9" X 9")	Dark green with black and white specks	200	S.F.				1.00	1.00
7	8.4851	01-011	Pipe Fitting Insulation	(4" O.D.) Condensate line valve 8	6	EA.				0.03	0.03
7	8.4851	15-028	Pipe Run Insulation	(4" O.D.) Room C-41	234	LF.				1.17	1.17
7	8.4851	15-030	Pipe Run Insulation	(4" O.D.) Room C-41	104	LF.				0.52	0.52
7	8.4851	15-038	Floor Tile Mastic	Mastic in southwest corner of room C-15	1055	S.F.				5.28	5.28
7	8.4851	15-040	Floor Tile Mastic	Mastic in southwest corner of room C-15	3399	S.F.				17.00	17.00
7	8.4861	03a-01	Pipe Fitting Insulation	(6" O.D.) elbow - west end	23	EA.				0.12	0.12
7	8.4861	3c-07	Pipe Run Insulation	(3" O.D.) Condensate line, south wall	8	LF.				0.04	0.04
7	8.4861	3c-08	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, south wall	3	EA.				0.02	0.02
7	8.4861	15-140	Pipe Fitting Insulation	(4" O.D.) Steam and condensate fitting in west central mechanical	25	EA.				0.13	0.13
7	8.4871	02a-042	Pipe Fitting Insulation	(5" O.D.) Black steam line elbow by column A-5	90	EA.				0.45	0.45
7	8.4871	06-106	Pipe Run Insulation Lagging	(8" O.D.) Steam line running north-south	165	S.F.				0.83	0.83
7	8.4881	28b-006	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, by duct	15	EA.				0.08	0.08
7	8.4881	09-054	Pipe Run Insulation	(6" O.D.) Waste water line, metal jacketed	230	LF.				1.15	1.15
7	8.4901	30-002	Pipe Fitting Insulation	(3" O.D.) Elbow leading to sink	8	EA.				0.04	0.04
7	8.4901	02a-024	Pipe Fitting Insulation	(4" O.D.) Water line elbow over slop sink	31	EA.				0.16	0.16

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.4901	06-089	Transite Sheet Material	Interior transite panels, smooth green	3920	S.F.				19.60	19.60
7	8.4901	09-048A	Transite Sheet Material	Transite wall painted light beige	120	S.F.				0.60	0.60
7	8.4911	4a-025	Pipe Fitting Insulation	(8" O.D.) steam line elbow by center rescubber tank	23	EA.				0.12	0.12
7	8.6494	15-011	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with gray streaks, outside room E-21	150	S.F.				0.75	0.75
7	8.6494	15-019	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown with brown streaks, in the southeast corner	336	S.F.				1.68	1.68
7	8.6504	15-086A	Pipe Run Insulation	(4" O.D.) Steam line insulation in hall across from room W-32	140	LF.				0.70	0.70
7	8.6514	20b-012	Pipe Run Insulation	(6" O.D.) Steam line	80	LF.				0.40	0.40
7	8.6514	05-016	Pipe Run Insulation	(8" O.D.) 150 pound steam line, metal jacketed, near column 19E	486	LF.				2.43	2.43
7	8.6524	05-021	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 19E	6	EA.				0.03	0.03
7	8.6524	05-029	Pipe Run Insulation	(4" O.D.) Potable water line, metal jacketed, next to 16F	100	LF.				0.50	0.50
7	8.6524	05-030	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 16F, metal	3	EA.				0.02	0.02
7	8.6524	8a-035	Pipe Fitting Insulation	(3" O.D.) Metal jacketed Not sampled per WEMCO	11	EA.				0.06	0.06
7	8.6524	8a-036	Pipe Run Insulation	(4" O.D.) Metal jacketed; not sampled per WEMCO	200	LF.				1.00	1.00
7	8.6524	8a-037	Pipe Fitting Insulation	(4" O.D.) Metal jacketed not sampled per WEMCO	45	EA.				0.23	0.23
7	8.6524	8a-038	Pipe Run Insulation	(3" O.D.) Metal jacketed; not sampled per WEMCO	210	LF.				1.05	1.05
7	8.6524	8a-039	Pipe Fitting Insulation	(5" O.D.) Metal jacketed not sampled per WEMCO	8	EA.				0.04	0.04
7	8.6524	8a-040	Pipe Run Insulation	(5" O.D.) Metal jacketed; not sampled per WEMCO	110	LF.				0.55	0.55
7	8.6524	8a-041	Pipe Fitting Insulation	(6" O.D.) Metal jacketed not sampled per WEMCO	5	EA.				0.03	0.03
7	8.6524	8a-042	Pipe Run Insulation	(6" O.D.) Metal jacketed; not sampled per WEMCO	100	LF.				0.50	0.50
7	8.6524	15-069	Pipe Fitting Insulation	(3" O.D.) Water line fitting in HVAC room S-21 above HVAC	29	EA.				0.15	0.15
7	8.6524	15-088	Pipe Run Insulation	(4" O.D.) Condensate line insulation in hall across from	110	LF.				0.55	0.55
7	8.6534	012a-024	Resilient Floor Tile (9" X 9")	Green tile with black & white specks	800	S.F.				4.00	4.00
7	8.6544	28b-011	Pipe Fitting Insulation	(3" O.D.) Steam elbow	7	EA.				0.04	0.04
7	8.6544	28b-023	Pipe Fitting Insulation	(3" O.D.) Steam line, elbow in lounge	11	EA.				0.06	0.06
7	8.6544	05-087	Pipe Run Insulation	(6" O.D.) Condensate line, next to column 15A	282	LF.				1.41	1.41
7	8.6544	09-046	Pipe Fitting Insulation	(8" O.D.) Hot water line elbow leading into HVAC	25	EA.				0.13	0.13
7	8.6544	15-048	Pipe Fitting Insulation	(4" O.D.) Steam line valve in southwest corner of room N-42A	177	EA.				0.89	0.89

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.6554	012a-011	Resilient Floor Tile (9" X 9")	Green / with white stripes	325	S.F.				1.63	1.63
7	8.6554	13a-014	Transite Sheet Material	Transite wall	7050	S.F.				35.25	35.25
7	8.6554	13b-005	Transite Sheet Material	Interior transite	600	S.F.				3.00	3.00
7	8.6554	02a-045	Pipe Run Insulation	(4" O.D.) Vertical steam line between A-15 and A-16.	808	L.F.				4.04	4.04
7	8.6554	31-009	Pipe Run Insulation	(2" O.D.) water line	212	L.F.				1.06	1.06
7	8.6554	31-010	Pipe Fitting Insulation	(2" O.D.) cold water	12	EA.				0.06	0.06
7	8.6554	03a-02	Pipe Run Insulation	(4" O.D.) Steam, upper level catwalk	180	L.F.				0.90	0.90
7	8.6554	03a-05	Pipe Run Insulation	(1" O.D.) at water heater south west	4	L.F.				0.02	0.02
7	8.6554	06-053	Pipe Fitting Insulation	(4" O.D.) Steam elbow	170	EA.				0.85	0.85
7	8.6554	09-058	Pipe Run Insulation	(6" O.D.) Vetical abandoned line, metal jacketed	21	L.F.				0.11	0.11
7	8.6564	011-009	Resilient Floor Tile (9" X 9")	Black floor tile border (9"x9")	20	S.F.				0.10	0.10
7	8.6564	02a-011	Pipe Fitting Insulation	(1" O.D.) Steam line elbow off tank D1-1	19	EA.				0.10	0.10
7	8.6564	31-012	Pipe Run Insulation	(2" O.D.) hot water	285	L.F.				1.43	1.43
7	8.6564	06-187	Pipe Run Insulation	Air line, north side	200	L.F.				1.00	1.00
7	8.6574	10a-032	Storage Tank / Exchanger Insulation	Condensate tank insulation	135	S.F.				0.68	0.68
7	8.6574	011-047	Pipe Run Insulation	(12" O.D.) Steam line horizontal	610	L.F.				3.05	3.05
7	8.6574	02a-046	Pipe Fitting Insulation	(6" O.D.) Steam elbow between columns A-16 and A-15	86	EA.				0.43	0.43
7	8.6574	66-08	Pipe Run Insulation	(3" O.D.) Steam line leading to heater	10	L.F.				0.05	0.05
7	8.6574	66-09	Pipe Fitting Insulation	(3" O.D.) Steam fitting by heater	3	EA.				0.02	0.02
7	8.6584	3e-31	Transite Sheet Material	Interior transite at exit	12,560	S.F.				62.80	62.80
7	8.6584	06-109	Transite Sheet Material	North office walls	100	S.F.				0.50	0.50
7	8.6594	20b-005	Pipe Fitting Insulation	(6" O.D.) Leading into heater	14	EA.				0.07	0.07
7	8.8187	15-013	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with black and gray streaks, In hall outside	300	S.F.				1.50	1.50
7	8.8187	15-015	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, yellow, across from room E-27	18	S.F.				0.09	0.09
7	8.8187	15-016	Floor Tile Mastic	Black mastic across from room E-27	18	S.F.				0.09	0.09
7	8.8187	15-034	Floor Tile Mastic	Mastic in hallway to south courtyard across from rooms	95	S.F.				0.48	0.48
7	8.8197	01-012	Pipe Run Insulation	(4" O.D.) 150# Steam line	116	L.F.				0.58	0.58

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.8207	011-004	Floor Tile Mastic	Black mastic	25,000	S.F.				125.00	125.00
7	8.8207	012a-028	Resilient Floor Tile (9" X 9")	Green	600	S.F.				3.00	3.00
7	8.8207	14-017	Acoustic Tile Mastic	Brown hallway outside room 152	15800	S.F.				79.00	79.00
7	8.8217	8b-004	Floor Tile Mastic	Floor Tile Mastic Black	165	S.F.				0.83	0.83
7	8.8217	05-082	Pipe Run Insulation	(6" O.D.) Condensate line, near column 24E	100	L.F.				0.50	0.50
7	8.8217	15-033	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting in room C-22, east wall above	76	EA.				0.38	0.38
7	8.8227	05-054	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 10G	11	EA.				0.06	0.06
7	8.8237	10a-028	Storage Tank / Exchanger Lagging	Dust collector, 8 each	1200	S.F.				6.00	6.00
7	8.8237	05-083	Pipe Fitting Insulation	(6" O.D.) Condensate line fitting, next to column 25F	6	EA.				0.03	0.03
7	8.8237	05-086	Pipe Fitting Insulation	(6" O.D.) Condensate return line fitting, next to column 18F	28	EA.				0.14	0.14
7	8.8237	06-080	Pipe Run Insulation	Steam line above restroom	630	L.F.				3.15	3.15
7	8.8237	06-082	Pipe Fitting Insulation	Steam valve above restroom	22	EA.				0.11	0.11
7	8.8237	15-031	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in northeast corner of room C-41	29	EA.				0.15	0.15
7	8.8237	4a-109	Storage Tank / Exchanger Insulation	Tank 4-6, 3 each	360	S.F.				1.80	1.80
7	8.8247	28b-008	Duct Insulation	Duct along south wall by double doors	700	S.F.				3.50	3.50
7	8.8247	3c-06	Pipe Fitting Insulation	(3" O.D.) Cold water elbow, north wall	21	EA.				0.11	0.11
7	8.8247	3g-002	Transite Sheet Material	Northwest Corner interior wall	1390	S.F.				6.95	6.95
7	8.8247	06-189	Fire Retardant Clothing	Silver pants within cabinet	18	EA.				0.90	0.90
7	8.8247	06-189	Fire Retardant Clothing	Silver mittens within cabinet, 18 pair	36	EA.				1.80	1.80
7	8.8247	06-039A	Gasketry	Assembly 06-8044-Con, northwest corner	1	L.F.				0.01	0.01
7	8.8247	07-028	Transite Sheet Material	Transite wall	50190	S.F.				250.95	250.95
7	8.8247	09-047	Resilient Floor Tile (9" X 9") & Mastic	Black mastic	112	S.F.				0.56	0.56
7	8.8247	09-052	Pipe Run Insulation	(24" O.D.) Sump water line, meta jacketed	28	L.F.				0.14	0.14
7	8.8257	2e-001	Pipe Run Insulation	(4" O.D.) Metal jacketed, condensate line	75	L.F.				0.38	0.38
7	8.8257	10a-005	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	110	EA.				0.55	0.55
7	8.8257	011-041	Pipe Run Insulation Lagging	Vertical metal jackets	20	L.F.				0.10	0.10
7	8.8257	14-037	Pipe Fitting Insulation	(2" O.D.) Elbow East hall by room 144	5	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.8257	28a-007	Pipe Run Insulation	(4" O.D.) Line insulation in room 101	360	LF.				1.80	1.80
7	8.8257	02a-076	Transite sheet material	Interior transite, east side of building; no samples taken.	18,000	S.F.				90.00	90.00
7	8.8257	3d-07	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation valve	27	EA.				0.14	0.14
7	8.8257	45-010	Pipe Fitting Insulation	(8" O.D.) Steam line elbow at air handling unit, metal jacketed	6	EA.				0.03	0.03
7	8.8257	45-011	Pipe Run Insulation	(8" O.D.) Steam line at air handling unit, metal jacketed	40	LF.				0.20	0.20
7	8.8257	06-116	Pipe Fitting Insulation	(6" O.D.) Steam elbow, southwes corner	40	EA.				0.20	0.20
7	8.8257	06-148	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate valve lagging	5	S.F.				0.03	0.03
7	8.8257	66-01	Pipe Run Insulation	Water line	125	LF.				0.63	0.63
7	8.8257	8a-001	Pipe Fitting Insulation	(12" O.D.) Steam line fitting by column D9	145	EA.				0.73	0.73
7	8.8267	10a-031	Storage Tank / Exchanger Insulation	Southwest corner of tank	30	S.F.				0.15	0.15
7	8.8267	4a-029	Pipe Fitting Insulation	(8" O.D.) steam line valve by column E-1	23	EA.				0.12	0.12
7	8.8267	06-142	Pipe Run Insulation	(3" O.D.) Condensate line	8	LF.				0.04	0.04
7	8.8267	66-03	Transite Sheet Material	Interior transite	500	S.F.				2.50	2.50
7	8.8277	4a-024	Pipe Run Insulation	(6" O.D.) verticle steam line, metal jacketed, by emergency	100	LF.				0.50	0.50
7	8.8277	55a-002	Transite Sheet Material	By control room	9100	S.F.				45.50	45.50
7	8.988	8a-024	Resilient Floor Tile (9" X 9")	(9" x9") Green with white streaks in supervisor's office	1960	S.F.				9.80	9.80
7	8.989	01-013	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.21	0.21
7	8.989	05-032	Pipe Run Insulation	(6" O.D.) Condensate line	70	LF.				0.35	0.35
7	8.989	15-071	Pipe Run Insulation	(3" O.D.) Water line insulation in HVAC room S-21 above HVAC	405	LF.				2.03	2.03
7	8.989	15-085	Pipe Run Insulation	(2" O.D.) Water line insulation in east hall outside room E-7	98	LF.				0.49	0.49
7	8.989	15-089	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in hall across from W-32	13	EA.				0.07	0.07
7	8.989	15-090	Pipe Run Insulation	(3" O.D.) Potable water line insulation across from room S-42	176	LF.				0.88	0.88
7	8.989	15-037	Floor Tile Mastic	Southeast corner of room C-26	192	S.F.				0.96	0.96
7	8.99	02a-070	Storage Tank / Exchanger Insulation	Second carbonate make-up tank @ D-13 (D=10, H=6), 11800	1800	S.F.				9.00	9.00
7	8.99	03a-10	Floor Tile Mastic	Office,north east corner	281	S.F.				1.41	1.41
7	8.99	05-055	Gasketry	Sheet gasket material at column 11F	60	S.F.				0.30	0.30
7	8.99	05-055	Gasketry	Sheet gasket material at column 10G	1	S.F.				0.01	0.01

(a) - *(R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.*
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.99	05-055	Gasketry	Sheet gasket material at column 10G	1	S.F.				0.01	0.01
7	8.99	15-053	Floor Tile Mastic	Mastic on north side of room N-40A by the door	4095	S.F.				20.48	20.48
7	8.991	28b-024	Pipe Run Insulation Lagging	(4" O.D.) Steam line	12	L.F.				0.06	0.06
7	8.991	10a-012	Boiler Insulation	Boiler tank insulation, 8 each	7200	S.F.				36.00	36.00
7	8.991	10a-039	Storage Tank / Exchanger Insulation	Gray, wrapped boiler insulation	100	S.F.				0.50	0.50
7	8.991	012a-020	Resilient Floor Tile (9" X 9")	White with black streaks	126	S.F.				0.63	0.63
7	8.991	14-044	Resilient Floor Tile (9" X 9")	Black West wing Room 210	8900	S.F.				44.50	44.50
7	8.991	14-044	Resilient Floor Tile (9" X 9")	White West wing Room 210	8900	S.F.				44.50	44.50
7	8.991	14-050	Acoustic Tile Mastic	Black central hall drafting room	17800	S.F.				89.00	89.00
7	8.991	05-081	Pipe Run Insulation	(4" O.D.) Steam line, next to column 26F	110	L.F.				0.55	0.55
7	8.991	06-041	Transite Sheet Material	Transite wall patch	17	S.F.				0.09	0.09
7	8.991	06-166	Resilient Floor Tile (12" X 12")	Brown	240	S.F.				1.20	1.20
7	8.991	15-029	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in northeast corner of room C-41	94	EA.				0.47	0.47
7	8.992	28b-018	Pipe Fitting Insulation	(3" O.D.)Condensate elbow by heater next to toilet	15	EA.				0.08	0.08
7	8.992	012a-043	Transite Sheet Material	Transite wall covering at stores office (corragated)	940	S.F.				4.70	4.70
7	8.992	13b-001	Pipe Run Insulation	(6" O.D.) Steam line at exit	140	L.F.				0.70	0.70
7	8.992	03a-09	Resilient Floor Tile (9" X 9")	Office white	63	S.F.				0.32	0.32
7	8.992	3c-04	Pipe Run Insulation	(4" O.D.) Steam line with gray lagging	130	L.F.				0.65	0.65
7	8.992	3c-13A	Pipe Run Insulation	(6" O.D.) Steam line; white material	12	L.F.				0.06	0.06
7	8.993	45-017	Pipe Run Insulation	(2" O.D.) Cold water line straight	6	L.F.				0.03	0.03
7	8.993	05-080	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, next to column 26F	13	EA.				0.07	0.07
7	8.993	07-53	Firebrick	Stored Firebrick, white in color inside room 7-19	15	S.F.				0.08	0.08
7	8.993	09-019	Storage Tank / Exchanger Insulation	Condensate tank	9	S.F.				0.05	0.05
7	8.994	38-02	Pipe Fitting Insulation	(4" O.D.) Steam elbow, white re-wrapped	37	EA.				0.19	0.19
7	8.994	069-005	Pipe Run Insulation	(9" O.D.) contaminated rinse line metal jacket south side of	9	L.F.				0.05	0.05
7	8.994	20b-001	Pipe Run Insulation	Over (24" O.D.)Vertical Line Metal Jacketed	15	L.F.				0.08	0.08
7	8.994	06-191	Storage Tank / Exchanger Insulation	Nitric acid tank by pickling	164	S.F.				0.82	0.82

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.994	09-010	Pipe Fitting Insulation	(10" O.D.) High pressure steam line elbow	19	EA.				0.10	0.10
7	8.995	10a-013	Boiler Insulation	West side, 4 feet off ground level	800	S.F.				4.00	4.00
7	8.995	14-042	Pipe Run Insulation	(6" O.D.) Steam line West wing by heating unit	110	LF.				0.55	0.55
7	8.995	14-043	Pipe Fitting Insulation	(4" O.D.) Steam line West wing by heating unit	75	EA.				0.38	0.38
7	8.995	02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - A-8	30	LF.				0.15	0.15
7	8.995	02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - C-10	20	LF.				0.10	0.10
7	8.995	02a-066	Pipe Run Insulation	(6" O.D.) Straight run, not sampled	150	LF.				0.75	0.75
7	8.995	02a-066	Pipe Run Insulation	(4" O.D.) Condensate return-straight - A-10	50	LF.				0.25	0.25
7	8.995	02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straigh - C-11	75	LF.				0.38	0.38
7	8.995	02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straigh - C-11	80	LF.				0.40	0.40
7	8.995	4a-070	Pipe Run Insulation	(6" O.D.) steam line by column 1F	95	LF.				0.48	0.48
7	8.995	4a-070	Pipe Run Insulation	(2" O.D.) steam line by column 3F	20	LF.				0.10	0.10
7	8.995	4a-104	Pipe Fitting Insulation	(8" O.D.) unknow line elbow by column 5B, next to containment	12	EA.				0.06	0.06
7	8.995	06-123	Pipe Run Insulation	(8" O.D.) Elevated steam line	135	LF.				0.68	0.68
7	8.995	06-126	Pipe Fitting Insulation	Steam fitting above office	20	EA.				0.10	0.10
7	8.995	09-018	Pipe Fitting Insulation	(6" O.D.) Chilled water line fitting 5 feet off the ground by south	13	EA.				0.07	0.07
7	8.996	24b-001	Pipe Run Insulation	(3" O.D.) Condensate; west wall, center	25	LF.				0.13	0.13
7	8.996	61-01	Duct Insulation	taken from abandoned blower unit in SE corner	4	S.F.				0.02	0.02
7	8.996	10a-015	Pipe Fitting Insulation	(10" O.D.) Zeolite water line elbow	57	EA.				0.29	0.29
7	8.996	10a-016	Pipe Run Insulation	(6" O.D.) Vertical steam line	4000	LF.				20.00	20.00
7	8.996	20a-001	Pipe Run Insulation	(6" O.D.) West wall	95	LF.				0.48	0.48
7	8.996	20a-002	Pipe Fitting Insulation	(8" O.D.) West wall	10	EA.				0.05	0.05
7	8.996	2d-009	Pipe Run Insulation	(4" O.D.) D1-10	8	LF.				0.04	0.04
7	8.996	3e-12	Pipe Fitting Insulation	(6" O.D.) Metal jacketed steam elbow at railing	2	EA.				0.01	0.01
7	8.996	3e-13	Pipe Run Insulation	(6" O.D.) Steam line by window, re-wettable canvas	93	LF.				0.47	0.47
7	8.996	3e-24A	Pipe Run Insulation	(10" O.D.) Abandoned pump line	20	LF.				0.10	0.10
7	8.996	3e-25	Pipe Fitting Insulation	(6" O.D.) Abandoned pump elbow	7	EA.				0.04	0.04

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.996	4a-001	Pipe Run Insulation	(4" O.D.) horizontal steam line, metal jacketed, by south stairwell	500	LF.				2.50	2.50
7	9.1573	02a-080	Storage Tank / Exchanger Insulation	Tank 11-211	300	S.F.				1.50	1.50
7	9.1583	05-033	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	3	EA.				0.02	0.02
7	9.1593	02a-032	Pipe Run Insulation	(18" O.D.) Horizontal tank line between C-18 and C-19,	152	LF.				0.76	0.76
7	9.1593	05-096	Transite Sheet Material	Smooth Transite walls on elevator at south end of plant	2568	S.F.				12.84	12.84
7	9.1593	09-062	Gasketry	Stored material	5	LF.				0.03	0.03
7	9.1593	15-060	Floor Tile Mastic	Mastic in the center of room N-40	135	S.F.				0.68	0.68
7	9.1603	8b-001	Pipe Run Insulation	(4" O.D.) Steam Line Located on North Side of Wall	110	LF.				0.55	0.55
7	9.1603	011-026	Pipe Run Insulation	(6" O.D.) Horizontal steam line	70	LF.				0.35	0.35
7	9.1603	20b-009	Pipe Run Insulation	(8" O.D.) Filter influent line	275	LF.				1.38	1.38
7	9.1603	20b-010	Pipe Run Insulation	(8" O.D.) Backwash discharge	120	LF.				0.60	0.60
7	9.1603	20b-009	Pipe Run Insulation	(8" O.D.) Filter influent line	100	LF.				0.50	0.50
7	9.1603	02a-049	Pipe Run Insulation	(6" O.D.) Vertical process water line by column C-15,	195	LF.				0.98	0.98
7	9.1603	05-088	Pipe Run Insulation	(4" O.D.) Steam line, North of column 3D	12	LF.				0.06	0.06
7	9.1603	06-016	Pipe Run Insulation Lagging	(8" O.D.) Treated water line	570	S.F.				2.85	2.85
7	9.1603	06-134	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate/steam elbow lagging	20	S.F.				0.10	0.10
7	9.1603	8a-008	Pipe Fitting Insulation	(6" O.D.) Cooling water line fitting by column 2A	15	EA.				0.08	0.08
7	9.1613	28b-004	Pipe Run Insulation	PIR(6" O.D.) Vertical leading to duct	9	LF.				0.05	0.05
7	9.1613	012a-008	Pipe Fitting Insulation	(4"O.D.) Elbow,leading to tank	1	EA.				0.01	0.01
7	9.1613	09-045	Pipe Run Insulation	(12" O.D.) Vertical hot water line leading to valve	150	LF.				0.75	0.75
7	9.1623	2e-002	Pipe Run Insulation	(6" O.D.) Metal jacketed, steam line	130	LF.				0.65	0.65
7	9.1623	2e-003	Pipe Fitting Insulation	(4" O.D.) Elbow, black in color, steam line	36	EA.				0.18	0.18
7	9.1623	38-04	Pipe Fitting Insulation	(3" O.D.) Steam elbow, green, south corner	20	EA.				0.10	0.10
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	LF.				1.00	1.00
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	LF.				1.00	1.00
7	9.1623	10a-014C	Pipe Run Insulation	(10" O.D.) Vertical zeolite water line	500	LF.				2.50	2.50
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	LF.				1.00	1.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	011-017	Pipe Fitting Insulation	(10" O.D.) Steam elbow	12	EA.				0.06	0.06
7	9.1623	14-026	Pipe Run Insulation	(3" O.D.) Central hall near room 129	195	LF.				0.98	0.98
7	9.1623	14-029	Pipe Fitting Insulation	(8" O.D.) Abandoned fire sprinkler line fittings by room 102	5	EA.				0.03	0.03
7	9.1623	14-033	Pipe Run Insulation	(2" O.D.) East hall by room 147	120	LF.				0.60	0.60
7	9.1623	14-036	Pipe Run Insulation	(6" O.D.) Abandoned fire sprinkler line East hall by room	70	LF.				0.35	0.35
7	9.1623	14-038	Pipe Fitting Insulation	(3" O.D.) Elbow East hall by room 144	5	EA.				0.03	0.03
7	9.1623	14-039	Pipe Fitting Insulation	(4" O.D.) Valve East hall by room 148	1	EA.				0.01	0.01
7	9.1623	14-041	Pipe Fitting Insulation	(4" O.D.) Steam line elbow room 136	100	EA.				0.50	0.50
7	9.1623	02a-062	Pipe Run Insulation	(10" O.D.) Steam line-straight - A-12	100	LF.				0.50	0.50
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-10	100	LF.				0.50	0.50
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - A-11	160	LF.				0.80	0.80
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-11	200	LF.				1.00	1.00
7	9.1623	02a-062	Pipe Run Insulation	(3" O.D.) Steam line-straight - C-11	50	LF.				0.25	0.25
7	9.1623	37-01	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting by exit door	70	EA.				0.35	0.35
7	9.1623	37-06	Pipe Fitting Insulation	(3" O.D.) 90 degree potable wate fitting above entrance	4	EA.				0.02	0.02
7	9.1623	45-013	Pipe Fitting Insulation	(4" O.D.) Gray Pipe run insulation abandoned West wall	3	EA.				0.02	0.02
7	9.1623	4a-021	Pipe Run Insulation	(6" O.D.) vertical steam line by column 6C	55	LF.				0.28	0.28
7	9.1623	06-022	Pipe Run Insulation	(3" O.D.) Potable water	25	LF.				0.13	0.13
7	9.1623	06-024	Pipe Fitting Insulation	(3" O.D.) Potable water elbow, over restroom	8	EA.				0.04	0.04
7	9.1623	06-114C	Pipe Run Insulation	(6" O.D.) Steam line, above enriched materials storage	400	LF.				2.00	2.00
7	9.1623	06-158	Pipe Run Insulation	Line to XFMR switch gear, south end near boiler	3	LF.				0.02	0.02
7	9.1623	66-02	Pipe Fitting Insulation	Water fittings	24	EA.				0.12	0.12
7	9.1623	09-020A	Pipe Run Insulation	(2" O.D.) Vertical cold water line leading from small tank	90	LF.				0.45	0.45
7	9.1623	09-021	Pipe Fitting Insulation	(2" O.D.) Cold water line fitting along south wall	10	EA.				0.05	0.05
7	9.1633	012a-007	Storage Tank / Exchanger Insulation	Condensate tank	35	S.F.				0.18	0.18
7	9.1633	02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column A-11	6	EA.				0.03	0.03
7	9.1633	02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column C-11	6	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1633	02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-A-11	30	LF.				0.15	0.15
7	9.1633	02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-C-11	30	LF.				0.15	0.15
7	9.1633	02a-069	Pipe Run Insulation	(36" O.D.) Line - 2 overflow vessels - D-11	40	LF.				0.20	0.20
7	9.1633	4a-026	Pipe Run Insulation	(3" O.D.) horizontal cold water line by south wall	41	LF.				0.21	0.21
7	9.1633	4a-064	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 2	216	S.F.				1.08	1.08
7	9.1633	4a-091	Pipe Fitting Insulation	(6" O.D.) steam line elbow by reactor 1	66	EA.				0.33	0.33
7	9.1643	14-001	Pipe Run Insulation	(10" O.D.) Steam line South end of mechanical room 4	70	LF.				0.35	0.35
7	9.1643	14-001	Pipe Run Insulation	(6" O.D.) Steam line mechanical room 4	20	LF.				0.10	0.10
7	9.1643	14-001	Pipe Run Insulation	(3" O.D.) Steam line North end mechanical room 4	40	LF.				0.20	0.20
7	9.1643	14-003	Storage Tank / Exchanger Insulation	Condensate tank North end mechanical room	13	S.F.				0.07	0.07
7	9.1643	4a-003A	Pipe Run Insulation	(4" O.D.) horizontal condensate line by column 9C by roll-up door	300	LF.				1.50	1.50
7	9.1643	55a-005	Pipe Fitting Insulation	(4" O.D.) Elbow , south wall at catwalk	31	EA.				0.16	0.16
7	9.1643	09-013	Pipe Run Insulation	(8" O.D.) Condensate line leading off of tank	120	LF.				0.60	0.60
7	9.1643	09-034	Resilient Floor Tile (9" X 9") & Mastic	(9" X 9") Floor tile, green with black and white specks	100	S.F.				0.50	0.50
7	9.1643	09-017	Pipe Run Insulation	(6" O.D.) Chilled water line, by valve	250	LF.				1.25	1.25
7	9.3246	05-011	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, white with gray streaks, office 05-27	120	S.F.				0.60	0.60
7	9.3246	06-143	Resilient Floor Tile (9" X 9")	Green	1800	S.F.				9.00	9.00
7	9.3266	05-085	Transite Sheet Material	Interior Transite	2568	S.F.				12.84	12.84
7	9.3276	011-024	Pipe Fitting Insulation	(10" O.D.)Steam line Tee	18	EA.				0.09	0.09
7	9.3276	14-048	Duct Insulation	Hall outside room 210	70	S.F.				0.35	0.35
7	9.3276	06-058	Resilient Floor Tile (12" X 12")	Brown, in rad tech office	400	S.F.				2.00	2.00
7	9.3286	011-031	Pipe Run Insulation	(6" O.D.) Steam line	500	LF.				2.50	2.50
7	9.3286	011-051	Pipe Fitting Insulation	(6" O.D.)Steam line elbow	2	EA.				0.01	0.01
7	9.3286	31-013	Resilient Floor Tile (9" X 9")	Off white w/ grey splotches	100	S.F.				0.50	0.50
7	9.3286	03a-03	Pipe Run Insulation	(3" O.D.)south west corner by sink	40	LF.				0.20	0.20
7	9.3286	3c-05	Pipe Run Insulation	(4" O.D.) Cold water line, north wall	80	LF.				0.40	0.40
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	White with gray splotches in office on NW corner of building 54	210	S.F.				1.05	1.05

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.3286	54-013	Floor Tile Mastic	Black in office on NW corner of building 54	210	S.F.				1.05	1.05
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	Computer room hallway	450	S.F.				2.25	2.25
7	9.3286	54-013	Floor Tile Mastic	Computer room hallway	450	S.F.				2.25	2.25
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	Hallway of ladies restroom	140	S.F.				0.70	0.70
7	9.3286	54-013	Floor Tile Mastic	Hallway of ladies restroom	140	S.F.				0.70	0.70
7	9.3286	06-036	Pipe Fitting Insulation	Condensate fittings	3	EA.				0.02	0.02
7	9.3286	06-071	Storage Tank / Exchanger Insulation	500 gallon urea tank at column D29	500	S.F.				2.50	2.50
7	9.3286	06-128A	Resilient Floor Tile (9" X 9")	Green with white streaks, in office	300	S.F.				1.50	1.50
7	9.3296	37-09	Storage Tank / Exchanger Insulation	Molten salt tank	75	S.F.				0.38	0.38
7	9.3296	06-029B	Pipe Fitting Insulation	(4" O.D.) Process water fitting	3	EA.				0.02	0.02
7	9.3296	06-162	Pipe Run Insulation	(4" O.D.) Steam line	60	LF.				0.30	0.30
7	9.3296	06-164	Pipe Fitting Insulation Lagging	(4" O.D.) Steam elbow lagging, above waste water tank	3	S.F.				0.02	0.02
7	9.3306	2e-004	Pipe Fitting Insulation	(3" O.D.) Elbow, black in color, condensate line	16	EA.				0.08	0.08
7	9.3306	38-01	Pipe Run Insulation	(5" O.D.) Steam, gray in color, near exit door	160	LF.				0.80	0.80
7	9.3306	38-03	Pipe Run Insulation	(3" O.D.) Steam line, green in color, west wall	85	LF.				0.43	0.43
7	9.3306	011-016	Pipe Run Insulation	(10" O.D.) Horizontal Steam line	60	LF.				0.30	0.30
7	9.3306	07-045	Gasketry	Rope Gasket	50	LF.				0.25	0.25
7	9.3316	011-036	Pipe Run Insulation	(12" O.D.) Steam line, vertical between tanks 3 & 2	150	LF.				0.75	0.75
7	9.3316	13a-017	Duct Insulation	12" exhaust duct	30	S.F.				0.15	0.15
7	9.3316	14-024	Pipe Run Insulation	(2" O.D.) Steam line South end computer room	670	LF.				3.35	3.35
7	9.3316	02a-026	Transite Sheet Material	Transite interior wall in south outer room	150	S.F.				0.75	0.75
7	9.3316	02a-063	Pipe Fitting Insulation	(6" O.D.) Process water elbow - A-12	5	EA.				0.03	0.03
7	9.3316	02a-063	Pipe Fitting Insulation	(3" O.D.) Process water elbow - C-12	15	EA.				0.08	0.08
7	9.3316	02a-063	Pipe Fitting Insulation	(10" O.D.) Process water elbow - A-12	10	EA.				0.05	0.05
7	9.3316	02a-064	Pipe Run Insulation	(6" O.D.) Process water-straight - A-12	30	LF.				0.15	0.15
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - C-12	30	LF.				0.15	0.15
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - C-9	20	LF.				0.10	0.10

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - A-12	30	LF.				0.15	0.15
7	9.3316	2d-005	Pipe Run Insulation	(6" O.D.) Steam line	40	LF.				0.20	0.20
7	9.3316	4a-087	Pipe Run Insulation	(2" O.D.) line off of the conduit line going into reactor 7	24	LF.				0.12	0.12
7	9.3316	4a-088	Pipe Run Insulation	(8" O.D.) exhaust line coming from reactor 8 by column 2B	50	LF.				0.25	0.25
7	9.3316	4a-105	Pipe Fitting Insulation	(8" O.D.) unknown line elbow by column 5B, next to containment	1	EA.				0.01	0.01
7	9.3326	24b-004	Pipe Fitting Insulation	(2" O.D.) Steam elbow; west wall, north end	20	EA.				0.10	0.10
7	9.3326	10a-007	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow	30	EA.				0.15	0.15
7	9.3326	14-005A	Pipe Run Insulation	(6" O.D.) Condensate line mechanical room 4	20	LF.				0.10	0.10
7	9.3326	14-005B	Pipe Run Insulation	(2" O.D.) Condensate line storage room 3	20	LF.				0.10	0.10
7	9.3326	14-007	Pipe Run Insulation	(8" O.D.) Dead fire protection line South end mechanical room 4	2	LF.				0.01	0.01
7	9.3326	20a-006	Pipe Fitting Insulation	(6" O.D.) Valve - east wall, center section	6	EA.				0.03	0.03
7	9.3326	2b-009	Transite Sheet Material	Interior transite wall	2400	S.F.				12.00	12.00
7	9.3326	2b-010b	Pipe Run Insulation	(6" O.D.) Steam line	10	LF.				0.05	0.05
7	9.3326	3e-01A	Pipe Run Insulation	(6" O.D.) Steam line	50	LF.				0.25	0.25
7	9.3326	3e-02	Pipe Fitting Insulation	(6" O.D.) Steam elbow	8	EA.				0.04	0.04
7	9.3326	3e-03B	Pipe Run Insulation	(4" O.D.) Condensate line	65	LF.				0.33	0.33
7	9.3326	3e-04	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	8	EA.				0.04	0.04
7	9.3326	3e-14	Pipe Fitting Insulation	(6" O.D.) Steam elbow, re-wettable canvas	5	EA.				0.03	0.03
7	9.3326	3e-21	Pipe Run Insulation	(4" O.D.) Abandoned line, at tank F1-309	50	LF.				0.25	0.25
7	9.3326	3g-003	Pipe Run Insulation	(6" O.D.) North Wall	24	LF.				0.12	0.12
7	9.3326	4a-044	Pipe Run Insulation	(2" O.D.) vertical potable water line by column 6A	50	LF.				0.25	0.25
7	9.3336	07-010	Pipe Fitting Insulation	(6" O.D.) LS steam line fitting insulation	23	EA.				0.12	0.12
7	9.3336	07-021	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	20	EA.				0.10	0.10
7	9.4959	01-015	Resilient Floor Tile (9" X 9")	(9" x 9") Resilient Floor Tile Green, White and Blue streaks	800	S.F.				4.00	4.00
7	9.4959	05-053	Pipe Run Insulation	(4" O.D.) Steam line, at column F	80	LF.				0.40	0.40
7	9.4959	15-057	Floor Tile Mastic	Mastic on north side of room N-40	135	S.F.				0.68	0.68
7	9.4959	15-142	Pipe Run Insulation	(4" O.D.) steam line south wall near exit	90	LF.				0.45	0.45

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4969	06-007	Pipe Run Insulation	(6" O.D.)Steam line, on catwalk	130	LF.				0.65	0.65
7	9.4969	06-020	Pipe Fitting Insulation	(8" O.D.)	17	EA.				0.09	0.09
7	9.4969	06-026	Pipe Fitting Insulation	(3" O.D.) Water elbow, above work station	10	EA.				0.05	0.05
7	9.4969	06-042	Pipe Fitting Insulation	(8" O.D.) Steam elbow	10	EA.				0.05	0.05
7	9.4969	06-056	Pipe Fitting Insulation	(4" O.D.) Water valve	6	EA.				0.03	0.03
7	9.4969	06-018A	Pipe Run Insulation	(8" O.D.)Treated water line over column	470	LF.				2.35	2.35
7	9.4979	012a-029	Resilient Floor Tile (9" X 9")	Dark green	25	S.F.				0.13	0.13
7	9.4979	4a-019	Resilient Floor Tile (9" X 9")	Floor tile, green with black flecks in the office at the south end	500	S.F.				2.50	2.50
7	9.4979	05-015	Transite Sheet Material	No sample taken, unsafe to enter elevator shaft, Assumed positive	6400	S.F.				32.00	32.00
7	9.4989	14-025	Pipe Run Insulation	(8" O.D.) Abandoned fire sprinkler line by room 129 centra	195	LF.				0.98	0.98
7	9.4989	14-027	Pipe Run Insulation	(2" O.D.) Central hall by room 12	195	LF.				0.98	0.98
7	9.4989	14-030	Pipe Fitting Insulation	(2" O.D.) Fittings room 102	5	EA.				0.03	0.03
7	9.4989	14-031	Pipe Fitting Insulation	(4" O.D.) Fittings central hall by room 111	5	EA.				0.03	0.03
7	9.4989	14-032	Pipe Fitting Insulation	(3" O.D.) Elbow central hall by room 117	5	EA.				0.03	0.03
7	9.4989	14-034	Pipe Run Insulation	(3" O.D.) East hall by room 147	120	LF.				0.60	0.60
7	9.4989	14-035	Pipe Run Insulation	(4" O.D.) East hall by room 148	120	LF.				0.60	0.60
7	9.4989	37-03	Pipe Run Insulation	(3" O.D.) Condensate line	8	LF.				0.04	0.04
7	9.4989	06-062	Pipe Run Insulation	(4" O.D.) 150 pound steam	75	LF.				0.38	0.38
7	9.4989	06-064	Pipe Fitting Insulation	Potable water elbow	5	EA.				0.03	0.03
7	9.4989	06-098	Pipe Fitting Insulation	Hot water elbow at column B7	5	EA.				0.03	0.03
7	9.4989	06-114B	Pipe Run Insulation	(10" O.D.) Horizontal steam line, north of pickling area	15	LF.				0.08	0.08
7	9.4989	06-178	Pipe Run Insulation	(6" O.D.) Steam line	100	LF.				0.50	0.50
7	9.4989	06-004	Pipe Run Insulation	(10" O.D.) Roof drain line, north end at men's restroom	260	LF.				1.30	1.30
7	9.4989	06-003	Pipe Fitting Insulation	(10" O.D.) Roof drain fitting; by north wall at men's restroom	3	EA.				0.02	0.02
7	9.4989	06-004	Pipe Run Insulation	(10" O.D.)Roof drain line, by north wall at men's restroom	10	LF.				0.05	0.05
7	9.4989	07-58	Transite Sheet Material	Interior transite smooth sampled from broken section	17000	S.F.				85.00	85.00
7	9.4989	09-023	Resilient Floor Tile (9" X 9") & Mastic	Mastic	500	S.F.				2.50	2.50

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4999	20e-002	Pipe Fitting Insulation	(12" O.D.) Elbow, water line	3	EA.				0.02	0.02
7	9.4999	68-003	Transite Sheet Material	Interior transite; no samples taken	400	S.F.				2.00	2.00
7	9.4999	02a-057	Duct Insulation	Insulation off HVAC system	250	S.F.				1.25	1.25
7	9.4999	2d-006	Pipe Run Insulation	(4" O.D.) Process water	6	LF.				0.00	0.00
7	9.4999	4a-035A	Pipe Run Insulation	(6" O.D.) vertical pipe system from reactor 6	35	LF.				0.18	0.18
7	9.4999	4a-041	Pipe Run Insulation	(3" O.D.) vertical treated water line by column 7B	20	LF.				0.10	0.10
7	9.4999	4a-055	Pipe Fitting Insulation	(6" O.D.) anhydrous line valve in the recovery room by column 1E	10	EA.				0.05	0.05
7	9.4999	4a-056	Pipe Run Insulation	(6" O.D.) anhydrous line in the recovery room by column 1E	40	LF.				0.20	0.20
7	9.4999	4a-058	Pipe Run Insulation	(36" O.D.) insulated vertical pipe riser by column 6F	20	LF.				0.10	0.10
7	9.4999	4a-065	Pipe Run Insulation	(2" O.D.) insulated conduit lines going into reactor 2	75	LF.				0.38	0.38
7	9.4999	4a-067	Gasketry	gasketry from abandoned tank at the rear of reactor 3	80	LF.				0.40	0.40
7	9.4999	4a-082	Pipe Run Insulation	(3" O.D.) unknow pipe line going into reactor 8 by column 3C	100	LF.				0.50	0.50
7	9.4999	4a-103	Pipe Run Insulation	(8" O.D.) anhydrous hydrogen line by column 5B	40	LF.				0.20	0.20
7	9.4999	4a-106	Pipe Run Insulation	(4" O.D.) steam line on the west wall by column 4A	100	LF.				0.50	0.50
7	9.4999	05-099	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, Northwest side of plant	9	EA.				0.05	0.05
7	9.4999	06-125	Pipe Fitting Insulation	(4" O.D.) Steam tee	24	EA.				0.12	0.12
7	9.4999	02a-077	Pipe Run Insulation	(4" O.D.) metal jacketed cold water line next to tag 0219 s. wall	80	LF.				0.40	0.40
7	9.4999	02a-078	Pipe Run Insulation	(8" O.D.) metal jacketed north of control panel	150	LF.				0.75	0.75
7	9.5009	24b-003	Pipe Run Insulation	(4" O.D.) Steam; east wall, center	95	LF.				0.48	0.48
7	9.5009	012a-018	Pipe Run Insulation	(4" O.D.) East wall grey lagging,cold water line	150	LF.				0.75	0.75
7	9.5009	14-002	Pipe Fitting Insulation	(10" O.D.) Steam line fittings South end of mechanical room 4	25	EA.				0.13	0.13
7	9.5009	14-006	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting storage room 3	30	EA.				0.15	0.15
7	9.5009	14-010	Pipe Run Insulation	(6" O.D.) Fire sprinkler line South end of mechanical room 4	25	LF.				0.13	0.13
7	9.5009	20a-009	Pipe Fitting Insulation	(8" O.D.) Elbow, metal jacket, north wall, center	9	EA.				0.05	0.05
7	9.5009	4a-015	Pipe Fitting Insulation	(2" O.D.) hydrogen line valve from tank 1	27	EA.				0.14	0.14
7	9.5009	54-026	Pipe Fitting Insulation	(5" O.D.) Cooling water supply line elbow above condensate	38	EA.				0.19	0.19
7	9.5009	55a-001	Transite Sheet Material	No sampleTaken, electrical transformer panel	500	S.F.				2.50	2.50

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.5009	55a-006	Pipe Run Insulation	(4" O.D.) at South wall	60	L.F.				0.30	0.30
7	9.5009	06-160	Storage Tank / Exchanger Insulation	XFMR tank by boiler, 4'L x 1'D	1	S.F.				0.01	0.01
7	9.5009	07-015	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting insulation	7	EA.				0.04	0.04
7	9.5009	09-007	Pipe Run Insulation	(6" O.D.) Steam line on catwalk	135	L.F.				0.68	0.68
7	9.5019	09-006	Pipe Run Insulation	(4" O.D.) Hot water line, to acid dip tank, metal jacketed	10	L.F.				0.05	0.05
7	9.6642	05-059	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, brown and white, office 05-24	600	S.F.				3.00	3.00
7	9.6642	05-059	Floor Tile Mastic	Black floor tile mastic, office 05-24	600	S.F.				3.00	3.00
7	9.6662	28b-022	Floor Tile Mastic	Black	5700	S.F.				28.50	28.50
7	9.6672	30-003	Resilient Floor Tile (9" X 9")	North Corner Gray	90	S.F.				0.45	0.45
7	9.6672	10a-020	Resilient Floor Tile (9" X 9") & Mastic	Resilient floor tile (9" X 9") gray with white specks	300	S.F.				1.50	1.50
7	9.6672	012a-014	Resilient Floor Tile (9" X 9")	Weld shop,Green/white tile	160	S.F.				0.80	0.80
7	9.6672	28a-004	Floor Tile Mastic	Green Tile in Room 107	400	S.F.				2.00	2.00
7	9.6672	28a-005	Floor Tile Mastic	White Tile in Room 107	400	S.F.				2.00	2.00
7	9.6672	4a-009	Pipe Fitting Insulation	(3" O.D.) potable water line elbow by column 2D	9	EA.				0.05	0.05
7	9.6672	4a-054	Fabric / Rope	Suspect miscellaneous rope at column E2	6	L.F.				0.03	0.03
7	9.6672	06-108A	Pipe Run Insulation	(6" O.D.) Vertical hot water line, by southwest roll-up door	35	L.F.				0.18	0.18
7	9.6672	06-110	Pipe Fitting Insulation	(6" O.D.) Hot water fitting, southwest corner	4	EA.				0.02	0.02
7	9.6672	06-110	Pipe Fitting Insulation	(3" O.D.) Hot water elbow	8	EA.				0.04	0.04
7	9.6672	07-56	Pipe Run Insulation	(5" O.D.) Live steam line	100	L.F.				0.50	0.50
7	9.6672	07-57	Pipe Run Insulation	(4" O.D.) Clean condensate line	100	L.F.				0.50	0.50
7	9.6682	012a-012	Resilient Floor Tile (9" X 9")	Light green	32	S.F.				0.16	0.16
7	9.6682	012a-036	Pipe Fitting Insulation	(4" O.D.)Steam, elbow by heater between Col. L 11-12	18	EA.				0.09	0.09
7	9.6682	13a-006	Pipe Fitting Insulation	(4" O.D.) Cooling water supply end fitting	15	EA.				0.08	0.08
7	9.6682	14-021	Pipe Run Insulation	(2" O.D.) Condensate line chalky brown South wall room 117	200	L.F.				1.00	1.00
7	9.6682	02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow C-11	10	EA.				0.05	0.05
7	9.6682	02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow C-11	20	EA.				0.10	0.10
7	9.6682	4a-004	Storage Tank / Exchanger Insulation	(6" x 2") condensate tank by column 8A, sample missing	600	S.F.				3.00	3.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.6682	4a-063	Pipe Run Insulation	(16" O.D.) straight run off rear of reactor 2	10	LF.				0.05	0.05
7	9.6682	4a-069	Pipe Fitting Insulation	(2" O.D.) line valve from tank between reactos 2 and 3	15	EA.				0.08	0.08
7	9.6682	4a-071	Pipe Fitting Insulation	(3" O.D.) steam line elbow at column 1F	36	EA.				0.18	0.18
7	9.6682	4a-077	Pipe Run Insulation	(4" O.D.) abandoned steam line by column 4B	30	LF.				0.15	0.15
7	9.6682	4a-078	Pipe Fitting Insulation	(2" O.D.) abandoned steam line elbow by column 4B	6	EA.				0.03	0.03
7	9.6682	4a-085	Pipe Fitting Insulation	(3" O.D.) pipe line elbow by column 2A	6	EA.				0.03	0.03
7	9.6682	4a-089	Pipe Fitting Insulation	(8" O.D.) exhaust line elbow coming from reactor 9 by column	30	EA.				0.15	0.15
7	9.6682	54-003	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting near garage door	7	EA.				0.04	0.04
7	9.6682	54-027	Pipe Run Insulation	(4" O.D.) Cooling water supply line off catwalk south side	650	LF.				3.25	3.25
7	9.6692	10a-006	Pipe Run Insulation	(6" O.D.) Horizontal condensate line	180	LF.				0.90	0.90
7	9.6692	20a-003	Transite Sheet Material	East wall, south section interior	2330	S.F.				11.65	11.65
7	9.6692	20a-007	Pipe Run Insulation	(3" O.D.) East wall, center section	8	LF.				0.04	0.04
7	9.6692	2b-007	Pipe Fitting Insulation	(8" O.D.) Elbow	9	EA.				0.05	0.05
7	9.6692	2b-010	Pipe Run Insulation	(4" O.D.) Line from refrigeration F1-617	6	LF.				0.03	0.03
7	9.6692	2b-011	Pipe Fitting Insulation	(4" O.D.)	1	EA.				0.01	0.01
7	9.6692	2b-013	Pipe Run Insulation	(4" O.D.) Condensate return	10	LF.				0.05	0.05
7	9.6692	3e-20	Pipe Fitting Insulation	(4" O.D.) Abandoned elbow	3	EA.				0.02	0.02
7	9.6692	4a-002	Pipe Fitting Insulation	(3" O.D.) steam line valve on column 4E	40	EA.				0.20	0.20
7	9.6692	4a-007	Pipe Fitting Insulation	(8" O.D.) treated water line valve by NE roll-up door	7	EA.				0.04	0.04
7	9.6692	4a-008	Pipe Run Insulation	(3" O.D.) horizontal potable water line by column 2D	130	LF.				0.65	0.65
7	9.6692	4a-022	Pipe Fitting Insulation	(6" O.D.) steam line elbow by column 6C	10	EA.				0.05	0.05
7	9.6692	4a-027	Pipe Fitting Insulation	(3" O.D.) cold water line elbow by south wall	8	EA.				0.04	0.04
7	9.6692	4a-030A	Pipe Run Insulation	(3" O.D.) vertical emergency water line by column 2D	66	LF.				0.33	0.33
7	9.6692	4a-050	Pipe Run Insulation	(6" O.D.) Abandoned line, metal jacketed, around the perimeter of	20	LF.				0.10	0.10
7	9.6692	4a-051	Pipe Run Insulation	(6" O.D.) Abandoned line elbow around the perimeter of the 6th	11	LF.				0.06	0.06
7	9.6692	09-011B	Pipe Run Insulation	(6" O.D.) High pressure steam line, vertical run, by valve	7	LF.				0.04	0.04
7	9.6702	4a-043	Pipe Fitting Insulation	(6" O.D.) Steam line elbow by column 6C	25	EA.				0.13	0.13

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.6702	07-002	Pipe Fitting Insulation	(4" O.D.) Steam line tee valve insulation	1	EA.				0.01	0.01
7	9.8335	06-028	Pipe Run Insulation	(10" O.D.) Metal clad steam line	50	LF.				0.25	0.25
7	9.8335	06-030	Pipe Fitting Insulation	(10" O.D.) Steam elbow	4	EA.				0.02	0.02
7	9.8335	06-032	Pipe Run Insulation	(4" O.D.)Condensate, metal clad	200	LF.				1.00	1.00
7	9.8335	06-040	Pipe Run Insulation Lagging	(8" O.D.) Metal clad steam, interior lagging	100	S.F.				0.50	0.50
7	9.8335	06-040	Pipe Run Insulation	(8" O.D.) Metal clad steam, at column C6	100	LF.				0.50	0.50
7	9.8345	32-004	Storage Tank / Exchanger Insulation	Condensate tank insulation	12	S.F.				0.06	0.06
7	9.8345	06-170	Resilient Floor Tile (9" X 9")	Green	985	S.F.				4.93	4.93
7	9.8355	39a-006	Transite Sheet Material	No samples taken	2200	S.F.				11.00	11.00
7	9.8355	10a-021	Resilient Floor Tile (9" X 9")	Resilient floor tile (9" X 9") green with white and black flecks	150	S.F.				0.75	0.75
7	9.8355	14-028	Pipe Run Insulation	(4" O.D.) Central hall by room 12	195	LF.				0.98	0.98
7	9.8355	31-006	Resilient Floor Tile (12" X 12")	Brown w/ brown & white splotches	400	S.F.				2.00	2.00
7	9.8355	37-04	Pipe Fitting Insulation	(3" O.D.) 90 degree condensate fitting	3	EA.				0.02	0.02
7	9.8355	37-08	Pipe Run Insulation	(3" O.D.) Cooling water line	50	LF.				0.25	0.25
7	9.8355	06-060	Pipe Fitting Insulation	(4" O.D.) Steam elbow	12	EA.				0.06	0.06
7	9.8355	06-112	Storage Tank / Exchanger Insulation	Hot water condensate tank, south end, west of catwalk	522	S.F.				2.61	2.61
7	9.8355	06-002	Pipe Fitting Insulation	(2" O.D.)Dead water fitting, by column C6	1	EA.				0.01	0.01
7	9.8355	8a-003	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting next to men's restroom	30	EA.				0.15	0.15
7	9.8365	046-003	Resilient Floor Tile (9" X 9")	Green	200	S.F.				1.00	1.00
7	9.8365	4a-052	Pipe Fitting Insulation	(6" O.D.) Unknown line elbow around the perimeter of the 6th	5	EA.				0.03	0.03
7	9.8365	4a-066	Pipe Fitting Insulation	(2" O.D.) Insulated conduit elbow on lines going into reactor 3	35	EA.				0.18	0.18
7	9.8365	4a-073	Pipe Run Insulation	(3" O.D.) steam line by column 8E on the south wall	40	LF.				0.20	0.20
7	9.8365	4a-074	Pipe Fitting Insulation	(10" O.D.) steam line elbow by column 8D on the south wall	60	EA.				0.30	0.30
7	9.8365	06-091	Gasketry	Vacuum line woven band, 4" x 8	53	LF.				0.27	0.27
7	9.8365	09-041	Pipe Fitting Insulation	(3" O.D.) Hot water line elbow on heater	2	EA.				0.01	0.01
7	9.8375	13a-004	Pipe Fitting Insulation	(4" O.D.) Cooling water return fitting	21	EA.				0.11	0.11
7	9.8375	14-008	Pipe Fitting Insulation	(4" O.D.) Potable water line fittings mechanical room 4 South	6	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.8375	14-011	Pipe Fitting Insulation	(6" O.D.) Fire sprinkler fitting storage room 3 East end	1	EA.				0.01	0.01
7	9.8375	14-019	Pipe Run Insulation	(3" O.D.) Steam line West wall vault room 1	20	LF.				0.10	0.10
7	9.8375	14-019	Pipe Run Insulation	(6" O.D.) Steam line South wall vault room 1	75	LF.				0.38	0.38
7	9.8375	14-020	Pipe Fitting Insulation	(3" O.D.) Steam line elbow South wall vault room 1	30	EA.				0.15	0.15
7	9.8375	14-053	Pipe Run Insulation	(4" O.D.) South end mechanical room 4	32	LF.				0.16	0.16
7	9.8375	02a-027	Pipe Fitting Insulation	Steam line fitting by west wall	1	EA.				0.01	0.01
7	9.8375	4a-005	Pipe Fitting Insulation	(3" O.D.) condenate line valve by column 3B	31	EA.				0.16	0.16
7	9.8375	4a-010	Pipe Run Insulation	(3" O.D.) vertical cold water line by column 4B	10	LF.				0.05	0.05
7	9.8375	54-022	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	13	EA.				0.07	0.07
7	9.8375	54-034	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow by stairs	21	EA.				0.11	0.11
7	9.8375	54-035	Pipe Run Insulation	(4" O.D.) Instrument air line in main steam room	27	LF.				0.14	0.14
7	9.8375	54-036	Pipe Fitting Insulation	(4" O.D.) Instrument air line elbow	2	EA.				0.01	0.01
7	9.8375	06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting, southeast corner	2	EA.				0.01	0.01
7	9.8375	06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting	2	EA.				0.01	0.01
7	9.8375	07-039	Pipe Run Insulation	(4" O.D.) Service water line insulation	30	LF.				0.15	0.15
7	9.8375	07-043	Pipe Fitting Insulation	(4" O.D.) Potable water line fitting insulation	16	EA.				0.08	0.08
7	9.8385	4a-042	Pipe Run Insulation	(6" O.D.) Steam line by column 6C	150	LF.				0.75	0.75
7	9.8385	06-124	Pipe Run Insulation	(4" O.D.) Steam line, above office	70	LF.				0.35	0.35
7	9.8385	07-034	Pipe Fitting Insulation	(4" O.D.) Steam line fitting insulation	26	EA.				0.13	0.13
7	9.8385	09-061	Pipe Run Insulation	(2" O.D.) Horizontal cold water line, northeast corner	10	LF.				0.05	0.05
7	9.8385	09-044	Pipe Fitting Insulation	(4" O.D.) Cold water line elbow above urinal	10	EA.				0.05	0.05
7	10.0028	13b-004	Floor Tile Mastic	Black	210	S.F.				1.05	1.05
7	10.0038	31-007	Floor Tile Mastic	Black & gummy	400	S.F.				2.00	2.00
7	10.0038	31-014	Floor Tile Mastic	Black & gummy	100	S.F.				0.50	0.50
7	10.0038	06-211	Pipe Run Insulation	(4" O.D.) east side wall next to door hard line	45	LF.				0.23	0.23
7	10.0048	012a-038	Pipe Fitting Insulation	(2" O.D.) Condensate ,elbow by Col. L-11	20	EA.				0.10	0.10
7	10.0048	31-003	HVAC Flexible Connector	Over 15' Multiplier	2	EA.				0.01	0.01

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	10.0048	4a-011	Pipe Fitting Insulation	(4" O.D.) cold water line elbow or column 4F	6	EA.				0.03	0.03
7	10.0058	011-010	Floor Tile Mastic	Black mastic, taken with sample 3227	20	S.F.				0.10	0.10
7	10.0058	011-010	Floor Tile Mastic	Black mastic, taken with sample 3231	1400	S.F.				7.00	7.00
7	10.0058	4a-094	Pipe Run Insulation	(4" O.D.) HF recovery line in the HF recovery room	20	L.F.				0.10	0.10
7	10.0058	4a-097	Pipe Run Insulation	(2" O.D.) condensate line, metal jacketed, in the HF recovery room	23	L.F.				0.12	0.12
7	10.0058	06-206	Pipe Run Insulation	(5" O.D.) Steam line insulation grey in color assumed per	125	L.F.				0.63	0.63
7	10.0068	07-025	Pipe Run Insulation	(4" O.D.) Potable water line insulation	32	L.F.				0.16	0.16
7	10.0068	09-001B	Pipe Run Insulation	(3" O.D.) Steam line, vertical	40	L.F.				0.20	0.20
7	10.1721	06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit	50	L.F.				0.25	0.25
7	10.1721	06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit, resample of 5147	80	L.F.				0.40	0.40
7	10.1731	28b-015	Pipe Fitting Insulation	Fittings above ceiling; not accessible	2	EA.				0.01	0.01
7	10.1731	012a-041	Resilient Floor Tile (9" X 9")	Green floor tile W / white streaks, in office	280	S.F.				1.40	1.40
7	10.1731	01-014	Resilient Floor Tile (12" X 12")	(12" x 12") Resilient Floor Tile White and Brown in Office 01-47	58	S.F.				0.29	0.29
7	10.1731	06-052	Floor Tile Mastic	Break room, Black	150	S.F.				0.75	0.75
7	10.1741	68-001	Resilient Floor Tile (9" X 9")	Resilient Floor Tile (9" X 9") Light gray with white streaks	100	S.F.				0.50	0.50
7	10.1741	68-002	Floor Tile Mastic	Black, with 9" x 9" tile	100	S.F.				0.50	0.50
7	10.1741	012a-044	Pipe Run Insulation	(4" O.D.) Condensate line by exit door	13	L.F.				0.07	0.07
7	10.1741	012a-045	Pipe Fitting Insulation	(4" O.D.) Condensate elbow by exit door	2	EA.				0.01	0.01
7	10.1741	012a-046	Pipe Run Insulation	(4" O.D.) Steam line , by west wal	60	L.F.				0.30	0.30
7	10.1741	012a-047	Pipe Fitting Insulation	(4" O.D.) Steam elbow by west wall	10	EA.				0.05	0.05
7	10.1741	13a-018	Pipe Fitting Insulation	(12" O.D.) Exhaust pipe duct fitting	5	EA.				0.03	0.03
7	10.1741	2b-003	Transite Sheet Material	Transite lab top, no samples taken	38	S.F.				0.19	0.19
7	10.1741	4a-018	Pipe Fitting Insulation	(6" O.D.) steam line elbow by tank 11	2	EA.				0.01	0.01
7	10.1741	07-036	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	4	EA.				0.02	0.02
7	10.1741	07-038	Pipe Fitting Insulation	(6" O.D.) Service water line tee valve insulation	1	EA.				0.01	0.01
7	10.1741	07-040	Pipe Fitting Insulation	(4" O.D.) Service water line tee fitting insulation	1	EA.				0.01	0.01
7	10.1741	07-041	Pipe Run Insulation	(4" O.D.) Service water line insulation	15	L.F.				0.08	0.08

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	10.1751	07-033	Pipe Run Insulation	Potable water line pipe could not be sampled due to drums in the	15	LF.				0.08	0.08
7	10.1751	06-208	Pipe Fitting Insulation	(5" O.D.) steam fittings Assumed per WEMCO	8	EA.				0.04	0.04
7	10.3414	012a-035	Pipe Run Insulation	(4" O.D.) Steam line by column k-11	100	LF.				0.50	0.50
7	10.3414	012a-035	Pipe Run Insulation	Steam line by column L-11	100	LF.				0.50	0.50
7	10.3414	012a-037	Pipe Run Insulation	(4" O.D.) Condensate line by Col. L-11 north side	32	LF.				0.16	0.16
7	10.3414	012a-039	Pipe Run Insulation	(3" O.D.)Water line by Col. L-11	67	LF.				0.34	0.34
7	10.3414	012a-040	Pipe Fitting Insulation	(3" O.D.) Water , elbow by Col. L-11	6	EA.				0.03	0.03
7	10.3424	30-004	Floor Tile Mastic	West End	90	S.F.				0.45	0.45
7	10.3434	06-127	Pipe Fitting Insulation	(6" O.D.) Roof drain elbow	5	EA.				0.03	0.03
7	10.5107	62-01	Transite Sheet Material	1/2" transite sheeting, stored material	744	S.F.				3.72	3.72
7	10.5107	06-177	Pipe Fitting Insulation	(10" O.D.) Refer to 2318, steam fitting, east side	1	EA.				0.01	0.01
7	10.5117	28b-021	Resilient Floor Tile (9" X 9")	(9"x9") Green tile covered by brown tile	5700	S.F.				28.50	28.50
7	10.5117	07-029	Pipe Fitting Insulation	(3" O.D.) Steam line fitting insulation	12	EA.				0.06	0.06
7	10.8483	4a-101	Transite Sheet Material	Transite sheeting material inside transformer banks, Not sampled	150	S.F.				0.75	0.75
TOTALS:							105,345.30	248,205.00	359,621.00	14,010.86	727,182.16

Total Removal Cost $12,676,676.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Material
Flue Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	7.4723	10a-030	Flue Insulation	Boiler flue insulation	4	L.F.				0.02	0.02
TOTALS:					4					0.02	0.02

Total Removal Cost $128.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Gasketry**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	5.617	10a-033	Gasketry	Gasket	100	L.F.		200.00	500.00		700.00
1	5.621	10a-040	Gasketry	White woven gasket	4	L.F.		8.00	20.00		28.00
1	8.6564	13a-020	Gasketry	Rope gasket	16	L.F.		32.00	80.00		112.00
1	7.307	4a-040	Gasketry	Cloth gasket from reactor 6	2	EA.		4.00	10.00		14.00
1	8.3148	05-024	Gasketry	Gasket on blower flange	1	S.F.		2.00	5.00		7.00
1	9.3296	06-137	Gasketry	(12" O.D.) Loose used gasket in pump pit	1	L.F.		2.00	5.00		7.00
3	8.3208	4a-022A	Gasketry	Woven gasketry wrapped around steam line	10	L.F.	15.00			0.05	15.05
4	9.5009	25c-01	Gasketry	(10"O.D.) Gasket pipe	5	L.F.	7.50			0.03	7.53
4	8.994	13a-019	Gasketry	Door gasket	16	L.F.	24.00			0.08	24.08
4	9.4969	05-052	Gasketry	8" Gasket	1	L.F.	1.50			0.01	1.51
6	8.4841	10a-026	Gasketry	On boiler stoker	12	EA.				0.06	0.06
7	9.4999	4a-067	Gasketry	gasketry from abandoned tank at the rear of reactor 3	80	L.F.				0.40	0.40
7	8.99	05-055	Gasketry	Sheet gasket material at column 11F	60	S.F.				0.30	0.30
7	8.99	05-055	Gasketry	Sheet gasket material at column 10G	1	S.F.				0.01	0.01
7	9.8365	06-091	Gasketry	Vacuum line woven band, 4" x 8'	53	L.F.				0.27	0.27
7	8.8247	06-039A	Gasketry	Assembly 06-8044-Con, northwest corner	1	L.F.				0.01	0.01
7	9.3306	07-045	Gasketry	Rope Gasket	50	L.F.				0.25	0.25
7	9.1593	09-062	Gasketry	Stored material	5	L.F.				0.03	0.03
TOTALS:					418		48.00	248.00	620.00	1.47	917.47

Total Removal Cost $836.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Material
Heat Shield

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	7.9812	05-056A	Heat Shield	Gloves at column 11F	1	S.F.	0.70			0.01	0.71
4	7.9812	05-056B	Heat Shield	Rope gasket, 1/4" X 1" flat ribbon, at column 11F	4	S.F.	2.80			0.02	2.82
TOTALS:					5		3.50			0.03	3.53

Total Removal Cost $25.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Material
HVAC Flexible Connector

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	7.4713	10a-034	HVAC Flexible Connector	No samples taken, would jeopardize boiler integrity. Flex	4	EA.	200.00			0.02	200.02
3	6.2852	05-063	HVAC Flexible Connector	(12" X 24" X 2") Woven	1	EA.	50.00			0.01	50.01
6	7.8109	05-097	HVAC Flexible Connector	Cloth like material (24" X 24"x4")	26	EA.				0.13	0.13
6	8.1445	15-025	HVAC Flexible Connector	Duct in hall outside room E-7, 850 S.F.	1	EA.				0.01	0.01
7	10.0048	31-003	HVAC Flexible Connector	Over 15' Multiplier	2	EA.				0.01	0.01
7	7.4683	15-141	HVAC Flexible Connector	Flexible connector on HVAC's. No samples taken, material	10	EA.				200.00	200.00
TOTALS:					44		250.00			200.17	450.17

Total Removal Cost $11,000.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: **Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	5.7863	02a-038	Insulation	Insulation in northeast corner building, transite	100	S.F.		200.00	1000.00		1200.00
TOTALS:					100			200.00	1,000.00		1,200.00

Total Removal Cost $200.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: Joint Compound

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.6672	05-046	Joint Compound	(4" O.D.) Transite pipe joint generator 11 and 12, near	33	S.F.	23.10			0.17	23.27
TOTALS:					33		23.10			0.17	23.27

Total Removal Cost $264.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: Other

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.4851	53-003	Other	Tar on insulation fasteners,sample taken south	20	S.F.	14.00			0.10	14.10
TOTALS:					20		14.00			0.10	14.10

Total Removal Cost $40.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Material
Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.1495	2e-005	Pipe Fitting Insulation	(4" O.D.) Elbow, Damaged, debris on floor, condensate	1	EA.		27.00	29.00		56.00
1	6.6378	011-030	Pipe Fitting Insulation	Cold water line valve	1	EA.		10.00	3.00		13.00
1	6.6268	012a-004	Pipe Fitting Insulation	(4" O.D.) By pipe shop	5	EA.		135.00	145.00		280.00
1	7.1377	13a-016	Pipe Fitting Insulation	(3" O.D.) Condensate fitting	2	EA.		54.00	58.00		112.00
1	6.2932	02a-020	Pipe Fitting Insulation	(4" O.D.) Steam line fitting on west side of room	1	EA.		27.00	29.00		56.00
1	6.9694	02a-052	Pipe Fitting Insulation	(6" O.D.) Process water elbow by column D-17	4	EA.		108.00	116.00		224.00
1	9.3326	2b-014	Pipe Fitting Insulation	(6" O.D.) Steam, elbow at air handler, upper level	3	EA.		81.00	87.00		168.00
1	9.1643	2d-001	Pipe Fitting Insulation	(4" O.D.) Elbow Steam line	6	EA.		162.00	174.00		336.00
1	8.995	2d-007	Pipe Fitting Insulation	(4" O.D.) Elbow process water	2	EA.		54.00	58.00		112.00
1	8.994	3e-06	Pipe Fitting Insulation	(4" O.D.) Tank elbow, at south end	20	EA.		540.00	580.00		1120.00
1	8.6584	3e-27	Pipe Fitting Insulation	(6" O.D.) Condensate elbow at north wall	28	EA.		756.00	812.00		1568.00
1	7.1387	05-089	Pipe Fitting Insulation	(6" O.D.) Steam line fitting, nex to column 4F	3	EA.		81.00	87.00		168.00
1	7.304	06-023B	Pipe Fitting Insulation	(2" to 4" O.D.) Condensate tank	14	EA.		378.00	406.00		784.00
1	8.6564	06-065B	Pipe Fitting Insulation	(2" O.D.) Elbow near column C14	4	EA.		108.00	116.00		224.00
1	7.8099	06-135	Pipe Fitting Insulation	Refer to sample 2314, pump pi	1	EA.		27.00	29.00		56.00
1	7.1357	06-163	Pipe Fitting Insulation	(6" O.D.) Refer to 2334, steam elbow	1	EA.		27.00	29.00		56.00
1	6.6318	06-202	Pipe Fitting Insulation	(6" O.D.) Hot water elbow, west side of plant	6	EA.		162.00	174.00		336.00
1	7.6446	07-005	Pipe Fitting Insulation	(3" O.D.) Ammonia line fitting insulation	83	EA.		2241.00	2407.00		4648.00
1	6.4605	09-059	Pipe Fitting Insulation	(6" O.D.) Nitric acid line elbow	4	EA.		108.00	116.00		224.00
2	6.2952	011-054	Pipe Fitting Insulation	(3"OD) Steam line elbow	3	EA.	4.50			0.02	4.52
2	8.8267	3e-10	Pipe Fitting Insulation	(6" O.D.) Steam elbow, by light	25	EA.	37.50			0.13	37.63
2	6.9684	06-076	Pipe Fitting Insulation	(8" O.D.) Steam elbow by restroom	2	EA.	3.00			0.01	3.01
3	6.8001	28b-005	Pipe Fitting Insulation	(4" O.D.) Elbow, south wall by double doors	46	EA.	69.00			0.23	69.23
3	7.6416	28b-014	Pipe Fitting Insulation	(3" O.D.) Condensate elbow	2	EA.	3.00			0.01	3.01
3	8.4871	3f-03	Pipe Fitting Insulation	(6" O.D.)	72	EA.	108.00			0.36	108.36
3	5.9596	011-050	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	44	EA.	66.00			0.22	66.22
3	7.9802	13a-001	Pipe Fitting Insulation	(6" O.D.) Steam line tee fitting	100	EA.	150.00			0.50	150.50
3	10.0048	13a-010	Pipe Fitting Insulation	No samples were taken, fittings not accessible	11	EA.	16.50			0.06	16.56
3	10.0048	13a-012	Pipe Fitting Insulation	No samples were taken, fittings not accessible	18	EA.	27.00			0.09	27.09

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

83

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	7.8089	01-006	Pipe Fitting Insulation	(4" O.D.) Water line	25	EA.	37.50			0.13	37.63
3	7.1407	02a-003	Pipe Fitting Insulation	(4" O.D.) Steam line elbow on unit E-2948	20	EA.	30.00			0.10	30.10
3	8.1535	02a-037	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by D-17	33	EA.	49.50			0.17	49.67
3	7.6426	02a-048	Pipe Fitting Insulation	(3" O.D.) Condensate elbow by column C-17	56	EA.	84.00			0.28	84.28
3	8.3188	03a-06	Pipe Fitting Insulation	(2" O.D.) by sink, south west corner	5	EA.	7.50			0.03	7.53
3	8.4881	03b-02	Pipe Fitting Insulation	(2" O.D.) elbow, north west corner	8	EA.	12.00			0.04	12.04
3	9.3326	3e-29	Pipe Fitting Insulation	(8" O.D.) Abandoned steam elbow at south wall	4	EA.	6.00			0.02	6.02
3	8.4891	4a-031	Pipe Fitting Insulation	(2" O.D.) emergency water line elbow by column 6D	18	EA.	27.00			0.09	27.09
3	8.4871	4a-086	Pipe Fitting Insulation	(2" O.D.) conduit line elbow on reactor 4 by column 3A	12	EA.	18.00			0.06	18.06
3	8.995	05-004	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow, near column 26E	24	EA.	36.00			0.12	36.12
3	8.4861	06-045B	Pipe Fitting Insulation	(8" O.D.) Steam elbow	7	EA.	10.50			0.04	10.54
3	9.3316	06-061	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, north AHU catwalk	60	EA.	90.00			0.30	90.30
3	7.6436	06-086	Pipe Fitting Insulation	(4" O.D.) Air line elbow	7	EA.	10.50			0.04	10.54
3	9.1623	06-179	Pipe Fitting Insulation	(4" O.D.) Steam elbow, above chalkboard	15	EA.	22.50			0.08	22.58
3	6.2922	06-194	Pipe Fitting Insulation	(2" O.D.) Condensate, elbow by pickling,white exposed	6	EA.	9.00			0.03	9.03
3	6.2922	06-194	Pipe Fitting Insulation	(2" O.D.) Condensate elbow, by entrance G-90, exposed	2	EA.	3.00			0.01	3.01
3	8.8247	06-198	Pipe Fitting Insulation	(3" O.D.) Waste water elbow, north end of tank	35	EA.	52.50			0.18	52.68
3	8.8247	06-198	Pipe Fitting Insulation	Waste water fitting, east side	5	EA.	7.50			0.03	7.53
3	9.1653	06-117	Pipe Fitting Insulation	(6" O.D.) Steam elbow	20	EA.	30.00			0.10	30.10
3	9.3336	07-018	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	11	EA.	16.50			0.06	16.56
3	9.6702	07-023	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	19	EA.	28.50			0.10	28.60
3	9.1643	07-050	Pipe Fitting Insulation	(4" O.D.) Service water line fitting insulation	36	EA.	54.00			0.18	54.18
3	8.8237	8a-010	Pipe Fitting Insulation	(6" O.D.) 90 degree condensate fitting by column	50	EA.	75.00			0.25	75.25
3	9.4989	8a-019	Pipe Fitting Insulation	(4" O.D.) 90 degree water fitting by east end, column D8	31	EA.	46.50			0.16	46.66
3	7.8109	09-057	Pipe Fitting Insulation	(10" O.D.) Abandoned line valve	2	EA.	3.00			0.01	3.01
3	7.306	15-112	Pipe Fitting Insulation	(12" O.D.) Chilled water system valve-south mechanical,	12	EA.	18.00			0.06	18.06
3	7.306	15-112	Pipe Fitting Insulation	(6" O.D.) Chilled water system. Elbow in corrosion room by	2	EA.	3.00			0.01	3.01
3	7.6426	15-126	Pipe Fitting Insulation	(8" O.D.) Hot water return to heat exchanger, elbow	8	EA.	12.00			0.04	12.04
3	8.3188	15-134	Pipe Fitting Insulation	(3" O.D.) Steam system elbow South mechanical room, west	106	EA.	159.00			0.53	159.53

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Material: **Pipe Fitting Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	8.3188	15-134	Pipe Fitting Insulation	(6" O.D.) Steam system elbow in corrosion room by HVAC	12	EA.	18.00			0.06	18.06
3	6.6308	15-136	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow by west wall between	15	EA.	22.50			0.08	22.58
4	9.3326	24b-002	Pipe Fitting Insulation	(5" O.D.)	7	EA.	10.50			0.04	10.54
4	8.994	069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	25	EA.	37.50			0.13	37.63
4	9.1603	011-027	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	17	EA.	25.50			0.09	25.59
4	10.0048	13a-008	Pipe Fitting Insulation	No samples were taken, fittings not accessible	8	EA.	12.00			0.04	12.04
4	8.6564	28a-011	Pipe Fitting Insulation	(4" O.D.) Elbow above hot water heater in womens rest	2	EA.	3.00			0.01	3.01
4	8.6564	28a-012	Pipe Fitting Insulation	(4" O.D.) Elbow in womens rest room #110	8	EA.	12.00			0.04	12.04
4	8.995	02a-050	Pipe Fitting Insulation	(6" O.D.) Process water elbow by green gauge panel	22	EA.	33.00			0.11	33.11
4	8.992	02a-054	Pipe Fitting Insulation	(32" O.D.) Vent pipe elbow on tank D1-206	13	EA.	19.50			0.07	19.57
4	8.4891	02a-061	Pipe Fitting Insulation	(10" O.D.) Steam line elbow - A-12	10	EA.	15.00			0.05	15.05
4	8.4891	02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-10	10	EA.	15.00			0.05	15.05
4	8.4891	02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - A-11	40	EA.	60.00			0.20	60.20
4	8.4891	02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - C-11	20	EA.	30.00			0.10	30.10
4	8.4891	02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-11	20	EA.	30.00			0.10	30.10
4	9.4999	02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - A-8	3	EA.	4.50			0.02	4.52
4	9.4999	02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-11	20	EA.	30.00			0.10	30.10
4	9.4999	02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-10	20	EA.	30.00			0.10	30.10
4	8.6544	02a-031A	Pipe Fitting Insulation	(4" O.D.) Steam line valve in south corner	21	EA.	31.50			0.11	31.61
4	9.4999	02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - C-10	20	EA.	30.00			0.10	30.10
4	9.1633	2b-005	Pipe Fitting Insulation	(4" O.D.) Steam line, elbow	33	EA.	49.50			0.17	49.67
4	9.1603	32-001	Pipe Fitting Insulation	(4" O.D.) Steam line fitting	3	EA.	4.50			0.02	4.52
4	9.8355	32-007	Pipe Fitting Insulation	(3" O.D.) Water line elbow, gra	7	EA.	10.50			0.04	10.54
4	8.8267	4a-049	Pipe Fitting Insulation	(10" O.D.) Steam line elbow at 5B	25	EA.	37.50			0.13	37.63
4	9.4999	4a-081	Pipe Fitting Insulation	(2" O.D.) Insulated conduit elbow going into reactor 8	50	EA.	75.00			0.25	75.25
4	9.6692	4a-095	Pipe Fitting Insulation	(4" O.D.) HF recovery line elbow in the HF recovery room	4	EA.	6.00			0.02	6.02
4	9.4999	05-006	Pipe Fitting Insulation	(4" O.D.) Potable water line tee near column 26E	8	EA.	12.00			0.04	12.04
4	7.4743	05-007	Pipe Fitting Insulation	(2" O.D.)	26	EA.	39.00			0.13	39.13
4	8.99	05-038	Pipe Fitting Insulation	(8" O.D.) 150 pound steam line elbow, near column 11F	15	EA.	22.50			0.08	22.58

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Material
Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.1613	05-041	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow, near column 11B	4	EA.	6.00			0.02	6.02
4	8.4851	05-044	Pipe Fitting Insulation	(6" O.D.) Potable water line elbow, near column 11F	6	EA.	9.00			0.03	9.03
4	8.3138	05-062	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	11	EA.	16.50			0.06	16.56
4	9.4989	05-065	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 5G	31	EA.	46.50			0.16	46.66
4	8.991	05-070	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 2D	63	EA.	94.50			0.32	94.82
4	9.3296	06-019B	Pipe Fitting Insulation	(8" O.D.) Steam; some metal clad	125	EA.	187.50			0.63	188.13
4	9.3296	06-019B	Pipe Fitting Insulation	(2" to 4" O.D.) 2 of 5 are metal clad	5	EA.	7.50			0.03	7.53
4	8.1485	06-047	Pipe Fitting Insulation	(8" O.D.) Steam tee at column C29 platform	41	EA.	61.50			0.21	61.71
4	8.993	06-051A	Pipe Fitting Insulation	Main steam line fitting at column C18	173	EA.	259.50			0.87	260.37
4	8.6564	06-055B	Pipe Fitting Insulation	(6" O.D.) Condensate elbow near column C23	8	EA.	12.00			0.04	12.04
4	8.1485	06-151	Pipe Fitting Insulation	(2" O.D.) Water line	5	EA.	7.50			0.03	7.53
4	9.1623	06-161	Pipe Fitting Insulation	(6" O.D.) Steam elbow	19	EA.	28.50			0.10	28.60
4	8.992	06-175	Pipe Fitting Insulation	(4" O.D.) Water elbow, at east wall	12	EA.	18.00			0.06	18.06
4	8.994	069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	25	EA.	37.50			0.13	37.63
4	9.3336	07-012	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	17	EA.	25.50			0.09	25.59
4	9.1643	07-046	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	146	EA.	219.00			0.73	219.73
4	9.3316	07-048	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	35	EA.	52.50			0.18	52.68
4	8.8257	15-051	Pipe Fitting Insulation	(4" O.D.) Water line fitting in room N-22, west wall	83	EA.	124.50			0.42	124.92
6	8.995	025a-01	Pipe Fitting Insulation	(3" O.D.) 90 degree fitting	35	EA.				0.18	0.18
6	9.5009	012a-049	Pipe Fitting Insulation	(5" O.D.) Steam elbow, by ladder at catwalk	20	EA.				0.10	0.10
6	9.5009	012a-049	Pipe Fitting Insulation	(3" O.D.) Steam elbow, at catwalk	20	EA.				0.10	0.10
6	8.8237	01-002	Pipe Fitting Insulation	(6" O.D.) 150# Steam line fitting	49	EA.				0.25	0.25
6	8.4851	01-004	Pipe Fitting Insulation	(4" O.D.) Condensate return line, Tee fitting	27	EA.				0.14	0.14
6	7.4723	01-008	Pipe Fitting Insulation	(3" O.D.) Water line fitting	15	EA.				0.08	0.08
6	8.4851	01-010	Pipe Fitting Insulation	(4" O.D.) 150# Steam line fitting	13	EA.				0.07	0.07
6	9.3316	01-016	Pipe Fitting Insulation	(8" O.D.) 150# Pound Steam line fitting to heater	8	EA.				0.04	0.04
6	9.1623	01-018	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting	22	EA.				0.00	0.00
6	7.1407	02a-008	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by rollup door	52	EA.				0.26	0.26
6	7.6446	31-001	Pipe Fitting Insulation	(2" O.D.) steam system	37	EA.				0.19	0.19

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: **Pipe Fitting Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.992	03a-04	Pipe Fitting Insulation	(3" O.D.) south west corner by sink	7	EA.				0.04	0.04
6	9.6692	3e-19	Pipe Fitting Insulation	(3" O.D.) Elbow leading from 8" O.D. line	7	EA.				0.04	0.04
6	9.3326	3e-23	Pipe Fitting Insulation	(6" O.D.) Steam elbow	9	EA.				0.05	0.05
6	8.6574	45-007	Pipe Fitting Insulation	(6" O.D.) Steam line valve at air handling unit	35	EA.				0.18	0.18
6	9.1603	05-092	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting, between column 2F	90	EA.				0.45	0.45
6	9.3276	05-094	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, on heater by column	115	EA.				0.58	0.58
6	8.8217	05-095	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, by column 28F	1995	EA.				9.98	9.98
6	9.5009	54-031	Pipe Fitting Insulation	(5" O.D.) Cooling water return line elbow above condensate	25	EA.				0.13	0.13
6	10.5107	54-041	Pipe Fitting Insulation	(4" O.D.) Dead line elbow in refrigeration area, could not	12	EA.				0.06	0.06
6	9.5009	54-021	Pipe Fitting Insulation	Over (10" O.D.) steam line fitting on main line in steam	57	EA.				0.29	0.29
6	8.6544	06-017B	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	9	EA.				0.05	0.05
6	8.8227	06-059	Pipe Fitting Insulation	(6" O.D.) Steam elbow, south AHU catwalk	173	EA.				0.87	0.87
6	7.9802	06-070	Pipe Fitting Insulation	Water fitting by restroom	16	EA.				0.08	0.08
6	8.6544	06-017B	Pipe Fitting Insulation	(4" O.D.)Condensate elbow	9	EA.				0.05	0.05
6	8.8257	8a-005	Pipe Fitting Insulation	(6" O.D.) Process water line fitting by column D9	45	EA.				0.23	0.23
6	9.8375	8a-016	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting on catwalk by column C1	14	EA.				0.07	0.07
6	9.8375	8a-018	Pipe Fitting Insulation	(4" O.D.) 90 degree fitting on catwalk, south side of heater	10	EA.				0.05	0.05
6	8.997	09-002A	Pipe Fitting Insulation	(6"O.D.)Condensate line elbow	4	EA.				0.02	0.02
6	8.993	15-064	Pipe Fitting Insulation	(4" O.D.) Steam line fitting by east wall in HVAC room S-1	45	EA.				0.23	0.23
6	8.993	15-066	Pipe Fitting Insulation	(3" O.D.) Condensate line fitting by northwest corner of	6	EA.				0.03	0.03
6	8.993	15-072	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in north wall of HVAC room S-22	300	EA.				1.50	1.50
6	9.3296	15-076	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting by north wall in HVAC	17	EA.				0.09	0.09
6	9.1603	15-123	Pipe Fitting Insulation	(4" O.D.) A.C. condensate pump elbow. Off A.C.	5	EA.				0.03	0.03
6	8.1485	15-128	Pipe Fitting Insulation	(3" O.D.) Elbow. Cold water system - Room R-16 (elevated	10	EA.				0.05	0.05
6	8.4851	15-130	Pipe Fitting Insulation	(2" O.D.) Hot water return system - Elbow, room R-16,	10	EA.				0.05	0.05
6	8.4851	15-132	Pipe Fitting Insulation	(3" O.D.) Hot water supply system - Elbow, room R-16,	10	EA.				0.05	0.05
6	8.1465	06-209	Pipe Fitting Insulation	(6" O.D.) Steam elbows assumed positive per WEMCO	41	EA.				0.21	0.21
7	9.4999	20e-002	Pipe Fitting Insulation	(12" O.D.) Elbow, water line	3	EA.				0.02	0.02
7	9.3326	24b-004	Pipe Fitting Insulation	(2" O.D.) Steam elbow; west wall, north end	20	EA.				0.10	0.10

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	2e-003	Pipe Fitting Insulation	(4" O.D.) Elbow, black in color, steam line	36	EA.				0.18	0.18
7	9.3306	2e-004	Pipe Fitting Insulation	(3" O.D.) Elbow, black in color, condensate line	16	EA.				0.08	0.08
7	8.4901	30-002	Pipe Fitting Insulation	(3" O.D.) Elbow leading to sink	8	EA.				0.04	0.04
7	8.994	38-02	Pipe Fitting Insulation	(4" O.D.) Steam elbow, white re-wrapped	37	EA.				0.19	0.19
7	9.1623	38-04	Pipe Fitting Insulation	(3" O.D.) Steam elbow, green, south corner	20	EA.				0.10	0.10
7	8.3188	8b-002	Pipe Fitting Insulation	(4" O.D.) Elbow North Side of Wall East Corner	20	EA.				0.10	0.10
7	8.4881	28b-006	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, by duct	15	EA.				0.08	0.08
7	8.6544	28b-011	Pipe Fitting Insulation	(3" O.D.) Steam elbow	7	EA.				0.04	0.04
7	10.1731	28b-015	Pipe Fitting Insulation	Fittings above ceiling; not accessible	2	EA.				0.01	0.01
7	8.4851	28b-016	Pipe Fitting Insulation	(4" O.D.) Steam elbow, line	14	EA.				0.07	0.07
7	8.992	28b-018	Pipe Fitting Insulation	(3" O.D.)Condensate elbow by heater next to toilet	15	EA.				0.08	0.08
7	8.6544	28b-023	Pipe Fitting Insulation	(3" O.D.) Steam line, elbow in lounge	11	EA.				0.06	0.06
7	8.4841	28b-027	Pipe Fitting Insulation	Steam elbows above drop ceiling; not accessible	7	EA.				0.04	0.04
7	8.3158	069-002	Pipe Fitting Insulation	(8" O.D.) steam line elbow, metal jacket N.E. heating unit	66	EA.				0.33	0.33
7	8.8257	10a-005	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	110	EA.				0.55	0.55
7	9.3326	10a-007	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow	30	EA.				0.15	0.15
7	8.996	10a-015	Pipe Fitting Insulation	(10" O.D.) Zeolite water line elbow	57	EA.				0.29	0.29
7	6.6328	10a-017	Pipe Fitting Insulation	(12" O.D.) Steam line tee on heat exchanger	370	EA.				1.85	1.85
7	6.8001	10a-019	Pipe Fitting Insulation	(4" O.D.) Water line valve	270	EA.				1.35	1.35
7	9.1623	011-017	Pipe Fitting Insulation	(10" O.D.) Steam elbow	12	EA.				0.06	0.06
7	9.3276	011-024	Pipe Fitting Insulation	(10" O.D.)Steam line Tee	18	EA.				0.09	0.09
7	7.9772	011-034	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	18	EA.				0.09	0.09
7	7.8099	011-048	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	51	EA.				0.26	0.26
7	9.3286	011-051	Pipe Fitting Insulation	(6" O.D.)Steam line elbow	2	EA.				0.01	0.01
7	9.1613	012a-008	Pipe Fitting Insulation	(4"O.D.) Elbow,leading to tank	1	EA.				0.01	0.01
7	9.6682	012a-036	Pipe Fitting Insulation	(4" O.D.)Steam, elbow by heater between Col. L 11-12	18	EA.				0.09	0.09
7	10.0048	012a-038	Pipe Fitting Insulation	(2" O.D.) Condensate ,elbow by Col. L-11	20	E.A.				0.10	0.10
7	10.3414	012a-040	Pipe Fitting Insulation	(3" O.D.) Water , elbow by Col. L-11	6	E.A.				0.03	0.03
7	10.1741	012a-045	Pipe Fitting Insulation	(4" O.D.) Condensate elbow by exit door	2	EA.				0.01	0.01

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number Indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	10.1741	012a-047	Pipe Fitting Insulation	(4" O.D.) Steam elbow by west wall	10	EA.				0.05	0.05
7	9.8375	13a-004	Pipe Fitting Insulation	(4" O.D.) Cooling water return fitting	21	EA.				0.11	0.11
7	9.6682	13a-006	Pipe Fitting Insulation	(4" O.D.) Cooling water supply end fitting	15	EA.				0.08	0.08
7	10.1741	13a-018	Pipe Fitting Insulation	(12" O.D.) Exhaust pipe duct fitting	5	EA.				0.03	0.03
7	8.3188	13b-002	Pipe Fitting Insulation	(4" O.D.) Steam elbow, center	17	EA.				0.09	0.09
7	9.5009	14-002	Pipe Fitting Insulation	(10" O.D.) Steam line fittings South end of mechanical room	25	EA.				0.13	0.13
7	9.5009	14-006	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting storage room 3	30	EA.				0.15	0.15
7	9.8375	14-008	Pipe Fitting Insulation	(4" O.D.) Potable water line fittings mechanical room 4	6	EA.				0.03	0.03
7	9.8375	14-011	Pipe Fitting Insulation	(6" O.D.) Fire sprinkler fitting storage room 3 East end	1	EA.				0.01	0.01
7	9.8375	14-020	Pipe Fitting Insulation	(3" O.D.) Steam line elbow South wall vault room 1	30	EA.				0.15	0.15
7	9.1623	14-029	Pipe Fitting Insulation	(8" O.D.) Abandoned fire sprinkler line fittings by room	5	EA.				0.03	0.03
7	9.4989	14-030	Pipe Fitting Insulation	(2" O.D.) Fittings room 102	5	EA.				0.03	0.03
7	9.4989	14-031	Pipe Fitting Insulation	(4" O.D.) Fittings central hall by room 111	5	EA.				0.03	0.03
7	9.4989	14-032	Pipe Fitting Insulation	(3" O.D.) Elbow central hall by room 117	5	EA.				0.03	0.03
7	8.8257	14-037	Pipe Fitting Insulation	(2" O.D.) Elbow East hall by room 144	5	EA.				0.03	0.03
7	9.1623	14-038	Pipe Fitting Insulation	(3" O.D.) Elbow East hall by room 144	5	EA.				0.03	0.03
7	9.1623	14-039	Pipe Fitting Insulation	(4" O.D.) Valve East hall by room 148	1	EA.				0.01	0.01
7	8.8257	14-040	Pipe Fitting Insulation	(6" O.D.) Abandoned fire sprinkler line elbow East hall	2	EA.				0.01	0.01
7	9.1623	14-041	Pipe Fitting Insulation	(4" O.D.) Steam line elbow room 136	100	EA.				0.50	0.50
7	8.995	14-043	Pipe Fitting Insulation	(4" O.D.) Steam line West wing by heating unit	75	EA.				0.38	0.38
7	8.4851	01-011	Pipe Fitting Insulation	(4" O.D.) Condensate line valve B	6	EA.				0.03	0.03
7	8.996	20a-002	Pipe Fitting Insulation	(8" O.D.) West wall	10	EA.				0.05	0.05
7	9.3326	20a-006	Pipe Fitting Insulation	(6" O.D.) Valve - east wall, center section	6	EA.				0.03	0.03
7	9.5009	20a-009	Pipe Fitting Insulation	(8" O.D.) Elbow, metal jacket, north wall, center	9	EA.				0.05	0.05
7	8.6594	20b-005	Pipe Fitting Insulation	(6" O.D.) Leading into heater	14	EA.				0.07	0.07
7	8.6564	02a-011	Pipe Fitting Insulation	(1" O.D.) Steam line elbow off tank D1-1	19	EA.				0.10	0.10
7	8.4901	02a-024	Pipe Fitting Insulation	(4" O.D.) Water line elbow over slop sink	31	EA.				0.16	0.16
7	9.8375	02a-027	Pipe Fitting Insulation	Steam line fitting by west wall	1	EA.				0.01	0.01
7	8.3168	02a-033	Pipe Fitting Insulation	(18" O.D.) Tank feed elbow between columns C-18 and	6	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: **Pipe Fitting Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.4871	02a-042	Pipe Fitting Insulation	(5" O.D.) Black steam line elbow by column A-5	90	EA.				0.45	0.45
7	8.6574	02a-046	Pipe Fitting Insulation	(6" O.D.) Steam elbow between columns A-16 and	86	EA.				0.43	0.43
7	9.1633	02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column A-11	6	EA.				0.03	0.03
7	9.1633	02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column C-11	6	EA.				0.03	0.03
7	9.3316	02a-063	Pipe Fitting Insulation	(6" O.D.) Process water elbow A-12	5	EA.				0.03	0.03
7	9.3316	02a-063	Pipe Fitting Insulation	(3" O.D.) Process water elbow C-12	15	EA.				0.08	0.08
7	9.3316	02a-063	Pipe Fitting Insulation	(10" O.D.) Process water elbow - A-12	10	EA.				0.05	0.05
7	9.6682	02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	10	EA.				0.05	0.05
7	9.6682	02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	20	EA.				0.10	0.10
7	9.6692	2b-007	Pipe Fitting Insulation	(8" O.D.) Elbow	9	EA.				0.05	0.05
7	9.6692	2b-011	Pipe Fitting Insulation	(4" O.D.)	1	EA.				0.01	0.01
7	8.6554	31-010	Pipe Fitting Insulation	(2" O.D.) cold water	12	EA.				0.06	0.06
7	8.1495	31-011	Pipe Fitting Insulation	(2" O.D.) hot water	5	EA.				0.03	0.03
7	9.1623	37-01	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting by exit door	70	EA.				0.35	0.35
7	9.8355	37-04	Pipe Fitting Insulation	(3" O.D.) 90 degree condensate fitting	3	EA.				0.02	0.02
7	9.1623	37-06	Pipe Fitting Insulation	(3" O.D.) 90 degree potable water fitting above entrance	4	EA.				0.02	0.02
7	8.4861	03a-01	Pipe Fitting Insulation	(6" O.D.) elbow - west end	23	EA.				0.12	0.12
7	8.8247	3c-06	Pipe Fitting Insulation	(3" O.D.) Cold water elbow, north wall	21	EA.				0.11	0.11
7	8.4861	3c-08	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, south wall	3	EA.				0.02	0.02
7	7.1327	3d-05	Pipe Fitting Insulation	(4" O.D.) Sump water line insulation elbow, by WEMCO	104	EA.				0.52	0.52
7	7.9792	3d-06	Pipe Fitting Insulation	(3" O.D.) Steam line insulation elbow, near WEMCO sample #	27	EA.				0.14	0.14
7	8.8257	3d-07	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation valve	27	EA.				0.14	0.14
7	9.3326	3e-02	Pipe Fitting Insulation	(6" O.D.) Steam elbow	8	EA.				0.04	0.04
7	9.3326	3e-04	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	8	EA.				0.04	0.04
7	8.996	3e-12	Pipe Fitting Insulation	(6" O.D.) Metal jacketed steam elbow at railing	2	EA.				0.01	0.01
7	9.3326	3e-14	Pipe Fitting Insulation	(6" O.D.) Steam elbow, re-wettable canvas	5	EA.				0.03	0.03
7	9.6692	3e-20	Pipe Fitting Insulation	(4" O.D.) Abandoned elbow	3	EA.				0.02	0.02
7	8.996	3e-25	Pipe Fitting Insulation	(6" O.D.) Abandoned pump elbow	7	EA.				0.04	0.04
7	8.8257	45-010	Pipe Fitting Insulation	(8" O.D.) Steam line elbow at air handling unit, metal	6	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Material
Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	45-013	Pipe Fitting Insulation	(4" O.D.) Gray Pipe run insulation, abandoned West	3	EA.				0.02	0.02
7	9.6692	4a-002	Pipe Fitting Insulation	(3" O.D.) steam line valve on column 4E	40	EA.				0.20	0.20
7	9.8375	4a-005	Pipe Fitting Insulation	(3" O.D.) condenate line valve by column 3B	31	EA.				0.16	0.16
7	9.6692	4a-007	Pipe Fitting Insulation	(8" O.D.) treated water line valve by NE roll-up door	7	EA.				0.04	0.04
7	9.6672	4a-009	Pipe Fitting Insulation	(3" O.D.) potable water line elbow by column 2D	9	EA.				0.05	0.05
7	10.0048	4a-011	Pipe Fitting Insulation	(4" O.D.) cold water line elbow on column 4F	6	EA.				0.03	0.03
7	9.5009	4a-015	Pipe Fitting Insulation	(2" O.D.) hydrogen line valve from tank 1	27	EA.				0.14	0.14
7	10.1741	4a-018	Pipe Fitting Insulation	(6" O.D.) steam line elbow by tank 11	2	EA.				0.01	0.01
7	9.6692	4a-022	Pipe Fitting Insulation	(6" O.D.) steam line elbow by column 6C	10	EA.				0.05	0.05
7	8.4911	4a-025	Pipe Fitting Insulation	(8" O.D.) steam line elbow by center rescubber tank	23	EA.				0.12	0.12
7	9.6692	4a-027	Pipe Fitting Insulation	(3" O.D.) cold water line elbow by south wall	8	EA.				0.04	0.04
7	8.8267	4a-029	Pipe Fitting Insulation	(8" O.D.) steam line valve by column E-1	23	EA.				0.12	0.12
7	9.6702	4a-043	Pipe Fitting Insulation	(6" O.D.) Steam line elbow by column 6C	25	EA.				0.13	0.13
7	9.8365	4a-052	Pipe Fitting Insulation	(6" O.D.) Unknown line elbow around the perimeter of the 6th	5	EA.				0.03	0.03
7	9.4999	4a-055	Pipe Fitting Insulation	(6" O.D.) anhydrous line valve in the recovery room by	10	EA.				0.05	0.05
7	9.8365	4a-066	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow on lines going into	35	EA.				0.18	0.18
7	9.6682	4a-069	Pipe Fitting Insulation	(2" O.D.) line valve from tank between reactos 2 and 3	15	EA.				0.08	0.08
7	9.6682	4a-071	Pipe Fitting Insulation	(3" O.D.) steam line elbow at column 1F	36	EA.				0.18	0.18
7	9.8365	4a-074	Pipe Fitting Insulation	(10" O.D.) steam line elbow by column 8D on the south wall	60	EA.				0.30	0.30
7	9.6682	4a-078	Pipe Fitting Insulation	(2" O.D.) abandoned steam line elbow by column 4B	6	EA.				0.03	0.03
7	9.6682	4a-085	Pipe Fitting Insulation	(3" O.D.) pipe line elbow by column 2A	6	EA.				0.03	0.03
7	9.6682	4a-089	Pipe Fitting Insulation	(8" O.D.) exhaust line elbow coming from reactor 9 by	30	EA.				0.15	0.15
7	9.1633	4a-091	Pipe Fitting Insulation	(6" O.D.) steam line elbow by reactor 1	66	EA.				0.33	0.33
7	8.995	4a-104	Pipe Fitting Insulation	(8" O.D.) unknow line elbow by column 5B, next to	12	EA.				0.06	0.06
7	9.3316	4a-105	Pipe Fitting Insulation	(8" O.D.) unknown line elbow by column 5B, next to	1	EA.				0.01	0.01
7	8.4841	05-019	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, by caged	13	EA.				0.07	0.07
7	8.6524	05-021	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 19E	6	EA.				0.03	0.03
7	9.1583	05-033	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	3	EA.				0.02	0.02
7	8.8227	05-054	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 10G	11	EA.				0.06	0.06

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Pipe Fitting Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.3158	05-071	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, at North end of men's	42	EA.				0.21	0.21
7	8.3168	05-073	Pipe Fitting Insulation	(4" O.D.) Sump water line, South of column 5F	5	EA.				0.03	0.03
7	8.3158	05-077	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, North of column 6A	25	EA.				0.13	0.13
7	8.993	05-080	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, nex to column 26F	13	EA.				0.07	0.07
7	8.8237	05-083	Pipe Fitting Insulation	(6" O.D.) Condensate line fitting, next to column 25F	6	EA.				0.03	0.03
7	8.8237	05-086	Pipe Fitting Insulation	(6" O.D.) Condensate return line fitting, next to column 18F	28	EA.				0.14	0.14
7	9.4999	05-099	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, Northwest side of plant	9	EA.				0.05	0.05
7	8.6524	05-030	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 16F,	3	EA.				0.02	0.02
7	9.6682	54-003	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting near garage door	7	EA.				0.04	0.04
7	9.8375	54-022	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	13	EA.				0.07	0.07
7	9.5009	54-026	Pipe Fitting Insulation	(5" O.D.) Cooling water supply line elbow above condensate	38	EA.				0.19	0.19
7	9.8375	54-034	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow by stairs	21	EA.				0.11	0.11
7	9.8375	54-036	Pipe Fitting Insulation	(4" O.D.) Instrument air line elbow	2	EA.				0.01	0.01
7	9.1643	55a-005	Pipe Fitting Insulation	(4" O.D.) Elbow , south wall at catwalk	31	EA.				0.16	0.16
7	9.4969	06-020	Pipe Fitting Insulation	(8" O.D.)	17	EA.				0.09	0.09
7	9.1623	06-024	Pipe Fitting Insulation	(3" O.D.) Potable water elbow, over restroom	8	EA.				0.04	0.04
7	9.4969	06-026	Pipe Fitting Insulation	(3" O.D.) Water elbow, above work station	10	EA.				0.05	0.05
7	9.3296	06-029B	Pipe Fitting Insulation	(4" O.D.) Process water fitting	3	EA.				0.02	0.02
7	9.8335	06-030	Pipe Fitting Insulation	(10" O.D.) Steam elbow	4	EA.				0.02	0.02
7	9.3286	06-036	Pipe Fitting Insulation	Condensate fittings	3	EA.				0.02	0.02
7	9.4969	06-042	Pipe Fitting Insulation	(8" O.D.) Steam elbow	10	EA.				0.05	0.05
7	8.6554	06-053	Pipe Fitting Insulation	(4" O.D.) Steam elbow	170	EA.				0.85	0.85
7	9.4969	06-056	Pipe Fitting Insulation	(4" O.D.) Water valve	6	EA.				0.03	0.03
7	9.8355	06-060	Pipe Fitting Insulation	(4" O.D.) Steam elbow	12	EA.				0.06	0.06
7	9.4989	06-064	Pipe Fitting Insulation	Potable water elbow	5	EA.				0.03	0.03
7	8.8237	06-082	Pipe Fitting Insulation	Steam valve above restroom	22	EA.				0.11	0.11
7	9.4989	06-098	Pipe Fitting Insulation	Hot water elbow at column B7	5	EA.				0.03	0.03
7	9.6672	06-110	Pipe Fitting Insulation	(6" O.D.) Hot water fitting, southwest corner	4	EA.				0.02	0.02
7	9.6672	06-110	Pipe Fitting Insulation	(3" O.D.) Hot water elbow	8	EA.				0.04	0.04

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Pipe Fitting Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.8257	06-116	Pipe Fitting Insulation	(6" O.D.) Steam elbow, southwest corner	40	EA.				0.20	0.20
7	9.4999	06-125	Pipe Fitting Insulation	(4" O.D.) Steam tee	24	EA.				0.12	0.12
7	8.995	06-126	Pipe Fitting Insulation	Steam fitting above office	20	EA.				0.10	0.10
7	10.3434	06-127	Pipe Fitting Insulation	(6" O.D.) Roof drain elbow	5	EA.				0.03	0.03
7	9.8375	06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting, southeast corner	2	EA.				0.01	0.01
7	9.8375	06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting	2	EA.				0.01	0.01
7	10.5107	06-177	Pipe Fitting Insulation	(10" O.D.) Refer to 2318, steam fitting, east side	1	EA.				0.01	0.01
7	9.8355	06-002	Pipe Fitting Insulation	(2" O.D.)Dead water fitting, by column C6	1	EA.				0.01	0.01
7	9.4989	06-003	Pipe Fitting Insulation	(10" O.D.) Roof drain fitting; by north wall at men's restroom	3	EA.				0.02	0.02
7	9.1623	66-02	Pipe Fitting Insulation	Water fittings	24	EA.				0.12	0.12
7	8.6574	66-09	Pipe Fitting Insulation	(3" O.D.) Steam fitting by heater	3	EA.				0.02	0.02
7	9.6702	07-002	Pipe Fitting Insulation	(4" O.D.) Steam line tee valve insulation	1	EA.				0.01	0.01
7	9.3336	07-010	Pipe Fitting Insulation	(6" O.D.) LS steam line fitting insulation	23	EA.				0.12	0.12
7	9.5009	07-015	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting insulation	7	EA.				0.04	0.04
7	9.3336	07-021	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	20	EA.				0.10	0.10
7	10.1751	07-027	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	1	EA.				0.01	0.01
7	10.5117	07-029	Pipe Fitting Insulation	(3" O.D.) Steam line fitting insulation	12	EA.				0.06	0.06
7	9.8385	07-034	Pipe Fitting Insulation	(4" O.D.) Steam line fitting insulation	26	EA.				0.13	0.13
7	10.1741	07-036	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	4	EA.				0.02	0.02
7	10.1741	07-038	Pipe Fitting Insulation	(6" O.D.) Service water line tee valve insulation	1	EA.				0.01	0.01
7	10.1741	07-040	Pipe Fitting Insulation	(4" O.D.) Service water line tee fitting insulation	1	EA.				0.01	0.01
7	9.8375	07-043	Pipe Fitting Insulation	(4" O.D.) Potable water line fitting insulation	16	EA.				0.08	0.08
7	8.8257	8a-001	Pipe Fitting Insulation	(12" O.D.) Steam line fitting by column D9	145	EA.				0.73	0.73
7	9.8355	8a-003	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting next to men's restroom	30	EA.				0.15	0.15
7	9.1603	8a-008	Pipe Fitting Insulation	(6" O.D.) Cooling water line fitting by column 2A	15	EA.				0.08	0.08
7	8.6524	8a-035	Pipe Fitting Insulation	(3" O.D.) Metal jacketed Not sampled per WEMCO	11	EA.				0.06	0.06
7	8.6524	8a-037	Pipe Fitting Insulation	(4" O.D.) Metal jacketed not sampled per WEMCO	45	EA.				0.23	0.23
7	8.6524	8a-039	Pipe Fitting Insulation	(5" O.D.) Metal jacketed not sampled per WEMCO	8	EA.				0.04	0.04
7	8.6524	8a-041	Pipe Fitting Insulation	(6" O.D.) Metal jacketed not sampled per WEMCO	5	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Pipe Fitting Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	7.305	09-008	Pipe Fitting Insulation	(6" O.D.) Steam line fitting	24	EA.				0.12	0.12
7	8.994	09-010	Pipe Fitting Insulation	(10" O.D.) High pressure steam line elbow	19	EA.				0.10	0.10
7	9.1623	09-021	Pipe Fitting Insulation	(2" O.D.) Cold water line fitting along south wall	10	EA.				0.05	0.05
7	8.3208	09-022A	Pipe Fitting Insulation	(2" O.D.) Hot water line fitting leading to heater, recently	10	EA.				0.05	0.05
7	9.8365	09-041	Pipe Fitting Insulation	(3" O.D.) Hot water line elbow on heater	2	EA.				0.01	0.01
7	9.8385	09-044	Pipe Fitting Insulation	(4" O.D.) Cold water line elbow above urinal	10	EA.				0.05	0.05
7	8.6544	09-046	Pipe Fitting Insulation	(8" O.D.) Hot water line elbow leading into HVAC	25	EA.				0.13	0.13
7	8.995	09-018	Pipe Fitting Insulation	(6" O.D.) Chilled water line fitting 5 feet off the ground by	13	EA.				0.07	0.07
7	7.9772	15-001	Pipe Fitting Insulation	(6" O.D.) Steam line fittings in room E-3 of southeast corner	149	EA.				0.75	0.75
7	7.9772	15-003	Pipe Fitting Insulation	(4" O.D.) Condensate line fittings in southeast corner of	31	EA.				0.16	0.16
7	8.991	15-029	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in northeast corner of room C-41	94	EA.				0.47	0.47
7	8.8237	15-031	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in northeast corner of	29	EA.				0.15	0.15
7	8.8217	15-033	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting in room C-22, east wall	76	EA.				0.38	0.38
7	8.6544	15-046	Pipe Fitting Insulation	(4" O.D.) Steam line valve in southwest corner of room	177	EA.				0.89	0.89
7	8.3158	15-049	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in southwest corner of	92	EA.				0.46	0.46
7	8.6524	15-069	Pipe Fitting Insulation	(3" O.D.) Water line fitting in HVAC room S-21 above HVAC	29	EA.				0.15	0.15
7	8.3158	15-084	Pipe Fitting Insulation	(2" O.D.) Water line fitting above drinking fountain in east	12	EA.				0.06	0.06
7	8.3158	15-087	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in room W-18 by exit door	46	EA.				0.23	0.23
7	8.989	15-089	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in hall across from W-32	13	EA.				0.07	0.07
7	8.3158	15-091	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation fitting in hall across	86	EA.				0.43	0.43
7	8.4861	15-140	Pipe Fitting Insulation	(4" O.D.) Steam and condensate fitting in west	25	EA.				0.13	0.13
7	10.1751	06-208	Pipe Fitting Insulation	(5" O.D.) steam fittings Assumed per WEMCO	8	EA.				0.04	0.04
7	8.1465	06-210	Pipe Fitting Insulation	(4" O.D.) Steam elbows assumed Positive per WEMCO	7	EA.				0.04	0.04
TOTALS:					10708		3,382.50	5,086.00	5,455.00	52.49	13,975.99

Total Removal Cost $297,608.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: Pipe Fitting Insulation Lagging

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	8.8227	15-120	Pipe Fitting Insulation Lagging	AHU unit-Condensate fittings (canvas wrapped material)	10	S.F.	15.00			0.05	15.05
7	9.1603	06-134	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate/steam elbow lagging	20	S.F.				0.10	0.10
7	8.8257	06-148	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate valve lagging	5	S.F.				0.03	0.03
7	9.3296	06-164	Pipe Fitting Insulation Lagging	(4" O.D.) Steam elbow lagging, above waste water tank	3	S.F.				0.02	0.02
TOTALS:					38		15.00			0.19	15.19

Total Removal Cost $380.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Pipe Run Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	9.3266	011-056	Pipe Run Insulation	(4" O.D.)	10	L.F.		220.00	130.00		350.00
1	7.4763	012a-048	Pipe Run Insulation	(8" O.D.) Steam line by heater at catwalk	80	L.F.		2000.00	1520.00		3520.00
1	7.1377	13a-015	Pipe Run Insulation	(3" O.D.) Condensate line	12	L.F.		264.00	156.00		420.00
1	8.1495	13a-002A	Pipe Run Insulation	(6" O.D.) Steam line insulation, by column Q1	1595	L.F.		35090.00	20735.00		55825.00
1	4.9448	02a-019	Pipe Run Insulation	(4" O.D.) Horizontal steam line	46	L.F.		1012.00	598.00		1610.00
1	6.4635	02a-025	Pipe Run Insulation	Vertical steam line in south outer building	5	L.F.		110.00	65.00		175.00
1	6.4635	02a-025	Pipe Run Insulation	(3" O.D.) Vertical steam run, west wall	15	L.F.		330.00	195.00		525.00
1	6.2972	02a-051	Pipe Run Insulation	(6" O.D.) Vertical sump water line by column D-17	55	L.F.		1210.00	715.00		1925.00
1	8.8257	2b-006	Pipe Run Insulation	(8" O.D.) Line	25	L.F.		625.00	475.00		1100.00
1	8.6554	3e-09	Pipe Run Insulation	(8" O.D.) Steam line	210	L.F.		5250.00	3990.00		9240.00
1	8.3188	3e-26	Pipe Run Insulation	(6" O.D.) Condensate line, south wall	80	L.F.		1760.00	1040.00		2800.00
1	7.304	4a-102	Pipe Run Insulation	Pipe Run Insulation in containment, preventing	720	L.F.		2880.00	6480.00		9360.00
1	7.4723	05-027	Pipe Run Insulation	(8" O.D.) 150 pound steam line, between column 17F and	158	L.F.		3950.00	3002.00		6952.00
1	8.8247	05-039	Pipe Run Insulation	(4" O.D.) 150 pound steam line, near column 10A, branch	15	L.F.		330.00	195.00		525.00
1	8.4881	06-122	Pipe Run Insulation	Vertical run at tocco furnace	6	L.F.		132.00	78.00		210.00
1	8.1505	07-001	Pipe Run Insulation	(4" O.D.) Steam line insulation	5	L.F.		110.00	65.00		175.00
1	7.9812	07-004	Pipe Run Insulation	(4" O.D.) Steam line insulation	35	L.F.		770.00	455.00		1225.00
1	7.4753	07-006	Pipe Run Insulation	(4" O.D.) Ammonia line insulation	425	L.F.		9350.00	5525.00		14875.00
1	7.4763	07-008	Pipe Run Insulation	(4" O.D.) Condensate line insulation	5	L.F.		110.00	65.00		175.00
1	8.6574	07-020	Pipe Run Insulation	(10" O.D.) Steam line insulation	105	L.F.		2625.00	1995.00		4620.00
1	7.6476	07-024	Pipe Run Insulation	(6" O.D.) Service water line insulation	43	L.F.		946.00	559.00		1505.00
1	7.8159	07-030	Pipe Run Insulation	(4" O.D.) Steam line insulation	126	L.F.		2772.00	1638.00		4410.00
1	7.1397	07-031	Pipe Run Insulation	(4" O.D.) Condensate line insulation	30	L.F.		660.00	390.00		1050.00
1	7.8139	07-049	Pipe Run Insulation	(4" O.D.) Condensate line insulation	405	L.F.		8910.00	5265.00		14175.00
1	8.1535	8a-021	Pipe Run Insulation	(3" O.D.) Water line off of hot water heater	6	L.F.		132.00	78.00		210.00
1	6.4585	8a-043	Pipe Run Insulation	(20" O.D.) Process line	45	L.F.		1350.00	945.00		2295.00
1	7.1377	09-003B	Pipe Run Insulation	(3" O.D.) Steam line, above roll up door	75	L.F.		1650.00	975.00		2625.00
1	6.4645	09-040	Pipe Run Insulation	(4" O.D.) Hot water lines leading to heaters	28	L.F.		616.00	364.00		980.00
1	6.9674	15-108	Pipe Run Insulation	Pipe insulation run, north tunnel, west side	26	L.F.		572.00	338.00		910.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Pipe Run Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.1229	15-138	Pipe Run Insulation	(6" O.D.) Condensate line straights by west wall between	107	L.F.		2354.00	1391.00		3745.00
2	7.1347	3d-08	Pipe Run Insulation	(4" O.D.) Horizontal steam line, tar wrapped	30	L.F.	45.00			0.15	45.15
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, ta wrapped	12	L.F.	18.00			0.06	18.06
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, ta wrapped	24	L.F.	36.00			0.12	36.12
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.)Vertical steam line, tar wrapped	12	L.F.	18.00			0.06	18.06
2	6.2952	06-078	Pipe Run Insulation	(8" O.D.) Steam line by restroom	5	L.F.	7.50			0.03	7.53
3	7.304	28b-001	Pipe Run Insulation	(3" O.D.) Horizontal steam line north wall	25	L.F.	37.50			0.13	37.63
3	8.4861	012a-003	Pipe Run Insulation	(4" O.D.)	137	L.F.	205.50			0.69	206.19
3	7.4753	012a-019	Pipe Run Insulation	(4" O.D.) Abandoned line	50	L.F.	75.00			0.25	75.25
3	9.3306	13a-009	Pipe Run Insulation	No samples were taken, lines not accessible	380	L.F.	570.00			1.90	571.90
3	9.1613	13a-011	Pipe Run Insulation	No samples were taken, lines not accessible	385	L.F.	577.50			1.93	579.43
3	6.7991	01-005	Pipe Run Insulation	(4" O.D.) Water line	256	L.F.	384.00			1.28	385.28
3	6.6318	02a-007	Pipe Run Insulation	(4" O.D.) Vertical condensate line by tank, metal-jacketed	555	L.F.	832.50			2.78	835.28
3	5.9566	02a-028	Pipe Run Insulation	(3" O.D.) Water line, metal-jacketed	21	L.F.	31.50			0.11	31.61
3	8.4841	02a-053	Pipe Run Insulation	(32" O.D.) Vent pipe, D1-204, by W.M.C.O. sample A0223,	130	L.F.	195.00			0.65	195.65
3	8.8257	37-02	Pipe Run Insulation	(4" O.D.) Steam line	660	L.F.	990.00			3.30	993.30
3	8.1495	03b-01	Pipe Run Insulation	(2" O.D.)	50	L.F.	75.00			0.25	75.25
3	8.8247	3e-07	Pipe Run Insulation	(4" O.D.) Tank line, at south end	60	L.F.	90.00			0.30	90.30
3	8.998	3e-22	Pipe Run Insulation	(8" O.D.) Steam line at south wall	50	L.F.	75.00			0.25	75.25
3	9.6692	3e-28	Pipe Run Insulation	(8" O.D.) Abandoned steam line at south wall	70	L.F.	105.00			0.35	105.35
3	9.5019	4a-006	Pipe Run Insulation	(6" O.D.) vertical treated water line, metal jacketed, by NE	75	L.F.	112.50			0.38	112.88
3	9.5019	4a-006	Pipe Run Insulation	(3" O.D.) horizontal treated water line by column 6D	30	L.F.	45.00			0.15	45.15
3	7.9812	4a-100	Pipe Run Insulation	(4" O.D.) steam condensate line on the west side of the	60	L.F.	90.00			0.30	90.30
3	8.8267	05-003	Pipe Run Insulation	(8" O.D.) Condensate line, near column 28B	340	L.F.	510.00			1.70	511.70
3	8.1465	05-076	Pipe Run Insulation	(6" O.D.) Process water line next to column 6A	194	L.F.	291.00			0.97	291.97
3	8.1465	05-078	Pipe Run Insulation	(6" O.D.) Condensate line, next to 2B	480	L.F.	720.00			2.40	722.40
3	10.1741	54-040	Pipe Run Insulation	(4" O.D.) Dead line in refrigeration area, could not	320	L.F.	480.00			1.60	481.60
3	8.6554	06-045A	Pipe Run Insulation	(8" O.D.)	30	L.F.	45.00			0.15	45.15
3	9.3338	07-009	Pipe Run Insulation	(5" O.D.) Service water line insulation	135	L.F.	202.50			0.68	203.18

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	9.6702	07-011	Pipe Run Insulation	(10" O.D.) Steam line insulation	105	L.F.	157.50			0.53	158.03
3	9.6702	07-014	Pipe Run Insulation	(6" O.D.) Service water line insulation	56	L.F.	84.00			0.28	84.28
3	9.8375	07-016	Pipe Run Insulation	(4" O.D.) Potable water line insulation	25	L.F.	37.50			0.13	37.63
3	9.3336	07-022	Pipe Run Insulation	(4" O.D.) Condensate line insulation	52	L.F.	78.00			0.26	78.26
3	9.1643	07-035	Pipe Run Insulation	(6" O.D.) Steam line insulation	157	L.F.	235.50			0.79	236.29
3	8.8267	07-047	Pipe Run Insulation	(4" O.D.) Steam line insulation	776	L.F.	1164.00			3.88	1167.88
3	8.8237	8a-011	Pipe Run Insulation	(6" O.D.) Condensate line above pumps	765	L.F.	1147.50			3.83	1151.33
3	7.4753	09-011A	Pipe Run Insulation	(10" O.D.) High pressure steam line, recently wrapped	198	L.F.	297.00			0.99	297.99
3	8.4861	15-135	Pipe Run Insulation	(6" O.D.) Steam system-straigh run, south mechanical room,	315	L.F.	472.50			1.58	474.08
3	8.4861	15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run in	112	L.F.	168.00			0.56	168.56
3	7.305	15-137	Pipe Run Insulation	(10" O.D.) Condensate line straights, elbow by overhead	151	L.F.	226.50			0.76	227.26
3	7.305	15-139	Pipe Run Insulation	(10" O.D.) Steam line straight by west wall by overhead	102	L.F.	153.00			0.51	153.51
4	8.994	20e-001	Pipe Run Insulation	(12" O.D.) Water Line	13	L.F.	19.50			0.07	19.57
4	8.6564	71-002	Pipe Run Insulation	(3" O.D.)Water line by south wall	18	L.F.	27.00			0.09	27.09
4	9.6682	13a-005	Pipe Run Insulation	(4" O.D.) Cooling water supply line on cooling water tank	585	L.F.	877.50			2.93	880.43
4	9.3306	13a-003B	Pipe Run Insulation	(4" O.D.) Cooling water return line	6	L.F.	9.00			0.03	9.03
4	9.3326	20a-005	Pipe Run Insulation	(10" O.D.) Green line, center section	40	L.F.	60.00			0.20	60.20
4	8.993	28a-009	Pipe Run Insulation	(4" O.D.) Line corner of womens bath room #110	20	L.F.	30.00			0.10	30.10
4	8.6564	28a-010	Pipe Run Insulation	(4" O.D.) Line in womens bath room #110	84	L.F.	126.00			0.42	126.42
4	6.9704	02a-002	Pipe Run Insulation	(4" O.D.) Horizontal steam line in between tanks D1-7 and	150	L.F.	225.00			0.75	225.75
4	8.996	2d-002	Pipe Run Insulation	(4" O.D.) Steam line	10	L.F.	15.00			0.05	15.05
4	9.3296	32-003	Pipe Run Insulation	(4" O.D.) Steam line pipe run insulation	12	L.F.	18.00			0.06	18.06
4	9.3296	32-006	Pipe Run Insulation	(4" O.D.) Water line pipe run insulation, gray	95	L.F.	142.50			0.48	142.98
4	9.6692	3e-18	Pipe Run Insulation	(8" O.D.) At half-level	30	L.F.	45.00			0.15	45.15
4	9.1633	45-018	Pipe Run Insulation	(3" O.D.) Abandoned straight line	30	L.F.	45.00			0.15	45.15
4	9.1623	4a-048	Pipe Run Insulation	(10" O.D.) Steam line by column 5B	150	L.F.	225.00			0.75	225.75
4	9.1633	4a-053	Pipe Run Insulation	(6" O.D.) Unknown line around the perimeter of the 6th floor.	150	L.F.	225.00			0.75	225.75
4	8.994	4a-068	Pipe Run Insulation	(6" O.D.) lines from tank between reactors 2 and 3	30	L.F.	45.00			0.15	45.15
4	8.8247	4a-072	Pipe Run Insulation	(3" O.D.) potable water line column 5F	40	L.F.	60.00			0.20	60.20

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.1633	4a-084	Pipe Run Insulation	(3" O.D.) pipe line by column 2A	40	L.F.	60.00			0.20	60.20
4	9.8365	05-104	Pipe Run Insulation	(6" O.D.) 150 pound steam line, near column 26E	70	L.F.	105.00			0.35	105.35
4	9.8365	05-001	Pipe Run Insulation	(6" O.D.) 150 pound steam, line near column 29C	80	L.F.	120.00			0.40	120.40
4	8.3158	05-008	Pipe Run Insulation	(2" O.D.) Steam line, office 05-27	70	L.F.	105.00			0.35	105.35
4	8.8217	05-037	Pipe Run Insulation	(8" O.D.) 150 pound steam line, near column 14	350	L.F.	525.00			1.75	526.75
4	9.8345	05-040	Pipe Run Insulation	(6" O.D.) Condensate line, near column 10A	297	L.F.	445.50			1.49	446.99
4	9.3286	05-057	Pipe Run Insulation	(4" O.D.) Water line riser, at column 12G	2	L.F.	3.00			0.01	3.01
4	8.991	05-069	Pipe Run Insulation	(3" O.D.) Steam line riser, near column 4E	610	L.F.	915.00			3.05	918.05
4	9.3296	06-029A	Pipe Run Insulation	(4" O.D.) Process water	45	L.F.	67.50			0.23	67.73
4	9.3296	06-051B	Pipe Run Insulation	(10" O.D.) At column C18	173	L.F.	259.50			0.87	260.37
4	9.1633	06-087B	Pipe Run Insulation	(2" O.D.) Steam line, metal clad	10	L.F.	15.00			0.05	15.05
4	8.3168	06-118	Pipe Run Insulation	(6" O.D.) Abandoned line leading to tocco furnace	25	L.F.	37.50			0.13	37.63
4	9.1623	06-165	Pipe Run Insulation	(2" O.D.) Steam line bypass	40	L.F.	60.00			0.20	60.20
4	8.992	06-171	Pipe Run Insulation	(10" O.D.) Steam line	40	L.F.	60.00			0.20	60.20
4	9.1603	06-173	Pipe Run Insulation	(4" O.D.) Water line, at east wa	40	L.F.	60.00			0.20	60.20
4	8.4841	069-003	Pipe Run Insulation	(4" O.D.) metal jacket	282	L.F.	423.00			1.41	424.41
4	9.3336	07-013	Pipe Run Insulation	(4" O.D.) Condensate line insulation	35	L.F.	52.50			0.18	52.68
4	10.0068	07-017	Pipe Run Insulation	(4" O.D.) Service water line insulation	35	L.F.	52.50			0.18	52.68
4	9.3336	07-032	Pipe Run Insulation	(4" O.D.) Service water line insulation	45	L.F.	67.50			0.23	67.73
4	9.3336	07-037	Pipe Run Insulation	(4" O.D.) Condensate line insulation	77	L.F.	115.50			0.39	115.89
4	9.5009	07-042	Pipe Run Insulation	(3" O.D.) Potable water line insulation	103	L.F.	154.50			0.52	155.02
4	8.6594	07-051	Pipe Run Insulation	(4" O.D.) Service water line insulation	306	L.F.	459.00			1.53	460.53
4	10.0068	8a-014	Pipe Run Insulation	(3" O.D.) Potable water line	52	L.F.	78.00			0.26	78.26
4	9.6692	15-111	Pipe Run Insulation	Pipe insulation run by column S-15 running north to south	3	L.F.	4.50			0.02	4.52
4	9.8375	06-207	Pipe Run Insulation	(5" O.D.) steam line by column B-3 Assumed per WEMCO	15	L.F.	22.50			0.08	22.58
5	6.9624	012a-001	Pipe Run Insulation	Over (10" O.D.) By west exit	670	L.F.				3.35	3.35
5	10.1751	4a-016	Pipe Run Insulation	(4" O.D.) steam line by tank 7	54	L.F.				0.27	0.27
5	8.3218	06-099	Pipe Run Insulation	(2" O.D.) Condensate line, metal clad	26	L.F.				0.13	0.13
5	9.1633	09-025	Pipe Run Insulation	(2" O.D.) Vertical hot water line leading into heater	50	L.F.				0.25	0.25

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Material: **Pipe Run Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	9.6682	20g-01	Pipe Run Insulation	(12" O.D.) Water line	14	LF.				0.07	0.07
6	8.995	025a-02	Pipe Run Insulation	(3" O.D.) Vertical line	88	LF.				0.44	0.44
6	9.4989	01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.21	0.21
6	6.9654	10a-004	Pipe Run Insulation	(6" O.D.) Vertical steam line insulation	550	LF.				2.75	2.75
6	7.6416	10a-041	Pipe Run Insulation	(3" O.D.) Steam line going into heaters	23	LF.				0.12	0.12
6	8.6544	01-001	Pipe Run Insulation	(4" O.D.) 150# Steam Line	785	LF.				3.93	3.93
6	8.6524	01-003	Pipe Run Insulation	(4" O.D.) Condensate return line	545	LF.				2.73	2.73
6	9.4989	01-017	Pipe Run Insulation	(4" O.D.) 150# Pound Steam Line next to Column 6C	30	LF.				0.15	0.15
6	6.4645	02a-004	Pipe Run Insulation	(2" O.D.) Horizontal black process water line leading to	173	LF.				0.87	0.87
6	7.9812	02a-047	Pipe Run Insulation	(3" O.D.)	59	LF.				0.30	0.30
6	7.305	2c-01	Pipe Run Insulation	(3" O.D.) Black lagging with white insulation	60	LF.				0.30	0.30
6	7.6446	31-002	Pipe Run Insulation	(6" O.D.) steam system	540	LF.				2.70	2.70
6	5.7873	3d-02A	Pipe Run Insulation	(4" O.D.) Steam line	250	LF.				1.25	1.25
6	7.4733	3d-04A	Pipe Run Insulation	(4" O.D.) Sump water insulation	450	LF.				2.25	2.25
6	8.6574	45-008	Pipe Run Insulation	(8" O.D.) Steam Line at Air Handling Unit	40	LF.				0.20	0.20
6	9.3328	4a-028	Pipe Run Insulation	(6" O.D.) vertical steam line by column F-1	330	LF.				1.65	1.65
6	9.1633	4a-092	Pipe Run Insulation	(8" O.D.) steam line, metal jacketed, by reactor 1	1120	LF.				5.60	5.60
6	8.6574	4a-013	Pipe Run Insulation	(6" O.D.) vertical ammonia line by west side double doors	85	LF.				0.43	0.43
6	9.3276	05-093	Pipe Run Insulation	(3" O.D.) Condensate return line, by column 2D	345	LF.				1.73	1.73
6	9.8375	54-028	Pipe Run Insulation	(4" O.D.) Cooling water supply line over water pumps	80	LF.				0.40	0.40
6	9.5009	54-032A	Pipe Run Insulation	(4" O.D.) Cooling water return line above water pumps	40	LF.				0.20	0.20
6	9.8375	54-033	Pipe Run Insulation	(4" O.D.) Potable water line left of stairs	379	LF.				1.90	1.90
6	9.8375	54-037	Pipe Run Insulation	(4" O.D.) Condensate line by condensate tank	71	LF.				0.36	0.36
6	7.9802	06-068	Pipe Run Insulation	Water line	20	LF.				0.10	0.10
6	7.8119	06-072	Pipe Run Insulation	Water line outside restroom	60	LF.				0.30	0.30
6	8.8247	06-095B	Pipe Run Insulation	(4" O.D.) Steam line, metal clad	92	LF.				0.46	0.46
6	8.8237	8a-002	Pipe Run Insulation	(12" O.D.) Steam line, metal jacketed by column D9	1360	LF.				6.80	6.80
6	9.1603	8a-004	Pipe Run Insulation	(3" O.D.) Potable water line, metal jacketed by Column 7B	284	LF.				1.42	1.42
6	10.5127	8a-006C	Pipe Run Insulation	(4" O.D.) Process water line by column 5a	60	LF.				0.30	0.30

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	10.5127	8a-006C	Pipe Run Insulation	(4" O.D.) Process water line by column 5a	60	L.F.				0.30	0.30
6	9.1643	8a-015	Pipe Run Insulation	(4" O.D.) Steam line by gauge door at column C1	220	L.F.				1.10	1.10
6	9.5009	8a-017	Pipe Run Insulation	(3" O.D.) Condensate line on catwalk, south side of heater	100	L.F.				0.50	0.50
6	10.0048	8a-020	Pipe Run Insulation	(4" O.D.) Process water line by column D8	212	L.F.				1.06	1.06
6	8.997	09-001A	Pipe Run Insulation	(6" O.D.) Condensate line, on heating unit	10	L.F.				0.05	0.05
6	8.993	15-065	Pipe Run Insulation	(4" O.D.) Steam line insulation by west wall in HVAC room S-	83	L.F.				0.42	0.42
6	8.993	15-067	Pipe Run Insulation	(3" O.D.) Condensate line insulation by northwest wall in	12	L.F.				0.06	0.06
6	9.3296	15-073	Pipe Run Insulation	(4" O.D.) Steam line insulation by main entrance to HVAC	1465	L.F.				7.33	7.33
6	8.993	15-077	Pipe Run Insulation	(4" O.D.) Condensate line insulation on floor. West side	22	L.F.				0.11	0.11
6	8.8237	15-114	Pipe Run Insulation	(4" O.D.) Cooling water supply and return, elevated line	57	L.F.				0.29	0.29
6	8.4851	15-127	Pipe Run Insulation	(2" O.D.) Cold water system - straight run. Room R-18	70	L.F.				0.35	0.35
6	8.1485	15-129	Pipe Run Insulation	(2" O.D.) Hot water return system straight runs. Room	70	L.F.				0.35	0.35
6	8.4851	15-131	Pipe Run Insulation	(3" O.D.) Hot water supply system - straight runs. Room	70	L.F.				0.35	0.35
6	8.992	15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run. South	40	L.F.				0.20	0.20
6	8.992	15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run in	17	L.F.				0.09	0.09
7	8.996	24b-001	Pipe Run Insulation	(3" O.D.) Condensate; west wall, center	25	L.F.				0.13	0.13
7	9.5009	24b-003	Pipe Run Insulation	(4" O.D.) Steam; east wall, center	95	L.F.				0.48	0.48
7	8.8257	2e-001	Pipe Run Insulation	(4" O.D.) Metal jacketed, condensate line	75	L.F.				0.38	0.38
7	9.1623	2e-002	Pipe Run Insulation	(6" O.D.) Metal jacketed, steam line	130	L.F.				0.65	0.65
7	9.3306	38-01	Pipe Run Insulation	(5" O.D.) Steam, gray in color, near exit door	160	L.F.				0.80	0.80
7	9.3306	38-03	Pipe Run Insulation	(3" O.D.) Steam line, green in color, west wall	85	L.F.				0.43	0.43
7	9.1603	8b-001	Pipe Run Insulation	(4" O.D.) Steam Line Located on North Side of Wall	110	L.F.				0.55	0.55
7	9.1613	28b-004	Pipe Run Insulation	PIR(6" O.D.) Vertical leading to duct	9	L.F.				0.05	0.05
7	8.994	069-005	Pipe Run Insulation	(9" O.D.) contaminated rinse line metal jacket south side of	9	L.F.				0.05	0.05
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	L.F.				1.00	1.00
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	L.F.				1.00	1.00
7	9.6692	10a-006	Pipe Run Insulation	(6" O.D.) Horizontal condensate line	180	L.F.				0.90	0.90
7	9.1623	10a-014C	Pipe Run Insulation	(10" O.D.) Vertical zeolite wate line	500	L.F.				2.50	2.50
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	L.F.				1.00	1.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.996	10a-016	Pipe Run Insulation	(6" O.D.) Vertical steam line	4000	L.F.				20.00	20.00
7	6.6278	10a-018A	Pipe Run Insulation	(6" O.D.) Vertical water line	1400	L.F.				7.00	7.00
7	9.3306	011-016	Pipe Run Insulation	(10" O.D.) Horizontal Steam line	60	L.F.				0.30	0.30
7	8.4831	011-023	Pipe Run Insulation	(24" O.D.) Steam line	75	L.F.				0.38	0.38
7	9.1603	011-026	Pipe Run Insulation	(6" O.D.) Horizontal steam line	70	L.F.				0.35	0.35
7	9.3286	011-031	Pipe Run Insulation	(6" O.D.) Steam line	500	L.F.				2.50	2.50
7	7.302	011-033	Pipe Run Insulation	(6" O.D.) Horizontal steam line north-south metal jacketed	450	L.F.				2.25	2.25
7	9.3316	011-036	Pipe Run Insulation	(12" O.D.) Steam line, vertical between tanks 3 & 2	150	L.F.				0.75	0.75
7	8.6574	011-047	Pipe Run Insulation	(12" O.D.) Steam line horizontal	610	L.F.				3.05	3.05
7	9.5009	012a-018	Pipe Run Insulation	(4" O.D.) East wall grey lagging,cold water line	150	L.F.				0.75	0.75
7	7.9802	012a-022	Pipe Run Insulation	(4" O.D.) Hot water line	150	L.F.				0.75	0.75
7	6.6298	012a-030	Pipe Run Insulation	(3" O.D.) Vertical by door 125+	20	L.F.				0.10	0.10
7	10.3414	012a-035	Pipe Run Insulation	(4" O.D.) Steam line by column k-11	100	L.F.				0.50	0.50
7	10.3414	012a-035	Pipe Run Insulation	Steam line by column L-11	100	L.F.				0.50	0.50
7	10.3414	012a-037	Pipe Run Insulation	(4" O.D.) Condensate line by Col. L-11 north side	32	L.F.				0.16	0.16
7	10.3414	012a-039	Pipe Run Insulation	(3" O.D.)Water line by Col. L-1	67	L.F.				0.34	0.34
7	10.1741	012a-044	Pipe Run Insulation	(4" O.D.) Condensate line by exit door	13	L.F.				0.07	0.07
7	10.1741	012a-046	Pipe Run Insulation	(4" O.D.) Steam line , by west wall	60	L.F.				0.30	0.30
7	8.992	13b-001	Pipe Run Insulation	(6" O.D.) Steam line at exit	140	L.F.				0.70	0.70
7	9.1643	14-001	Pipe Run Insulation	(10" O.D.) Steam line South end of mechanical room 4	70	L.F.				0.35	0.35
7	9.1643	14-001	Pipe Run Insulation	(6" O.D.) Steam line mechanical room 4	20	L.F.				0.10	0.10
7	9.1643	14-001	Pipe Run Insulation	(3" O.D.) Steam line North end mechanical room 4	40	L.F.				0.20	0.20
7	9.3326	14-005A	Pipe Run Insulation	(6" O.D.) Condensate line mechanical room 4	20	L.F.				0.10	0.10
7	9.3326	14-005B	Pipe Run Insulation	(2" O.D.) Condensate line storage room 3	20	L.F.				0.10	0.10
7	9.3326	14-007	Pipe Run Insulation	(8" O.D.) Dead fire protection line South end mechanical	2	L.F.				0.01	0.01
7	9.5009	14-010	Pipe Run Insulation	(6" O.D.) Fire sprinkler line South end of mechanical room	25	L.F.				0.13	0.13
7	9.8375	14-019	Pipe Run Insulation	(3" O.D.) Steam line West wall vault room 1	20	L.F.				0.10	0.10
7	9.8375	14-019	Pipe Run Insulation	(6" O.D.) Steam line South wall vault room 1	75	L.F.				0.38	0.38
7	9.6682	14-021	Pipe Run Insulation	(2" O.D.) Condensate line chalky brown South wall room	200	L.F.				1.00	1.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4989	14-025	Pipe Run Insulation	(8" O.D.) Abandoned fire sprinkler line by room 129	195	LF.				0.98	0.98
7	9.1623	14-026	Pipe Run Insulation	(3" O.D.) Central hall near room 129	195	LF.				0.98	0.98
7	9.4989	14-027	Pipe Run Insulation	(2" O.D.) Central hall by room 129	195	LF.				0.98	0.98
7	9.8355	14-028	Pipe Run Insulation	(4" O.D.) Central hall by room 128	195	LF.				0.98	0.98
7	9.1623	14-033	Pipe Run Insulation	(2" O.D.) East hall by room 147	120	LF.				0.60	0.60
7	9.4989	14-034	Pipe Run Insulation	(3" O.D.) East hall by room 147	120	LF.				0.60	0.60
7	9.4989	14-035	Pipe Run Insulation	(4" O.D.) East hall by room 148	120	LF.				0.60	0.60
7	9.1623	14-036	Pipe Run Insulation	(6" O.D.) Abandoned fire sprinkler line East hall by room	70	LF.				0.35	0.35
7	8.995	14-042	Pipe Run Insulation	(6" O.D.) Steam line West wing by heating unit	110	LF.				0.55	0.55
7	9.8375	14-053	Pipe Run Insulation	(4" O.D.) South end mechanical room 4	32	LF.				0.16	0.16
7	8.8197	01-012	Pipe Run Insulation	(4" O.D.) 150# Steam line	116	LF.				0.58	0.58
7	8.989	01-013	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.21	0.21
7	8.996	20a-001	Pipe Run Insulation	(6" O.D.) West wall	95	LF.				0.48	0.48
7	9.6692	20a-007	Pipe Run Insulation	(3" O.D.) East wall, center section	8	LF.				0.04	0.04
7	8.994	20b-001	Pipe Run Insulation	Over (24" O.D.)Vertical Line Metal Jacketed	15	LF.				0.08	0.08
7	9.1603	20b-009	Pipe Run Insulation	(8" O.D.) Filter influent line	275	LF.				1.38	1.38
7	9.1603	20b-010	Pipe Run Insulation	(8" O.D.) Backwash discharge	120	LF.				0.60	0.60
7	9.1603	20b-009	Pipe Run Insulation	(8" O.D.) Filter influent line	100	LF.				0.50	0.50
7	8.6514	20b-012	Pipe Run Insulation	(6" O.D.) Steam line	80	LF.				0.40	0.40
7	8.8257	28a-007	Pipe Run Insulation	(4" O.D.) Line insulation in room 101	360	LF.				1.80	1.80
7	7.9802	02a-010	Pipe Run Insulation	(2" O.D.) Horizontal steam line by D1-4 and D1-5	145	LF.				0.73	0.73
7	7.4783	02a-030	Pipe Run Insulation	(4" O.D.) Vertical steam line by north window, metal-jacketed	505	LF.				2.53	2.53
7	9.1593	02a-032	Pipe Run Insulation	(18" O.D.) Horizontal tank line between C-18 and C-19,	152	LF.				0.76	0.76
7	8.6554	02a-045	Pipe Run Insulation	(4" O.D.) Vertical steam line between A-15 and A-16,	808	LF.				4.04	4.04
7	9.1603	02a-049	Pipe Run Insulation	(6" O.D.) Vertical process wate line by column C-15,	195	LF.				0.98	0.98
7	9.1633	02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-A-11	30	LF.				0.15	0.15
7	9.1633	02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-C-11	30	LF.				0.15	0.15
7	9.1623	02a-062	Pipe Run Insulation	(10" O.D.) Steam line-straight - A-12	100	LF.				0.50	0.50
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-10	100	LF.				0.50	0.50

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - A-11	160	LF.				0.80	0.80
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-11	200	LF.				1.00	1.00
7	9.1623	02a-062	Pipe Run Insulation	(3" O.D.) Steam line-straight - C-11	50	LF.				0.25	0.25
7	9.3316	02a-064	Pipe Run Insulation	(6" O.D.) Process water-straigh - A-12	30	LF.				0.15	0.15
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straigh - C-12	30	LF.				0.15	0.15
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straigh - C-9	20	LF.				0.10	0.10
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straigh - A-12	30	LF.				0.15	0.15
7	8.995	02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - A-8	30	LF.				0.15	0.15
7	8.995	02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - C-10	20	LF.				0.10	0.10
7	8.995	02a-066	Pipe Run Insulation	(6" O.D.) Straight run, not sampled	150	LF.				0.75	0.75
7	8.995	02a-066	Pipe Run Insulation	(4" O.D.) Condensate return-straight - A-10	50	LF.				0.25	0.25
7	8.995	02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	75	LF.				0.38	0.38
7	8.995	02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	80	LF.				0.40	0.40
7	9.1633	02a-069	Pipe Run Insulation	(36" O.D.) Line - 2 overflow vessels - D-11	40	LF.				0.20	0.20
7	6.6318	02a-036	Pipe Run Insulation	(3" O.D.) Horizontal condensate line over tank by	321	LF.				1.61	1.61
7	6.8001	02a-041	Pipe Run Insulation	(8" O.D.) Steam line in south side of the building near	650	LF.				3.25	3.25
7	9.6692	2b-010	Pipe Run Insulation	(4" O.D.) Line from refrigeration F1-617	6	LF.				0.03	0.03
7	9.3326	2b-010b	Pipe Run Insulation	(6" O.D.) Steam line	10	LF.				0.05	0.05
7	9.6692	2b-013	Pipe Run Insulation	(4" O.D.) Condensate return	10	LF.				0.05	0.05
7	9.3316	2d-005	Pipe Run Insulation	(6" O.D.) Steam line	40	LF.				0.20	0.20
7	9.4999	2d-006	Pipe Run Insulation	(4" O.D.) Process water	6	LF.				0.03	0.03
7	8.996	2d-009	Pipe Run Insulation	(4" O.D.) D1-10	8	LF.				0.04	0.04
7	8.6554	31-009	Pipe Run Insulation	(2" O.D.) water line	212	LF.				1.06	1.06
7	8.6564	31-012	Pipe Run Insulation	(2" O.D.) hot water	285	LF.				1.43	1.43
7	9.4989	37-03	Pipe Run Insulation	(3" O.D.) Condensate line	8	LF.				0.04	0.04
7	9.8355	37-08	Pipe Run Insulation	(3" O.D.) Cooling water line	50	LF.				0.25	0.25
7	8.6554	03a-02	Pipe Run Insulation	(4" O.D.) Steam, upper level catwalk	180	LF.				0.90	0.90
7	9.3288	03a-03	Pipe Run Insulation	(3" O.D.)south west corner by sink	40	LF.				0.20	0.20
7	8.6554	03a-05	Pipe Run Insulation	(1" O.D.) at water heater south west	4	LF.				0.02	0.02

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.992	3c-04	Pipe Run Insulation	(4" O.D.) Steam line with gray lagging	130	LF.				0.65	0.65
7	9.3286	3c-05	Pipe Run Insulation	(4" O.D.) Cold water line, north wall	80	LF.				0.40	0.40
7	8.4861	3c-07	Pipe Run Insulation	(3" O.D.) Condensate line, south wall	8	LF.				0.04	0.04
7	8.992	3c-13A	Pipe Run Insulation	(6" O.D.) Steam line; white material	12	LF.				0.06	0.06
7	9.3326	3e-01A	Pipe Run Insulation	(6" O.D.) Steam line	50	LF.				0.25	0.25
7	9.3326	3e-03B	Pipe Run Insulation	(4" O.D.) Condensate line	65	LF.				0.33	0.33
7	8.996	3e-13	Pipe Run Insulation	(6" O.D.) Steam line by window, re-wettable canvas	93	LF.				0.47	0.47
7	9.3326	3e-21	Pipe Run Insulation	(4" O.D.) Abandoned line, at tank F1-309	50	LF.				0.25	0.25
7	8.996	3e-24A	Pipe Run Insulation	(10" O.D.) Abandoned pump line	20	LF.				0.10	0.10
7	9.3326	3g-003	Pipe Run Insulation	(6" O.D.) North Wall	24	LF.				0.12	0.12
7	8.8257	45-011	Pipe Run Insulation	(8" O.D.) Steam line at air handling unit, metal jacketed	40	LF.				0.20	0.20
7	8.993	45-017	Pipe Run Insulation	(2" O.D.) Cold water line straight	6	LF.				0.03	0.03
7	8.996	4a-001	Pipe Run Insulation	(4" O.D.) horizontal steam line, metal jacketed, by south	500	LF.				2.50	2.50
7	9.1643	4a-003A	Pipe Run Insulation	(4" O.D.) horizontal condensate line by column 9C by roll-up	300	LF.				1.50	1.50
7	9.6692	4a-008	Pipe Run Insulation	(3" O.D.) horizontal potable water line by column 2D	130	LF.				0.65	0.65
7	9.8375	4a-010	Pipe Run Insulation	(3" O.D.) vertical cold water line by column 4B	10	LF.				0.05	0.05
7	9.1623	4a-021	Pipe Run Insulation	(6" O.D.) vertical steam line by column 6C	55	LF.				0.28	0.28
7	8.8277	4a-024	Pipe Run Insulation	(6" O.D.) verticle steam line, metal jacketed, by emergency	100	LF.				0.50	0.50
7	9.1633	4a-026	Pipe Run Insulation	(3" O.D.) horizontal cold water line by south wall	41	LF.				0.21	0.21
7	9.6692	4a-030A	Pipe Run Insulation	(3" O.D.) vertical emergency water line by column 2D	66	LF.				0.33	0.33
7	9.4999	4a-035A	Pipe Run Insulation	(6" O.D.) vertical pipe system from reactor 6	35	LF.				0.18	0.18
7	9.4999	4a-041	Pipe Run Insulation	(3" O.D.) vertical treated water line by column 7B	20	LF.				0.10	0.10
7	9.8385	4a-042	Pipe Run Insulation	(6" O.D.) Steam line by column 6C	150	LF.				0.75	0.75
7	9.3326	4a-044	Pipe Run Insulation	(2" O.D.) vertical potable water line by column 6A	50	LF.				0.25	0.25
7	9.6692	4a-050	Pipe Run Insulation	(6" O.D.) Abandoned line, metal jacketed, around the	20	LF.				0.10	0.10
7	9.6692	4a-051	Pipe Run Insulation	(6" O.D.) Abandoned line elbow around the perimeter of	11	LF.				0.06	0.06
7	9.4999	4a-056	Pipe Run Insulation	(6" O.D.) anhydrous line in the recovery room by column 1E	40	LF.				0.20	0.20
7	9.4999	4a-058	Pipe Run Insulation	(36" O.D.) Insulated vertical pipe riser by column 6F	20	LF.				0.10	0.10
7	9.6682	4a-063	Pipe Run Insulation	(16" O.D.) straight run off rear of reactor 2	10	LF.				0.05	0.05

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

ity, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4999	4a-065	Pipe Run Insulation	(2" O.D.) Insulated conduit lines going into reactor 2	75	LF.				0.38	0.38
7	8.995	4a-070	Pipe Run Insulation	(6" O.D.) steam line by column 1F	95	LF.				0.48	0.48
7	8.995	4a-070	Pipe Run Insulation	(2" O.D.) steam line by column 3F	20	LF.				0.10	0.10
7	9.8365	4a-073	Pipe Run Insulation	(3" O.D.) steam line by column 8E on the south wall	40	LF.				0.20	0.20
7	9.6682	4a-077	Pipe Run Insulation	(4" O.D.) abandoned steam line by column 4B	30	LF.				0.15	0.15
7	9.4999	4a-082	Pipe Run Insulation	(3" O.D.) unknow pipe line going into reactor 8 by column	100	LF.				0.50	0.50
7	9.3316	4a-087	Pipe Run Insulation	(2" O.D.) line off of the conduit line going into reactor 7	24	LF.				0.12	0.12
7	9.3316	4a-088	Pipe Run Insulation	(8" O.D.) exhaust line coming from reactor 8 by column 2B	50	LF.				0.25	0.25
7	10.0058	4a-094	Pipe Run Insulation	(4" O.D.) HF recovery line in the HF recovery room	20	LF.				0.10	0.10
7	10.0058	4a-097	Pipe Run Insulation	(2" O.D.) condensate line, metal jacketed, in the HF	23	LF.				0.12	0.12
7	9.4999	4a-103	Pipe Run Insulation	(8" O.D.) anhydrous hydrogen line by column 5B	40	LF.				0.20	0.20
7	9.4999	4a-106	Pipe Run Insulation	(4" O.D.) steam line on the wes wall by column 4A	100	LF.				0.50	0.50
7	8.6514	05-016	Pipe Run Insulation	(8" O.D.) 150 pound steam line, metal jacketed, near	486	LF.				2.43	2.43
7	8.3148	05-018	Pipe Run Insulation	(4" O.D.) Branch line off of (6" O.D.) condensate return line,	260	LF.				1.30	1.30
7	8.3148	05-020B	Pipe Run Insulation	(3" O.D.) Potable water line, near column 19E, metal	75	LF.				0.38	0.38
7	8.6524	05-029	Pipe Run Insulation	(4" O.D.) Potable water line, metal jacketed, next to 16F	100	LF.				0.50	0.50
7	8.989	05-032	Pipe Run Insulation	(6" O.D.) Condensate line	70	LF.				0.35	0.35
7	9.4959	05-053	Pipe Run Insulation	(4" O.D.) Steam line, at column F	80	LF.				0.40	0.40
7	8.1465	05-072A	Pipe Run Insulation	(4" O.D.) Potable water line, next to column 2E	562	LF.				2.81	2.81
7	8.991	05-081	Pipe Run Insulation	(4" O.D.) Steam line, next to column 26F	110	LF.				0.55	0.55
7	8.8217	05-082	Pipe Run Insulation	(6" O.D.) Condensate line, near column 24E	100	LF.				0.50	0.50
7	8.6544	05-087	Pipe Run Insulation	(6" O.D.) Condensate line, next to column 15A	282	LF.				1.41	1.41
7	9.1603	05-088	Pipe Run Insulation	(4" O.D.) Steam line, North of column 3D	12	LF.				0.06	0.06
7	9.6682	54-027	Pipe Run Insulation	(4" O.D.) Cooling water supply line off catwalk south side	650	LF.				3.25	3.25
7	9.8375	54-035	Pipe Run Insulation	(4" O.D.) Instrument air line in main steam room	27	LF.				0.14	0.14
7	9.5009	55a-008	Pipe Run Insulation	(4" O.D.) at South wall	60	LF.				0.30	0.30
7	9.4969	06-007	Pipe Run Insulation	(6" O.D.)Steam line, on catwalk	130	LF.				0.65	0.65
7	9.1623	06-022	Pipe Run Insulation	(3" O.D.) Potable water	25	LF.				0.13	0.13
7	9.8335	06-028	Pipe Run Insulation	(10" O.D.) Metal clad steam line	50	LF.				0.25	0.25

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

1 r r

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.8335	06-032	Pipe Run Insulation	(4" O.D.)Condensate, metal clad	200	LF.				1.00	1.00
7	9.4989	06-062	Pipe Run Insulation	(4" O.D.) 150 pound steam	75	LF.				0.38	0.38
7	8.8237	06-080	Pipe Run Insulation	Steam line above restroom	630	LF.				3.15	3.15
7	9.6672	06-108A	Pipe Run Insulation	(6" O.D.) Vertical hot water line by southwest roll-up door	35	LF.				0.18	0.18
7	9.4989	06-114B	Pipe Run Insulation	(10" O.D.) Horizontal steam line, north of pickling area	15	LF.				0.08	0.08
7	9.1623	06-114C	Pipe Run Insulation	(6" O.D.) Steam line, above enriched materials storage	400	LF.				2.00	2.00
7	8.995	06-123	Pipe Run Insulation	(8" O.D.) Elevated steam line	135	LF.				0.68	0.68
7	9.8385	06-124	Pipe Run Insulation	(4" O.D.) Steam line, above office	70	LF.				0.35	0.35
7	8.8267	06-142	Pipe Run Insulation	(3" O.D.) Condensate line	8	LF.				0.04	0.04
7	10.1721	06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit	50	LF.				0.25	0.25
7	9.1623	06-158	Pipe Run Insulation	Line to XFMR switch gear, south end near boiler	3	LF.				0.02	0.02
7	9.3296	06-162	Pipe Run Insulation	(4" O.D.) Steam line	60	LF.				0.30	0.30
7	9.4989	06-178	Pipe Run Insulation	(6" O.D.) Steam line	100	LF.				0.50	0.50
7	8.6564	06-187	Pipe Run Insulation	Air line, north side	200	LF.				1.00	1.00
7	8.1515	06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	30	LF.				0.15	0.15
7	8.1515	06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	20	LF.				0.10	0.10
7	8.1515	06-193	Pipe Run Insulation	(4"O.D.) Condensate, north side by empty tank	12	LF.				0.06	0.06
7	8.1515	06-193	Pipe Run Insulation	(2"O.D.) Condensate line, west side, cloth clad	15	LF.				0.08	0.08
7	7.4783	06-196	Pipe Run Insulation	(4" O.D.) Vertical waste water, metal clad, on east side of	11	LF.				0.06	0.06
7	7.4783	06-196	Pipe Run Insulation	(4" O.D.) Waste water line, east side of tank	110	LF.				0.55	0.55
7	9.4989	06-004	Pipe Run Insulation	(10" O.D.) Roof drain line, north end at men's restroom	260	LF.				1.30	1.30
7	9.8335	06-040	Pipe Run Insulation	(8" O.D.) Metal clad steam, at column C6	100	LF.				0.50	0.50
7	9.4989	06-004	Pipe Run Insulation	(10" O.D.)Roof drain line, by north wall at men's restroom	10	LF.				0.05	0.05
7	9.4969	06-018A	Pipe Run Insulation	(8" O.D.)Treated water line over column	470	LF.				2.35	2.35
7	10.1721	06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit, resample of 5147	80	LF.				0.40	0.40
7	8.8257	66-01	Pipe Run Insulation	Water line	125	LF.				0.63	0.63
7	8.6574	66-08	Pipe Run Insulation	(3" O.D.) Steam line leading to heater	10	LF.				0.05	0.05
7	10.0068	07-025	Pipe Run Insulation	(4" O.D.) Potable water line insulation	32	LF.				0.16	0.16
7	10.1751	07-033	Pipe Run Insulation	Potable water line pipe could not be sampled due to drums in	15	LF.				0.08	0.08

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Material
Pipe Run Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.8375	07-039	Pipe Run Insulation	(4" O.D.) Service water line insulation	30	LF.				0.15	0.15
7	10.1741	07-041	Pipe Run Insulation	(4" O.D.) Service water line insulation	15	LF.				0.08	0.08
7	9.6672	07-56	Pipe Run Insulation	(5" O.D.) Live steam line	100	LF.				0.50	0.50
7	9.6672	07-57	Pipe Run Insulation	(4" O.D.) Clean condensate line	100	LF.				0.50	0.50
7	8.6524	8a-036	Pipe Run Insulation	(4" O.D.) Metal jacketed; not sampled per WEMCO	200	LF.				1.00	1.00
7	8.6524	8a-038	Pipe Run Insulation	(3" O.D.) Metal jacketed; not sampled per WEMCO	210	LF.				1.05	1.05
7	8.6524	8a-040	Pipe Run Insulation	(5" O.D.) Metal jacketed; not sampled per WEMCO	110	LF.				0.55	0.55
7	8.6524	8a-042	Pipe Run Insulation	(6" O.D.) Metal jacketed; not sampled per WEMCO	100	LF.				0.50	0.50
7	10.0068	09-001B	Pipe Run Insulation	(3" O.D.) Steam line, vertical	40	LF.				0.20	0.20
7	9.5019	09-006	Pipe Run Insulation	(4" O.D.) Hot water line, to acid dip tank, metal jacketed	10	LF.				0.05	0.05
7	9.5009	09-007	Pipe Run Insulation	(6" O.D.) Steam line on catwalk	135	LF.				0.68	0.68
7	9.6692	09-011B	Pipe Run Insulation	(6" O.D.) High pressure steam line, vertical run, by valve	7	LF.				0.04	0.04
7	9.1643	09-013	Pipe Run Insulation	(8" O.D.) Condensate line leading off of tank	120	LF.				0.60	0.60
7	9.1623	09-020A	Pipe Run Insulation	(2" O.D.) Vertical cold water line leading from small tank	90	LF.				0.45	0.45
7	9.8385	09-061	Pipe Run Insulation	(2" O.D.) Horizontal cold water line, northeast corner	10	LF.				0.05	0.05
7	9.1613	09-045	Pipe Run Insulation	(12" O.D.) Vertical hot water line leading to valve	150	LF.				0.75	0.75
7	9.1643	09-017	Pipe Run Insulation	(6" O.D.) Chilled water line, by valve	250	LF.				1.25	1.25
7	8.8247	09-052	Pipe Run Insulation	(24" O.D.) Sump water line, metal jacketed	28	LF.				0.14	0.14
7	8.4881	09-054	Pipe Run Insulation	(6" O.D.) Waste water line, metal jacketed	230	LF.				1.15	1.15
7	8.6554	09-058	Pipe Run Insulation	(6" O.D.) Vetical abandoned line, metal jacketed	21	LF.				0.11	0.11
7	7.9772	15-002	Pipe Run Insulation	(4" O.D.) Room E-3 northwest corner	645	LF.				3.23	3.23
7	7.9792	15-026	Pipe Run Insulation	(5" O.D.) West side by center hallway entrance	16	LF.				0.08	0.08
7	8.3158	15-027	Pipe Run Insulation	(6" O.D.) West side by center hallway entrance	16	LF.				0.08	0.08
7	8.4851	15-028	Pipe Run Insulation	(4" O.D.) Room C-41	234	LF.				1.17	1.17
7	8.4851	15-030	Pipe Run Insulation	(4" O.D.) Room C-41	104	LF.				0.52	0.52
7	7.8099	15-047	Pipe Run Insulation	(4" O.D.) Line in room N-26, south wall	226	LF.				1.13	1.13
7	7.9772	15-048	Pipe Run Insulation	(4" O.D.) Southwest corner of room N-42A	670	LF.				3.35	3.35
7	8.989	15-071	Pipe Run Insulation	(3" O.D.) Water line insulation in HVAC room S-21 above	405	LF.				2.03	2.03
7	8.989	15-085	Pipe Run Insulation	(2" O.D.) Water line insulation in east hall outside room E-7	98	LF.				0.49	0.49

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Material: **Pipe Run Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.6504	15-086A	Pipe Run Insulation	(4" O.D.) Steam line insulation in hall across from room W-32	140	LF.				0.70	0.70
7	8.6524	15-088	Pipe Run Insulation	(4" O.D.) Condensate line insulation in hall across from	110	LF.				0.55	0.55
7	8.989	15-090	Pipe Run Insulation	(3" O.D.) Potable water line insulation across from room	176	LF.				0.88	0.88
7	9.4959	15-142	Pipe Run Insulation	(4" O.D.) steam line south wall near exit	90	LF.				0.45	0.45
7	9.4999	02a-077	Pipe Run Insulation	(4" O.D.) metal jacketed cold water line next to tag 0219 s.	80	LF.				0.40	0.40
7	9.4999	02a-078	Pipe Run Insulation	(8" O.D.) metal jacketed north of control panel	150	LF.				0.75	0.75
7	8.1475	02a-079	Pipe Run Insulation	(5" O.D.) metal jacketed	200	LF.				1.00	1.00
7	10.0058	06-206	Pipe Run Insulation	(5" O.D.) Steam line insulation grey in color assumed per	125	LF.				0.63	0.63
7	10.0038	06-211	Pipe Run Insulation	(4" O.D.) east side wall next to door hard line	45	LF.				0.23	0.23
TOTALS:					60726		17,547.00	88,090.00	59,422.00	281.14	165,340.14

Total Removal Cost $1,378,524.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Material: **Pipe Run Insulation Lagging**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.4851	05-067	Pipe Run Insulation Lagging	(8" O.D.) Steam line lagging	60	L.F.		600.00	180.00		780.00
4	8.1475	28b-002	Pipe Run Insulation Lagging	(2" O.D.) North wall steam line	46	S.F.	69.00			0.23	69.23
4	9.5009	55a-004	Pipe Run Insulation Lagging	(4" O.D.) South Wall	245	S.F.	367.50			1.23	368.73
7	8.991	28b-024	Pipe Run Insulation Lagging	(4" O.D.) Steam line	12	L.F.				0.06	0.06
7	8.4841	069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	465	L.F.				2.33	2.33
7	8.8257	011-041	Pipe Run Insulation Lagging	Vertical metal jackets	20	L.F.				0.10	0.10
7	9.1603	06-016	Pipe Run Insulation Lagging	(8" O.D.) Treated water line	570	S.F.				2.85	2.85
7	9.8335	06-040	Pipe Run Insulation Lagging	(8" O.D.) Metal clad steam, interior lagging	100	S.F.				0.50	0.50
7	8.4871	06-106	Pipe Run Insulation Lagging	(8" O.D.) Steam line running north-south	165	S.F.				0.83	0.83
7	8.4841	069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	465	L.F.				2.33	2.33
TOTALS:					2148		436.50	600.00	180.00	10.44	1,226.94

Total Removal Cost $21,480.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Resilient Floor Tile (12" X 12")

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.993	06-050	Resilient Floor Tile (12" X 12")	Break room	150	S.F.				0.75	0.75
7	8.4851	28b-025	Resilient Floor Tile (12" X 12")	(12"x12") Blue/gray	1184	S.F.				5.92	5.92
7	10.1731	01-014	Resilient Floor Tile (12" X 12")	(12" x 12") Resilient Floor Tile White and Brown in Office	58	S.F.				0.29	0.29
7	9.8355	31-006	Resilient Floor Tile (12" X 12")	Brown w/ brown & white splotches	400	S.F.				2.00	2.00
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	White with gray splotches in office on NW corner of building	210	S.F.				1.05	1.05
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	Computer room hallway	450	S.F.				2.25	2.25
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	Hallway of ladies restroom	140	S.F.				0.70	0.70
7	9.3276	06-058	Resilient Floor Tile (12" X 12")	Brown, in rad tech office	400	S.F.				2.00	2.00
7	8.991	06-166	Resilient Floor Tile (12" X 12")	Brown	240	S.F.				1.20	1.20
TOTALS:					3232					16.16	16.16

Total Removal Cost $12,928.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Material: Resilient Floor Tile (9" X 9")

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.9714	07-044	Resilient Floor Tile (9" X 9")	(9" X 9") Resilient floor tile, red	1000	S.F.		4000.00	0.00		4000.00
3	8.4851	15-041	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white and dark blue streaks, in	3399	S.F.	2379.30			17.00	2396.30
3	7.6386	15-062	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, on south side of hall	1840	S.F.	1288.00			9.20	1297.20
4	8.8177	05-064	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, green	400	S.F.	280.00			2.00	282.00
4	9.6672	06-138	Resilient Floor Tile (9" X 9")	Black	75	S.F.	52.50			0.38	52.88
4	9.6672	06-138	Resilient Floor Tile (9" X 9")	White	75	S.F.	52.50			0.38	52.88
4	8.3128	15-021	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, tan with red, brown and orange streaks, in	300	S.F.	210.00			1.50	211.50
4	8.8207	15-036	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, light brown with white and brown streaks, in	192	S.F.	134.40			0.96	135.36
4	8.4851	15-039	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with beige streaks, in southwest	1055	S.F.	738.50			5.28	743.78
4	8.99	15-052	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, on north side of room	4095	S.F.	2866.50			20.48	2886.98
4	9.1593	15-058	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, on northwest	135	S.F.	94.50			0.68	95.18
4	7.6356	15-082	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, in hall outside room	1840	S.F.	1288.00			9.20	1297.20
4	8.1435	15-095	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, off white with black spec, in hall outside of	2508	S.F.	1755.60			12.54	1768.14
4	8.1435	15-101	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with green streaks, in room W-28	2285	S.F.	1599.50			11.43	1610.93
5	8.8217	012a-010	Resilient Floor Tile (9" X 9")	Green tile with white specks	90	S.F.				0.45	0.45
6	8.991	31-004	Resilient Floor Tile (9" X 9")	Medium green w/ white/black splotches	700	S.F.				3.50	3.50
6	7.6426	06-046	Resilient Floor Tile (9" X 9")	Green in quality control office	300	S.F.				1.50	1.50
7	9.6672	30-003	Resilient Floor Tile (9" X 9")	North Corner Gray	90	S.F.				0.45	0.45
7	9.8365	046-003	Resilient Floor Tile (9" X 9")	Green	200	S.F.				1.00	1.00
7	10.5117	28b-021	Resilient Floor Tile (9" X 9")	(9"x9") Green tile covered by brown tile	5700	S.F.				28.50	28.50
7	10.1741	68-001	Resilient Floor Tile (9" X 9")	Resilient Floor Tile (9" X 9") Light gray with white streaks	100	S.F.				0.50	0.50
7	9.8355	10a-021	Resilient Floor Tile (9" X 9")	Resilient floor tile (9" X 9") green with white and black	150	S.F.				0.75	0.75
7	8.3148	011-001	Resilient Floor Tile (9" X 9")	Grey Floor Tile (9"x9")	11000	S.F.				55.00	55.00
7	7.8069	011-003	Resilient Floor Tile (9" X 9")	Green / white stripes (9"x9")	25000	S.F.				125.00	125.00
7	8.6564	011-009	Resilient Floor Tile (9" X 9")	Black floor tile border (9"x9")	20	S.F.				0.10	0.10
7	8.6554	012a-011	Resilient Floor Tile (9" X 9")	Green / with white stripes	325	S.F.				1.63	1.63
7	9.6682	012a-012	Resilient Floor Tile (9" X 9")	Light green	32	S.F.				0.16	0.16
7	9.6672	012a-014	Resilient Floor Tile (9" X 9")	Weld shop,Green/white tile	160	S.F.				0.80	0.80
7	8.991	012a-020	Resilient Floor Tile (9" X 9")	White with black streaks	126	S.F.				0.63	0.63

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Resilient Floor Tile (9" X 9")

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.6534	012a-024	Resilient Floor Tile (9" X 9")	Green tile with black & white specks	800	S.F.				4.00	4.00
7	8.4851	012a-025	Resilient Floor Tile (9" X 9")	Dark green with black and white specks	200	S.F.				1.00	1.00
7	8.3128	012a-026	Resilient Floor Tile (9" X 9")	Green with white and black specks	3700	S.F.				18.50	18.50
7	8.8207	012a-028	Resilient Floor Tile (9" X 9")	Green	600	S.F.				3.00	3.00
7	9.4979	012a-029	Resilient Floor Tile (9" X 9")	Dark green	25	S.F.				0.13	0.13
7	8.3168	012a-032B	Resilient Floor Tile (9" X 9")	Black tile with white specks	96	S.F.				0.48	0.48
7	10.1731	012a-041	Resilient Floor Tile (9" X 9")	Green floor tile W / white streaks, in office	280	S.F.				1.40	1.40
7	8.4831	14-012	Resilient Floor Tile (9" X 9")	Black West hall	9098	S.F.				45.49	45.49
7	8.4831	14-012	Resilient Floor Tile (9" X 9")	White West hall	9098	S.F.				45.49	45.49
7	8.991	14-044	Resilient Floor Tile (9" X 9")	Black West wing Room 210	8900	S.F.				44.50	44.50
7	8.991	14-044	Resilient Floor Tile (9" X 9")	White West wing Room 210	8900	S.F.				44.50	44.50
7	9.4959	01-015	Resilient Floor Tile (9" X 9")	(9" x 9") Resilient Floor Tile Green, White and Blue streaks	800	S.F.				4.00	4.00
7	9.3286	31-013	Resilient Floor Tile (9" X 9")	Off white w/ grey splotches	100	S.F.				0.50	0.50
7	8.992	03a-09	Resilient Floor Tile (9" X 9")	Office white	63	S.F.				0.32	0.32
7	8.4841	3c-01	Resilient Floor Tile (9" X 9")	Green (9"x9")	2000	S.F.				10.00	10.00
7	9.4979	4a-019	Resilient Floor Tile (9" X 9")	Floor tile, green with black flecks in the office at the south	500	S.F.				2.50	2.50
7	9.3246	05-011	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, white with gray streaks, office 05-27	120	S.F.				0.60	0.60
7	9.6642	05-059	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, brown and white, office 05-24	600	S.F.				3.00	3.00
7	9.3286	06-128A	Resilient Floor Tile (9" X 9")	Green with white streaks, in office	300	S.F.				1.50	1.50
7	9.3246	06-143	Resilient Floor Tile (9" X 9")	Green	1800	S.F.				9.00	9.00
7	9.8345	06-170	Resilient Floor Tile (9" X 9")	Green	985	S.F.				4.93	4.93
7	8.988	8a-024	Resilient Floor Tile (9" X 9")	(9" x9") Green with white streaks in supervisor's office	1960	S.F.				9.80	9.80
7	8.1435	15-007	Resilient Floor Tile (9" X 9")	(9" X 9") Green tile with white streaks in room E-5	1760	S.F.				8.80	8.80
7	8.4801	15-009	Resilient Floor Tile (9" X 9")	(9" X 9") Tile in hall by door to south courtyard biege and	1600	S.F.				8.00	8.00
7	8.6494	15-011	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with gray streaks, outside room E-21	150	S.F.				0.75	0.75
7	8.8187	15-013	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with black and gray streaks, in hall	300	S.F.				1.50	1.50
7	8.8187	15-015	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, yellow, across from room E-27	18	S.F.				0.09	0.09.
7	8.6494	15-019	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown with brown streaks, in the southeast	336	S.F.				1.68	1.68
7	8.1435	15-054	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown w/ white and dark brown streaks, on the	1000	S.F.				5.00	5.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Resilient Floor Tile (9" X 9")

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	7.6356	15-075	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in northwest corner of	10640	S.F.				53.20	53.20
7	8.3128	15-097	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, in center of room	620	S.F.				3.10	3.10
7	8.3128	15-103	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in room W-28	620	S.F.				3.10	3.10
TOTALS:					131161		12,739.30	4,000.00	0.00	650.81	17,390.11

Total Removal Cost $524,644.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Resilient Floor Tile (9" X 9") & Mastic

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.6672	10a-020	Resilient Floor Tile (9" X 9") & Mastic	Resilient floor tile (9" X 9") gray with white specks	300	S.F.				1.50	1.50
7	9.4989	09-023	Resilient Floor Tile (9" X 9") & Mastic	Mastic	500	S.F.				2.50	2.50
7	9.1643	09-034	Resilient Floor Tile (9" X 9") & Mastic	(9" X 9") Floor tile, green with black and white specks	100	S.F.				0.50	0.50
7	8.8247	09-047	Resilient Floor Tile (9" X 9") & Mastic	Black mastic	112	S.F.				0.56	0.56
TOTALS:					1012					5.06	5.06

Total Removal Cost $4,048.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Roof Flashing

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.1465	16a-001	Roof Flashing	Transite Flashing Material	40	S.F.				0.20	0.20
7	7.6406	16a-002	Roof Flashing	Transite Flashing Material, Assumed Positive	250	S.F.				1.25	1.25
TOTALS:					290					1.45	1.45

Total Removal Cost $4,350.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
SmokeStack Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	7.301	10a-035	SmokeStack Insulation	Smoke stack insulation	2400	S.F.				12.00	12.00
TOTALS:					2400					12.00	12.00

Total Removal Cost $4,800.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Storage Tank / Exchanger Insulation**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	5.7853	02a-006	Storage Tank / Exchanger Insulation	Condensate in between tank F1-2 and F1-26	130	S.F.		2600.00	1300.00		3900.00
1	7.6436	4a-096	Storage Tank / Exchanger Insulation	HF recovery tank in the HF recovery room by the	20	S.F.		400.00	200.00		600.00
3	8.4861	31-02	Storage Tank / Exchanger Insulation	Sample taken at bottom of tank #1	616	S.F.	924.00			3.08	927.08
3	6.4625	011-038	Storage Tank / Exchanger Insulation	Hot water tank #1 west end is torn	85	S.F.	127.50			0.43	127.93
3	6.4625	02a-009	Storage Tank / Exchanger Insulation	Condensate tank insulation	110	S.F.	165.00			0.55	165.55
3	7.1377	02a-055	Storage Tank / Exchanger Insulation	Top of tank D1-208	162	S.F.	243.00			0.81	243.81
3	6.4605	4a-017	Storage Tank / Exchanger Insulation	Tank insulation from the inside of tank 7	1100	S.F.	1650.00			5.50	1655.50
3	7.9842	4a-023	Storage Tank / Exchanger Insulation	Tank insulation from tank by column 6C	200	S.F.	300.00			1.00	301.00
3	8.4891	4a-083	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 8	500	S.F.	750.00			2.50	752.50
4	8.994	07-007	Storage Tank / Exchanger Insulation	Light gas surge tank insulation	100	S.F.	150.00			0.50	150.50
5	8.995	10a-011	Storage Tank / Exchanger Insulation	Tank insulation	100	S.F.				0.50	0.50
6	8.8207	01-007	Storage Tank / Exchanger Insulation	Condensate holding tank insulation	66	S.F.				0.00	0.00
6	8.4851	06-014	Storage Tank / Exchanger Insulation	Condensate tank	50	S.F.				0.25	0.25
6	9.1603	15-116	Storage Tank / Exchanger Insulation	Heat exchanger tank insulation. South mechanical	56	S.F.				0.28	0.28
7	8.3208	10a-001	Storage Tank / Exchanger Insulation	(7' x 12') Blow down tank	377	S.F.				1.89	1.89
7	8.1435	10a-002	Storage Tank / Exchanger Insulation	(7' x 12') Plant air dryer tank	377	S.F.				1.89	1.89
7	8.991	10a-039	Storage Tank / Exchanger Insulation	Gray, wrapped boiler insulation	100	S.F.				0.50	0.50
7	8.8267	10a-031	Storage Tank / Exchanger Insulation	Southwest corner of tank	30	S.F.				0.15	0.15
7	8.6574	10a-032	Storage Tank / Exchanger Insulation	Condensate tank insulation	135	S.F.				0.68	0.68
7	9.1633	012a-007	Storage Tank / Exchanger Insulation	Condensate tank	35	S.F.				0.18	0.18
7	9.1643	14-003	Storage Tank / Exchanger Insulation	Condensate tank North end mechanical room	13	S.F.				0.07	0.07
7	8.99	02a-070	Storage Tank / Exchanger Insulation	Second carbonate make-up tank @ D-13 (D=10, H=6),	1800	S.F.				9.00	9.00
7	9.8345	32-004	Storage Tank / Exchanger Insulation	Condensate tank insulation	12	S.F.				0.06	0.06
7	9.3296	37-09	Storage Tank / Exchanger Insulation	Molten salt tank	75	S.F.				0.38	0.38
7	9.6682	4a-004	Storage Tank / Exchanger Insulation	(6' x 2') condensate tank by column 8A, sample missing	600	S.F.				3.00	3.00
7	9.1633	4a-064	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 2	216	S.F.				1.08	1.08
7	9.3286	06-071	Storage Tank / Exchanger Insulation	500 gallon urea tank at column D29	500	S.F.				2.50	2.50
7	9.8355	08-112	Storage Tank / Exchanger Insulation	Hot water condensate tank, south end, west of catwalk	522	S.F.				2.61	2.61
7	9.5009	06-160	Storage Tank / Exchanger Insulation	XFMR tank by boiler, 4'L x 1'D	1	S.F.				0.01	0.01

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: Storage Tank / Exchanger Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.994	06-191	Storage Tank / Exchanger Insulation	Nitric acid tank by pickling	164	S.F.				0.82	0.82
7	8.993	09-019	Storage Tank / Exchanger Insulation	Condensate tank	9	S.F.				0.05	0.05
7	8.8237	4a-109	Storage Tank / Exchanger Insulation	Tank 4-6, 3 each	360	S.F.				1.80	1.80
7	9.1573	02a-080	Storage Tank / Exchanger Insulation	Tank 11-211	300	S.F.				1.50	1.50
TOTALS:					8921		4,309.50	3,000.00	1,500.00	43.53	8,853.03

Total Removal Cost $177,100.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: Storage Tank / Exchanger Lagging

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	7.9802	3f-01	Storage Tank / Exchanger Lagging	Sample taken bottom of tank #1	616	S.F.		12320.00	6160.00		18480.00
1	8.4881	13a-013	Storage Tank / Exchanger Lagging	Lagging off of tank D1	125	S.F.		2500.00	1250.00		3750.00
1	6.4625	66-06	Storage Tank / Exchanger Lagging	Sample taken on North end of tank	250	S.F.		5000.00	2500.00		7500.00
3	6.1219	3d-01	Storage Tank / Exchanger Lagging	Black tar tank wrap	1812	S.F.	2718.00			9.06	2727.06
7	8.8237	10a-028	Storage Tank / Exchanger Lagging	Dust collector, 8 each	1200	S.F.				6.00	6.00
TOTALS:					4003		2,718.00	19,820.00	9,910.00	15.06	32,463.06

Total Removal Cost $80,060.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Material
Transite Pipe

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.6652	05-047	Transite Pipe	(4" O.D.) Transite exhaust flue generator 11 and 12, near	55	L.F.	82.50			0.28	82.78
4	9.1583	05-051	Transite Pipe	(4" O.D.) Transite flue at remelt near furnace column 6D	56	L.F.	84.00			0.28	84.28
TOTALS:					111		166.50			0.56	167.06

Total Removal Cost $1,665.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Material
Transite Sheet Material

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	3.4241	02a-039	Transite Sheet Material	Sample taken by column B-8	5000	S.F.		20000.00	45000.00		65000.00
1	7.4713	02a-075	Transite Sheet Material	Interior transite, middle of building; no samples taken,	18,000	S.F.		72000.00	162000.00		234000.00
1	4.2686	2d-012	Transite Sheet Material	Entire south wall between Plant 2a & 2d	1,520	S.F.		6080.00	13680.00		19760.00
1	3.4211	3e-33	Transite Sheet Material	Delaminated section north wall by overhead door	2,376	S.F.		9504.00	21384.00		30888.00
1	6.4585	06-031	Transite Sheet Material	Transite	6250	S.F.		25000.00	56250.00		81250.00
1	6.4675	09-022B	Transite Sheet Material	Transite ceiling	500	S.F.		2000.00	4500.00		6500.00
4	8.8247	30-005	Transite Sheet Material	Transite Wall	400	S.F.	280.00			2.00	282.00
4	7.6396	13a-023	Transite Sheet Material	No samples taken per scope of work assumed positive	18,000	S.F.	12600.00			90.00	12690.00
4	8.3168	02a-073	Transite Sheet Material	No sample taken, material assessed	25,000	S.F.	17500.00			125.00	17625.00
4	8.4871	02a-074	Transite Sheet Material	Interior transite west side of building; no samples taken,	20,000	S.F.	14000.00			100.00	14100.00
4	8.4891	2d-010	Transite Sheet Material	South interior transite wall	3440	S.F.	2408.00			17.20	2425.20
4	9.4999	4a-079	Transite Sheet Material	Transite sheet material with inner insulation air cell around	600	S.F.	420.00			3.00	423.00
4	8.4881	05-014	Transite Sheet Material	Transite walls from column 25 to column 29	1000	S.F.	700.00			5.00	705.00
4	8.6554	05-048	Transite Sheet Material	1/4" Walls and ceiling	8140	S.F.	5698.00			40.70	5738.70
4	8.6544	05-049	Transite Sheet Material	1/4" Transite corridor wall addition from 10A to 7A	900	S.F.	630.00			4.50	634.50
4	8.4851	05-057A	Transite Sheet Material	Transite on wall columns 13F and 10F	1460	S.F.	1022.00			7.30	1029.30
4	8.1465	05-060	Transite Sheet Material	Transite walls, office 05-24, at column 9G	1668	S.F.	1167.60			8.34	1175.94
4	7.9812	06-077	Transite Sheet Material	Smooth interior wall	3000	S.F.	2100.00			15.00	2115.00
5	8.1565	09-048B	Transite Sheet Material	Smooth transite wall by north roll up door	7400	S.F.				37.00	37.00
5	7.311	09-049B	Transite Sheet Material	Corrigated interior transite wall, north end	3000	S.F.				15.00	15.00
5	6.1249	09-050	Transite Sheet Material	Transite wall, no sample taken	48,200	S.F.				241.00	241.00
5	6.1249	09-051	Transite Sheet Material	Transite wall, West side	14,000	S.F.				70.00	70.00
6	7.9772	020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	10232	S.F.				51.16	51.16
6	6.9654	30-006	Transite Sheet Material	Exterior transite, No samples taken per scope of work	62,500	S.F.				312.50	312.50
6	8.4861	68-004	Transite Sheet Material	Transite; no samples taken	16,000	S.F.				80.00	80.00
6	7.6416	01-021	Transite Sheet Material	Transite wall between columns 2F, E3	55260	S.F.				276.30	276.30
6	9.8375	20a-004	Transite Sheet Material	Interior transite panels in transformer, no samples taken	250	S.F.				1.25	1.25
6	7.9772	020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	10232	S.F.				51.16	51.16
6	6.2922	02a-040	Transite Sheet Material	Most transite in good repair, few patches of broken and	78,000	S.F.				390.00	390.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Material: **Transite Sheet Material**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	6.4615	02a-072	Transite Sheet Material	West side of plant 2a	38000	S.F.				190.00	190.00
6	7.9792	2b-015	Transite Sheet Material	Transite, no samples taken	4,900	S.F.				24.50	24.50
6	7.9832	2d-011	Transite Sheet Material	Transite, No Samples Taken	8,680	S.F.				43.40	43.40
6	8.6534	03a-12	Transite Sheet Material	Interior transite walls	960	S.F.				4.80	4.80
6	8.6514	03a-13	Transite Sheet Material	No samples taken Per scope of work. Assumed	17,360	S.F.				86.80	86.80
6	8.992	03b-04	Transite Sheet Material	No samples taken per scope of work. Assumed positive	3,525	S.F.				17.63	17.63
6	6.9664	3c-12	Transite Sheet Material	No samples taken	7,610	S.F.				38.05	38.05
6	7.9792	3e-32	Transite Sheet Material	No samples taken, Assumed positive	17,850	S.F.				89.25	89.25
6	7.9782	3g-004	Transite Sheet Material	No Samples Taken, assumed positive, exterior	2,360	S.F.				11.80	11.80
6	9.3296	4a-080	Transite Sheet Material	Interior transite sheeting material by column 1E	46500	S.F.				232.50	232.50
6	8.1485	4a-090	Transite Sheet Material	Material not sampled per Scope-of-Work exterior	80090	S.F.				400.45	400.45
6	8.1455	04c-004	Transite Sheet Material	No samples taken	8,530	S.F.				42.65	42.65
6	6.9674	05-022	Transite Sheet Material	1/4" Transite wallboard	2800	S.F.				14.00	14.00
6	8.4831	05-036	Transite Sheet Material	Corregated Transite wall	646	S.F.				3.23	3.23
6	7.304	05-079	Transite Sheet Material	Corregated wall panel, next to elevator at column 1E	3809	S.F.				19.05	19.05
6	7.4723	06-044	Transite Sheet Material	Smooth cement wallboard, west wall	11,500	S.F.				57.50	57.50
6	6.6288	06-190	Transite Sheet Material	North side of plant	10800	S.F.				54.00	54.00
6	7.6406	8a-032	Transite Sheet Material	Interior transite by roll-up door	2,000	S.F.				10.00	10.00
7	10.5107	62-01	Transite Sheet Material	1/2" transite sheeting, stored material	744	S.F.				3.72	3.72
7	9.8355	39a-006	Transite Sheet Material	No samples taken	2200	S.F.				11.00	11.00
7	9.4999	68-003	Transite Sheet Material	Interior transite; no samples taken	400	S.F.				2.00	2.00
7	6.9644	10a-037	Transite Sheet Material	Transite wall no samples taken assumed positive	52,583	S.F.				262.92	262.92
7	4.9398	012a-033	Transite Sheet Material	Transite, No samples taken assumed to be positive.	67,000	S.F.				335.00	335.00
7	7.1337	012a-034	Transite Sheet Material	Transite, exterior west side of building	12,000	S.F.				60.00	60.00
7	8.992	012a-043	Transite Sheet Material	Transite wall covering at stores office (corragated)	940	S.F.				4.70	4.70
7	8.6554	13a-014	Transite Sheet Material	Transite wall	7050	S.F.				35.25	35.25
7	8.6554	13b-005	Transite Sheet Material	Interior transite	600	S.F.				3.00	3.00
7	9.6692	20a-003	Transite Sheet Material	East wall, south section Interio	2330	S.F.				11.65	11.65
7	7.303	20a-011	Transite Sheet Material	Exterior Transite, no sample taken, assumed positive	12,960	S.F.				64.80	64.80

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

y, State:
ERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/26/92 3242

Revision Date:

Material: **Transite Sheet Material**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.3316	02a-026	Transite Sheet Material	Transite interior wall in south outer room	150	S.F.				0.75	0.75
7	8.8257	02a-076	Transite sheet material	Interior transite, east side of building; no samples taken,	18,000	S.F.				90.00	90.00
7	10.1741	2b-003	Transite Sheet Material	Transite lab top, no samples taken	38	S.F.				0.19	0.19
7	9.3326	2b-009	Transite Sheet Material	Interior transite wall	2400	S.F.				12.00	12.00
7	7.6436	2c-02	Transite Sheet Material	Exterior transite	1,392	S.F.				6.96	6.96
7	7.9812	2c-03	Transite Sheet Material	Transite walls	700	S.F.				3.50	3.50
7	8.6584	3e-31	Transite Sheet Material	Interior transite at exit	12,560	S.F.				62.80	62.80
7	8.8247	3g-002	Transite Sheet Material	Northwest Corner interior wall	1390	S.F.				6.95	6.95
7	8.3188	45-004	Transite Sheet Material	Interior Transite wall	1070	S.F.				5.35	5.35
7	10.8483	4a-101	Transite Sheet Material	Transite sheeting material inside transformer banks, Not	150	S.F.				0.75	0.75
7	6.9644	04c-005	Transite Sheet Material	Interior transite	3000	S.F.				15.00	15.00
7	7.9782	05-010	Transite Sheet Material	Transite wall, office 05-27	960	S.F.				4.80	4.80
7	9.4979	05-015	Transite Sheet Material	No sample taken, unsafe to enter elevator shaft, Assumed	6400	S.F.				32.00	32.00
7	7.9802	05-084	Transite Sheet Material	Transite wall, South of elevator wall	3836	S.F.				19.18	19.18
7	9.3266	05-085	Transite Sheet Material	Interior Transite	2568	S.F.				12.84	12.84
7	7.8119	05-090	Transite Sheet Material	Smooth Transite wall, by elevator	5316	S.F.				26.58	26.58
7	9.1593	05-096	Transite Sheet Material	Smooth Transite walls on elevator at south end of plant	2568	S.F.				12.84	12.84
7	8.3188	05-098	Transite Sheet Material	South side of plant 5, No samples taken Assumed	1,768	S.F.				8.84	8.84
7	8.3168	54-024	Transite Sheet Material	Interior walls north side of plan	5160	S.F.				25.80	25.80
7	9.5009	55a-001	Transite Sheet Material	No sampleTaken, electrical transformer panel	500	S.F.				2.50	2.50
7	8.8277	55a-002	Transite Sheet Material	By control room	9100	S.F.				45.50	45.50
7	7.4723	55a-009	Transite Sheet Material	Exterior No Samples Taken, assumed to be positive	11800	S.F.				59.00	59.00
7	8.991	06-041	Transite Sheet Material	Transite wall patch	17	S.F.				0.09	0.09
7	8.4901	06-089	Transite Sheet Material	Interior transite panels, smooth green	3920	S.F.				19.60	19.60
7	8.6584	06-109	Transite Sheet Material	North office walls	100	S.F.				0.50	0.50
7	7.1377	06-136	Transite Sheet Material	Cement board by central exit door	46,000	S.F.				230.00	230.00
7	7.8129	06-185	Transite Sheet Material	Cement board	4000	S.F.				20.00	20.00
7	8.8267	66-03	Transite Sheet Material	Interior transite	500	S.F.				2.50	2.50
7	8.8247	07-028	Transite Sheet Material	Transite wall	50190	S.F.				250.95	250.95

#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
he first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	7.8119	07-052	Transite Sheet Material	Transite siding	16,800	S.F.				84.00	84.00
7	9.4989	07-58	Transite Sheet Material	Interior transite smooth sampled from broken section	17000	S.F.				85.00	85.00
7	8.1475	8a-022	Transite Sheet Material	Corrugated, by walk-thru door, column A5	6400	S.F.				32.00	32.00
7	7.9782	8a-023	Transite Sheet Material	East end wall on men's bathroom	3812	S.F.				19.06	19.06
7	6.9674	8a-025	Transite Sheet Material	West side of building	68,750	S.F.				343.75	343.75
7	8.3228	09-042	Transite Sheet Material	West interior transite wall by vertical pipe	544	S.F.				2.72	2.72
7	8.4901	09-048A	Transite Sheet Material	Transite wall painted light beige	120	S.F.				0.60	0.60
7	7.4723	10a-042	Transite Sheet Material	Interior transite	2010	S.F.				10.05	10.05
7	7.4723	20b-013	Transite Sheet Material	All interior walls are transite	1000	S.F.				5.00	5.00
7	7.6426	01-024	Transite Sheet Material	No samples taken	768,700	S.F.				3843.50	3843.50
7	7.6436	06-213	Transite Sheet Material	No samples taken	458,900	S.F.				2294.50	2294.50
7	8.3188	55a-010	Transite Sheet Material	No samples taken	36,000	S.F.				180.00	180.00
TOTALS:							58,525.60	125,080.00	281,430.00	11,964.74	477,000.34

Total Removal Cost $9,696,872.00

GRAND TOTALS:	105,345.30	248,205.00	359,621.00	14,010.86	727,182.16

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

3242

VI. FACILITY REMOVAL PRIORITY AND COST ESTIMATES FOR MATERIAL CATERGORIES

3242

DEFINITIONS OF FACILITY REMOVAL PRIORITY AND COST ESTIMATES FOR MATERIAL CATERGORIES

Sample No.	Numerical order of samples taken.
Location/Function	The area and/or equipment from which the sample is taken.
Floor/Level	Bsmt, Mezz, Penths, Roof, 1, 2, 3, LL, UL represent basement, mezzanine, penthouse, roof, first floor/level, second floor/level, third floor/level, lower level, upper level, etc., respectively.
Material/Description	Spray-applied fireproofing/ceiling materials, pipe or equipment insulation/lagging, ceiling panels/tiles, resilient floor tile/sheeting, plaster, "Transite" panels, etc.
Homogeneous Area Number	A number assigned to an area of ACM that is uniform in color and texture.
Hazard Rank	The classification of material into seven (7) different WEMCO hazard rank categories based on the WEMCO decision tree.
Removal Priority	The priorities of Response Actions based upon the Hazard Rank.
Estimated Quantity	Amounts of types of material.
Unit	Units of measure : SF is used for square feet, SY for square yards, CI for cubic inches, LF for linear feet, and EA for individual parts
Cost	Includes demolition, abatement, decontamination, and materials replacement (if applicable); does not include relocation expense, architectural and engineering fees, nor abatement administration and monitoring. Cost escalation historically exceeds 8% per annum.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

Material
Acoustic Panel (2' X 4')

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.4851	05-013	Acoustic Panel (2' X 4')	(2' X 4') Ceiling panel, hole and fissure	144	S.F.	100.80			0.72	101.52
TOTALS:					144		100.80			0.72	101.52

Total Removal Cost $432.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Acoustic Tile Mastic**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.8207	14-017	Acoustic Tile Mastic	Brown hallway outside room 152	15800	S.F.				79.00	79.00
7	8.991	14-050	Acoustic Tile Mastic	Black central hall drafting room	17800	S.F.				89.00	89.00
TOTALS:					33600					168.00	168.00

Total Removal Cost $67,200.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Boiler Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.991	10a-012	Boiler Insulation	Boiler tank insulation, 8 each	7200	S.F.				36.00	36.00
7	8.995	10a-013	Boiler Insulation	West side, 4 feet off ground level	800	S.F.				4.00	4.00
7	7.1387	10a-029	Boiler Insulation	Boiler plate insulation	270	S.F.				1.35	1.35
TOTALS:					8270					41.35	41.35

Total Removal Cost $165,400.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: Debris samples from floor

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.6348	3e-16	Debris samples from floor	Northwest corner	1	EA		25.00	0.00		25.00
TOTALS:					1			25.00	0.00		25.00

Total Removal Cost $25.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Material
Duct Insulation

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	7.9802	4a-045	Duct Insulation	(24" O.D.) flue exhaust pipe at column 4B	4	S.F.		8.00	40.00		48.00
3	9.4989	01-020	Duct Insulation	Heater duct insulation on column 6c & 7c	880	S.F.	1320.00			4.40	1324.40
3	4.2636	15-109	Duct Insulation	HVAC duct insulation, air handler between S-8 and S-9.	120	S.F.	180.00			0.60	180.60
4	9.4999	4a-046	Duct Insulation	(18" O.D.) exhasust lines from reactor 12-A5	40	S.F.	60.00			0.20	60.20
4	9.4999	4a-047	Duct Insulation	Exhaust insulation from reactor 12-A5	50	S.F.	75.00			0.25	75.25
4	8.4881	4a-076	Duct Insulation	Blow fan insulation by column 7C	100	S.F.	150.00			0.50	150.50
4	8.8267	07-019	Duct Insulation	Duct insulation	480	S.F.	720.00			2.40	722.40
4	8.994	07-026	Duct Insulation	Duct insulation	480	S.F.	720.00			2.40	722.40
4	8.3158	15-045	Duct Insulation	Duct insulation taken in center wing hall outside lab C-43	536	S.F.	804.00			2.68	806.68
5	8.991	15-068	Duct Insulation	Duct on west side of in HVAC room S-1	236	S.F.				1.18	1.18
6	8.8217	15-080A	Duct Insulation	HVAC duct insulation in room S-22 by northeast corner	3000	S.F.				15.00	15.00
6	8.1495	15-118	Duct Insulation	Fan unit - Elevated duct core sample near north wall of	160	S.F.				0.80	0.80
7	8.996	61-01	Duct Insulation	taken from abandoned blower unit in SE corner	4	S.F.				0.02	0.02
7	8.8247	28b-008	Duct Insulation	Duct along south wall by double doors	700	S.F.				3.50	3.50
7	8.1475	28b-019	Duct Insulation	Air duct	120	S.F.				0.60	0.60
7	9.3316	13a-017	Duct Insulation	12" exhaust duct	30	S.F.				0.15	0.15
7	9.3276	14-048	Duct Insulation	Hall outside room 210	70	S.F.				0.35	0.35
7	9.4999	02a-057	Duct Insulation	Insulation off HVAC system	250	S.F.				1.25	1.25
7	7.9782	15-124	Duct Insulation	Fan/blower duct insulation by column R-18 in corrosion room	360	S.F.				1.80	1.80
TOTALS:					7620		4,029.00	8.00	40.00	38.08	4,115.08

Total Removal Cost $15,240.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Material
Duct Insulation Lagging

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.1525	4a-075	Duct Insulation Lagging	Air handling unit lagging by column 8D	500	S.F.	750.00			2.50	752.50
7	8.3148	012a-016	Duct Insulation Lagging	Lagging of fiberglass wrapped duct	150	S.F.				0.75	0.75
TOTALS:					650		750.00			3.25	753.25

Total Removal Cost $6,500.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Report Date:
2/28/92

3242

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Revision Date:

City, State:
FERNALD, OHIO

Material
Fabric / Rope

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.1505	10a-010	Fabric / Rope	Replacement rope gasket material on stool in	10	L.F.		30.00	40.00		70.00
1	8.6574	2b-008	Fabric / Rope	1" Rope TSI, west end	6	L.F.		18.00	24.00		42.00
4	8.993	06-139	Fabric / Rope	Valve packing rope, north corner of pump pit	10	L.F.	7.00			0.05	7.05
7	9.6672	4a-054	Fabric / Rope	Suspect miscellaneous rope at column E2	6	L.F.				0.03	0.03
TOTALS:					32		7.00	48.00	64.00	0.08	119.08

Total Removal Cost $96.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Fire Retardant Clothing**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.8247	06-189	Fire Retardant Clothing	Silver pants within cabinet	18	EA.				0.90	0.90
7	8.8247	06-189	Fire Retardant Clothing	Silver mittens within cabinet, 18 pair	36	EA.				1.80	1.80
TOTALS:					54					2.70	2.70

Total Removal Cost $2,340.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Firebrick

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.993	07-53	Firebrick	Stored Firebrick, white in color inside room 7-19	15	S.F.				0.08	0.08
TOTALS:					15					0.08	0.08

Total Removal Cost **$75.00**

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Material
Floor Tile Mastic

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.9714	07-044	Floor Tile Mastic	Floor tile mastic, black	1000	S.F.		2000.00	0.00		2000.00
4	8.8177	05-064	Floor Tile Mastic	Floor tile mastic, black	400	S.F.	280.00			2.00	282.00
6	7.302	15-063	Floor Tile Mastic	Mastic, south side of hall outside of room N-24	1840	S.F.				9.20	9.20
7	10.3424	30-004	Floor Tile Mastic	West End	90	S.F.				0.45	0.45
7	8.8217	8b-004	Floor Tile Mastic	Floor Tile Mastic Black	165	S.F.				0.83	0.83
7	9.6662	28b-022	Floor Tile Mastic	Black	5700	S.F.				28.50	28.50
7	10.1741	68-002	Floor Tile Mastic	Black, with 9" x 9" tile	100	S.F.				0.50	0.50
7	8.1465	011-002	Floor Tile Mastic	Black mastic	11000	S.F.				55.00	55.00
7	8.8207	011-004	Floor Tile Mastic	Black mastic	25,000	S.F.				125.00	125.00
7	10.0058	011-010	Floor Tile Mastic	Black mastic, taken with sample 3227	20	S.F.				0.10	0.10
7	10.0058	011-010	Floor Tile Mastic	Black mastic, taken with sample 3231	1400	S.F.				7.00	7.00
7	10.0028	13b-004	Floor Tile Mastic	Black	210	S.F.				1.05	1.05
7	7.9762	14-013	Floor Tile Mastic	Black in room 109	18195	S.F.				90.98	90.98
7	9.6672	28a-004	Floor Tile Mastic	Green Tile in Room 107	400	S.F.				2.00	2.00
7	9.6672	28a-005	Floor Tile Mastic	White Tile in Room 107	400	S.F.				2.00	2.00
7	10.0038	31-007	Floor Tile Mastic	Black & gummy	400	S.F.				2.00	2.00
7	10.0038	31-014	Floor Tile Mastic	Black & gummy	100	S.F.				0.50	0.50
7	8.99	03a-10	Floor Tile Mastic	Office,north east corner	281	S.F.				1.41	1.41
7	8.3148	3c-02	Floor Tile Mastic	Brown	2000	S.F.				10.00	10.00
7	9.6642	05-059	Floor Tile Mastic	Black floor tile mastic, office 05-24	600	S.F.				3.00	3.00
7	9.3286	54-013	Floor Tile Mastic	Black in office on NW corner of building 54	210	S.F.				1.05	1.05
7	9.3286	54-013	Floor Tile Mastic	Computer room hallway	450	S.F.				2.25	2.25
7	9.3286	54-013	Floor Tile Mastic	Hallway of ladies restroom	140	S.F.				0.70	0.70
7	10.1731	06-052	Floor Tile Mastic	Break room, Black	150	S.F.				0.75	0.75
7	8.4801	15-008	Floor Tile Mastic	Black mastic in room E-5	1760	S.F.				8.80	8.80
7	8.4801	15-010	Floor Tile Mastic	Black mastic by door to south courtyard	1600	S.F.				8.00	8.00
7	8.1435	15-014	Floor Tile Mastic	Black mastic sampled outside of room E-25	300	S.F.				1.50	1.50
7	8.8187	15-016	Floor Tile Mastic	Black mastic across from room E-27	18	S.F.				0.09	0.09
7	8.3128	15-020	Floor Tile Mastic	Mastic sampled in the southeast corner of room E-25	336	S.F.				1.68	1.68

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Material: **Floor Tile Mastic**

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.3128	15-022	Floor Tile Mastic	Mastic in southeast corner of room E-23	300	S.F.				1.50	1.50
7	8.8187	15-034	Floor Tile Mastic	Mastic in hallway to south courtyard across from rooms	95	S.F.				0.48	0.48
7	8.4851	15-038	Floor Tile Mastic	Mastic in southwest corner of room C-15	1055	S.F.				5.28	5.28
7	8.4851	15-040	Floor Tile Mastic	Mastic in southwest corner of room C-15	3399	S.F.				17.00	17.00
7	8.4801	15-044	Floor Tile Mastic	Mastic in the southwest corner of room C-10	2112	S.F.				10.56	10.56
7	8.99	15-053	Floor Tile Mastic	Mastic on north side of room N-40A by the door	4095	S.F.				20.48	20.48
7	8.1435	15-055	Floor Tile Mastic	Mastic, black, on east side of room N-42A by the entrance	1000	S.F.				5.00	5.00
7	9.4959	15-057	Floor Tile Mastic	Mastic on north side of room N-40	135	S.F.				0.68	0.68
7	9.1593	15-060	Floor Tile Mastic	Mastic in the center of room N-40	135	S.F.				0.68	0.68
7	8.1415	15-074	Floor Tile Mastic	Black mastic in northwest corner of room S-9	10640	S.F.				53.20	53.20
7	7.9762	15-098	Floor Tile Mastic	Black mastic in room W-18	680	S.F.				3.40	3.40
7	8.1435	15-102	Floor Tile Mastic	Mastic in room W-28	2285	S.F.				11.43	11.43
7	8.3128	15-104	Floor Tile Mastic	Black mastic in room W-28	620	S.F.				3.10	3.10
7	8.989	15-037	Floor Tile Mastic	Southeast corner of room C-26	192	S.F.				0.96	0.96
7	8.3128	15-100	Floor Tile Mastic	Black mastic on north side of room W-18	200	S.F.				1.00	1.00
TOTALS:					101208		280.00	2,000.00	0.00	501.04	2,781.04

Total Removal Cost $202,416.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

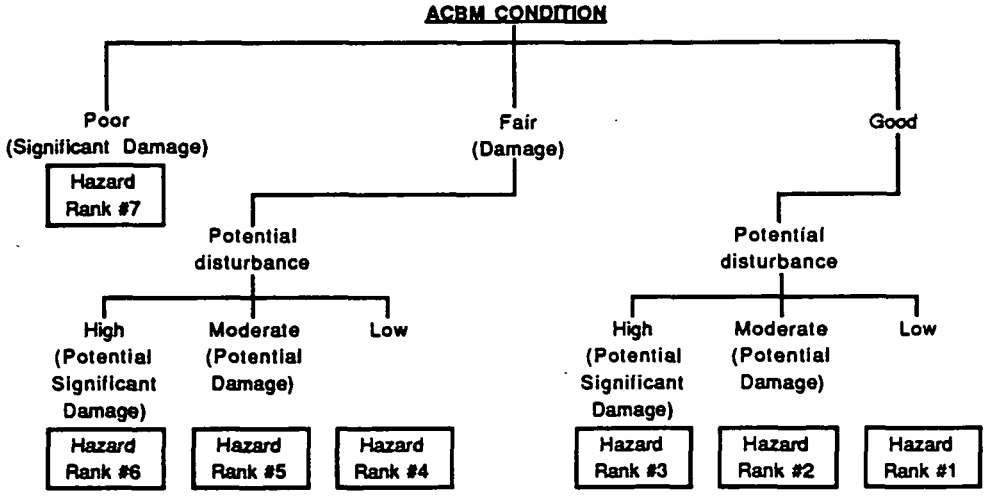
3242

VII. RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

3242

DEFINITIONS OF FACILITY REMOVAL PRIORITY AND COST ESTIMATES FOR RESPONSE ACTION

Homogeneous Area Number	A number assigned to an area of ACM that is uniform in color and texture. The first digits indicates the Building Number.
Sample No.	Numerical order of samples taken.
Location/Function	The area and/or equipment from which the sample is taken.
Floor/Level	Bsmt, Mezz, Penths, Roof, 1, 2, 3, LL, UL represent basement, mezzanine, penthouse, roof, first floor/level, second floor/level, third floor/level, lower level, upper level, etc., respectively.
Material/Description	Spray-applied fireproofing/ceiling materials, pipe or equipment insulation/lagging, ceiling panels/tiles, resilient floor tile/sheeting, plaster, "Transite" panels, etc.
Positive/Negative	P – material containing greater than 1% asbestos; N – equal or less than 1% asbestos.
Asbestos Content, %, Type	Chrysotile, Amosite and/or Crocidolite, and their percentages. N/D denotes no asbestos detected during analysis.
Friability	Nonfriable – Material can not be reduced to powder by hand pressure, is well bound, will not release fibers during any appropriate end use, handling, storage or transportation; may or may not become friable during deterioration, demolition or renovation activities. Friable – Material can be broken, crumbled, pulverized or reduced to powder by hand pressure when dry. The degree of friability is assessed as follows: High - Material is fluffy and/or the slightest hand pressure can dislodge it. A slight breeze may disperse the material. Medium - Material can be dislodged or scraped/crumbled by hand. Low - Material is firmly bound, difficult to scrape off by hand.
WEMCO Hazard Rank	The classification of material into seven (7) different WEMCO hazard categories based on the following decision tree:



3242

WEMCO Removal Priority — The priorities of Response Actions based upon the WEMCO Hazard Rank.

WEMCO Damage Category — The visual assessment of damage of the material based upon the variables of physical damage, water damage, proximity to items for repair, type of material, potential for damage and the asbestos content.

Recommended Response Action — The appropriate response action require by WEMCO based upon the Hazard Rank and Damage Categories according to the following table:

HAZARD RANK	REMOVAL PRIORITY	DAMAGE CATEGORIES	RESPONSE ACTIONS REQUIRED
7	1	Significantly Damaged	Evacuate or isolate the area if needed. Remove the ACBM (or enclose or encapsulate if sufficient to contain fibers). Repair of thermal system insulation is allowed if feasible and safe.. O&M required for all friable ACBM.
6	2	Damaged + Potential for Significant Damage	Evacuate or isolate the area if needed. Remove, enclose, encapsulate, or repair to correct damage. Take steps to reduce potential for disturbance. O&M required for all friable ACBM.
5	3	Damaged + Potential for Damage	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACBM.
4	4	Damaged	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACBM.
3	5	Potential for Significant Damage	Evacuate or isolate the area if needed. Take steps to reduce potential for disturbance. O&M required for all friable ACBM.
2	6	Potential for Damage	O&M required for all friable ACBM.
1	7	No problem	O&M required for all friable ACBM, but measures need not be as extensive as above.

Note: AHERA does not account for combinations of current and potential damage (i.e. hazard ranks #5 and 6). The response actions shown are combinations of those required for each condition.

Note: Sample sequencing error, cross-contamination, or other sampling irregularities will result in a void sample.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
011-030	Pipe Fitting Insulation	Cold water line valve	7	Remove and Replace
011-056	Pipe Run Insulation	(4" O.D.)	7	Remove and Replace
012a-004	Pipe Fitting Insulation	(4" O.D.) By pipe shop	7	Remove and Replace
012a-048	Pipe Run Insulation	(8" O.D.) Steam line by heater at catwalk	7	Remove and Replace
02a-006	Storage Tank / Exchanger Insulation	Condensate in between tank F1-2 and F1-26	7	Remove and Replace
02a-019	Pipe Run Insulation	(4" O.D.) Horizontal steam line	7	Remove and Replace
02a-020	Pipe Fitting Insulation	(4" O.D.) Steam line fitting on west side of room	7	Remove and Replace
02a-025	Pipe Run Insulation	Vertical steam line in south outer building	7	Remove and Replace
02a-025	Pipe Run Insulation	(3" O.D.) Vertical steam run, west wall	7	Remove and Replace
02a-038	Insulation	Insulation in northeast corner building, transite	7	Remove and Replace
02a-039	Transite Sheet Material	Sample taken by column B-8	7	Remove and Replace
02a-051	Pipe Run Insulation	(6" O.D.) Vertical sump water line by column D-17	7	Remove and Replace
02a-052	Pipe Fitting Insulation	(6" O.D.) Process water elbow by column D-17	7	Remove and Replace
02a-075	Transite Sheet Material	Interior transite, middle of building; no samples taken, material assessed	7	Remove and Replace
05-024	Gasketry	Gasket on blower flange	7	Remove and Replace
05-027	Pipe Run Insulation	(8" O.D.) 150 pound steam line, between column 17F and 18F, metal jacketed	7	Remove and Replace
05-039	Pipe Run Insulation	(4" O.D.) 150 pound steam line, near column 10A, branch off of (8" O.D.) main	7	Remove and Replace
05-067	Pipe Run Insulation Lagging	(8" O.D.) Steam line lagging	7	Remove and Replace
05-089	Pipe Fitting Insulation	(6" O.D.) Steam line fitting, next to column 4F	7	Remove and Replace
06-023B	Pipe Fitting Insulation	(2" to 4" O.D.) Condensate tank	7	Remove and Replace
06-031	Transite Sheet Material	Transite	7	Remove and Replace
06-065B	Pipe Fitting Insulation	(2" O.D.) Elbow near column C14	7	Remove and Replace
06-122	Pipe Run Insulation	Vertical run at tocco furnace	7	Remove and Replace
06-135	Pipe Fitting Insulation	Refer to sample 2314, pump pit	7	Remove and Replace
06-137	Gasketry	(12" O.D.) Loose used gasket in pump pit	7	Remove and Replace
06-163	Pipe Fitting Insulation	(6" O.D.) Refer to 2334, steam elbow	7	Remove and Replace
06-202	Pipe Fitting Insulation	(6" O.D.) Hot water elbow, west side of plant	7	Remove and Replace
07-001	Pipe Run Insulation	(4" O.D.) Steam line insulation	7	Remove and Replace
07-004	Pipe Run Insulation	(4" O.D.) Steam line insulation	7	Remove and Replace

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
07-005	Pipe Fitting Insulation	(3" O.D.) Ammonia line fitting insulation	7	Remove and Replace
07-006	Pipe Run Insulation	(4" O.D.) Ammonia line insulation	7	Remove and Replace
07-008	Pipe Run Insulation	(4" O.D.) Condensate line insulation	7	Remove and Replace
07-020	Pipe Run Insulation	(10" O.D.) Steam line insulation	7	Remove and Replace
07-024	Pipe Run Insulation	(6" O.D.) Service water line insulation	7	Remove and Replace
07-030	Pipe Run Insulation	(4" O.D.) Steam line insulation	7	Remove and Replace
07-031	Pipe Run Insulation	(4" O.D.) Condensate line insulation	7	Remove and Replace
07-044	Resilient Floor Tile (9" X 9")	(9" X 9") Resilient floor tile, red	7	Remove and Replace
07-044	Floor Tile Mastic	Floor tile mastic, black	7	Remove and Replace
07-049	Pipe Run Insulation	(4" O.D.) Condensate line insulation	7	Remove and Replace
09-003B	Pipe Run Insulation	(3" O.D.) Steam line, above roll up door	7	Remove and Replace
09-022B	Transite Sheet Material	Transite ceiling	7	Remove and Replace
09-040	Pipe Run Insulation	(4" O.D.) Hot water lines leading to heaters	7	Remove and Replace
09-059	Pipe Fitting Insulation	(6" O.D.) Nitric acid line elbow	7	Remove and Replace
10a-010	Fabric / Rope	Replacement rope gasket material on stool in maintenance cage	7	Remove and Replace
10a-033	Gasketry	Gasket	7	Remove and Replace
10a-040	Gasketry	White woven gasket	7	Remove and Replace
13a-002A	Pipe Run Insulation	(6" O.D.) Steam line insulation, by column Q1	7	Remove and Replace
13a-013	Storage Tank / Exchanger Lagging	Lagging off of tank D1	7	Remove and Replace
13a-015	Pipe Run Insulation	(3" O.D.) Condensate line	7	Remove and Replace
13a-016	Pipe Fitting Insulation	(3" O.D.) Condensate fitting	7	Remove and Replace
13a-020	Gasketry	Rope gasket	7	Remove and Replace
15-108	Pipe Run Insulation	Pipe insulation run, north tunnel, west side	7	Remove and Replace
15-138	Pipe Run Insulation	(6" O.D.) Condensate line straights by west wall between rooms S-7 and S-8	7	Remove and Replace
2b-006	Pipe Run Insulation	(8" O.D.) Line	7	Remove and Replace
2b-008	Fabric / Rope	1" Rope TSI, west end	7	Remove and Replace
2b-014	Pipe Fitting Insulation	(6" O.D.) Steam, elbow at air handler, upper level	7	Remove and Replace
2d-001	Pipe Fitting Insulation	(4" O.D.) Elbow Steam line	7	Remove and Replace
2d-007	Pipe Fitting Insulation	(4" O.D.) Elbow process water	7	Remove and Replace

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
2d-012	Transite Sheet Material	Entire south wall between Plant 2a & 2d	7	Remove and Replace
2e-005	Pipe Fitting Insulation	(4" O.D.) Elbow, Damaged, debris on floor, condensate line	7	Remove and Replace
3e-06	Pipe Fitting Insulation	(4" O.D.) Tank elbow, at south end	7	Remove and Replace
3e-09	Pipe Run Insulation	(8" O.D.) Steam line	7	Remove and Replace
3e-16	Debris samples from floor	Northwest corner	7	Remove and Replace
3e-26	Pipe Run Insulation	(6" O.D.) Condensate line, south wall	7	Remove and Replace
3e-27	Pipe Fitting Insulation	(6" O.D.) Condensate elbow at north wall	7	Remove and Replace
3e-33	Transite Sheet Material	Delaminated section north wall by overhead door	7	Remove and Replace
3f-01	Storage Tank / Exchanger Lagging	Sample taken bottom of tank #1	7	Remove and Replace
4a-040	Gasketry	Cloth gasket from reactor 6	7	Remove and Replace
4a-045	Duct Insulation	(24" O.D.) flue exhaust pipe at column 4B	7	Remove and Replace
4a-096	Storage Tank / Exchanger Insulation	HF recovery tank in the HF recovery room by the southwest corner	7	Remove and Replace
4a-102	Pipe Run Insulation	Pipe Run Insulation in containment, preventing accessibity	7	Remove and Replace
66-06	Storage Tank / Exchanger Lagging	Sample taken on North end of tank	7	Remove and Replace
8a-021	Pipe Run Insulation	(3" O.D.) Water line off of hot water heater	7	Remove and Replace
8a-043	Pipe Run Insulation	(20" O.D.) Process line	7	Remove and Replace
011-054	Pipe Fitting Insulation	(3"OD) Steam line elbow	6	Repair and O & M
06-076	Pipe Fitting Insulation	(8" O.D.) Steam elbow by restroom	6	Repair and O & M
06-078	Pipe Run Insulation	(8" O.D.) Steam line by restroom	6	Repair and O & M
3d-08	Pipe Run Insulation	(4" O.D.) Horizontal steam line, tar wrapped	6	Repair and O & M
3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, tar wrapped	6	Repair and O & M
3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, tar wrapped	6	Repair and O & M
3d-08	Pipe Run Insulation	(3" O.D.)Vertical steam line, tar wrapped	6	Repair and O & M
3e-10	Pipe Fitting Insulation	(6" O.D.) Steam elbow, by light	6	Repair and O & M
01-005	Pipe Run Insulation	(4" O.D.) Water line	5	Repair and O & M
01-006	Pipe Fitting Insulation	(4" O.D.) Water line	5	Repair and O & M
01-020	Duct Insulation	Heater duct insulation on column 6c & 7c	5	Repair and O & M
011-038	Storage Tank / Exchanger Insulation	Hot water tank #1 west end is torn	5	Repair and O & M
011-050	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	5	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
012a-003	Pipe Run Insulation	(4" O.D.)	5	Repair and O & M
012a-019	Pipe Run Insulation	(4" O.D.) Abandoned line	5	Repair and O & M
02a-003	Pipe Fitting Insulation	(4" O.D.) Steam line elbow on unit E-2948	5	Repair and O & M
02a-007	Pipe Run Insulation	(4" O.D.) Vertical condensate line by tank, metal-jacketed	5	Repair and O & M
02a-009	Storage Tank / Exchanger Insulation	Condensate tank insulation	5	Repair and O & M
02a-028	Pipe Run Insulation	(3" O.D.) Water line, metal-jacketed	5	Repair and O & M
02a-037	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by D-17	5	Repair and O & M
02a-048	Pipe Fitting Insulation	(3" O.D.) Condensate elbow by column C-17	5	Repair and O & M
02a-053	Pipe Run Insulation	(32" O.D.) Vent pipe, D1-204, by W.M.C.O. sample A0223, metal-jacketed	5	Repair and O & M
02a-055	Storage Tank / Exchanger Insulation	Top of tank D1-208	5	Repair and O & M
03a-06	Pipe Fitting Insulation	(2" O.D.) by sink, south west corner	5	Repair and O & M
03b-01	Pipe Run Insulation	(2" O.D.)	5	Repair and O & M
03b-02	Pipe Fitting Insulation	(2" O.D.) elbow, north west corner	5	Repair and O & M
05-003	Pipe Run Insulation	(8" O.D.) Condensate line, near column 28B	5	Repair and O & M
05-004	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow, near column 26E	5	Repair and O & M
05-063	HVAC Flexible Connector	(12" X 24" X 2") Woven	5	Repair and O & M
05-076	Pipe Run Insulation	(6" O.D.) Process water line next to column 6A	5	Repair and O & M
05-078	Pipe Run Insulation	(6" O.D.) Condensate line, next to 2B	5	Repair and O & M
06-045A	Pipe Run Insulation	(8" O.D.)	5	Repair and O & M
06-045B	Pipe Fitting Insulation	(8" O.D.) Steam elbow	5	Repair and O & M
06-061	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, north AHU catwalk	5	Repair and O & M
06-086	Pipe Fitting Insulation	(4" O.D.) Air line elbow	5	Repair and O & M
06-117	Pipe Fitting Insulation	(6" O.D.) Steam elbow	5	Repair and O & M
06-179	Pipe Fitting Insulation	(4" O.D.) Steam elbow, above chalkboard	5	Repair and O & M
06-194	Pipe Fitting Insulation	(2" O.D.) Condensate, elbow by pickling,white exposed material	5	Repair and O & M
06-194	Pipe Fitting Insulation	(2" O.D.) Condensate elbow, by entrance G-90, exposed material	5	Repair and O & M
06-198	Pipe Fitting Insulation	(3" O.D.) Waste water elbow, north end of tank	5	Repair and O & M
06-198	Pipe Fitting Insulation	Waste water fitting, east side	5	Repair and O & M
07-009	Pipe Run Insulation	(5" O.D.) Service water line insulation	5	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
07-011	Pipe Run Insulation	(10" O.D.) Steam line insulation	5	Repair and O & M
07-014	Pipe Run Insulation	(6" O.D.) Service water line insulation	5	Repair and O & M
07-016	Pipe Run Insulation	(4" O.D.) Potable water line insulation	5	Repair and O & M
07-018	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	5	Repair and O & M
07-022	Pipe Run Insulation	(4" O.D.) Condensate line insulation	5	Repair and O & M
07-023	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	5	Repair and O & M
07-035	Pipe Run Insulation	(6" O.D.) Steam line insulation	5	Repair and O & M
07-047	Pipe Run Insulation	(4" O.D.) Steam line insulation	5	Repair and O & M
07-050	Pipe Fitting Insulation	(4" O.D.) Service water line fitting insulation	5	Repair and O & M
09-011A	Pipe Run Insulation	(10" O.D.) High pressure steam line, recently wrapped	5	Repair and O & M
09-057	Pipe Fitting Insulation	(10" O.D.) Abandoned line valve	5	Repair and O & M
10a-034	HVAC Flexible Connector	No samples taken, would jeopardize boiler integrity. Flex connectors on all 4 boilers	5	Repair and O & M
13a-001	Pipe Fitting Insulation	(6" O.D.) Steam line tee fitting	5	Repair and O & M
13a-009	Pipe Run Insulation	No samples were taken, lines not accessible	5	Repair and O & M
13a-010	Pipe Fitting Insulation	No samples were taken, fittings not accessible	5	Repair and O & M
13a-011	Pipe Run Insulation	No samples were taken, lines not accessible	5	Repair and O & M
13a-012	Pipe Fitting Insulation	No samples were taken, fittings not accessible	5	Repair and O & M
15-041	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white and dark blue streaks, in southeast corner of room	5	Repair and O & M
15-062	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, on south side of hall outside of room N-24	5	Repair and O & M
15-109	Duct Insulation	HVAC duct insulation, air handler between S-8 and S-9, middle of duct	5	Repair and O & M
15-112	Pipe Fitting Insulation	(12" O.D.) Chilled water system valve-south mechanical, central.	5	Repair and O & M
15-112	Pipe Fitting Insulation	(6" O.D.) Chilled water system. Elbow in corrosion room by HVAC.	5	Repair and O & M
15-120	Pipe Fitting Insulation Lagging	AHU unit-Condensate fittings (canvas wrapped material) south mechanical	5	Repair and O & M
15-126	Pipe Fitting Insulation	(8" O.D.) Hot water return to heat exchanger, elbow	5	Repair and O & M
15-134	Pipe Fitting Insulation	(3" O.D.) Steam system elbow - South mechanical room, west wall of northern	5	Repair and O & M
15-134	Pipe Fitting Insulation	(6" O.D.) Steam system elbow in corrosion room by HVAC	5	Repair and O & M
15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run, south mechanical room, mid-point west wall	5	Repair and O & M
15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run in corrosion room running east to west	5	Repair and O & M
15-136	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow by west wall between rooms S-8 and S-7	5	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-137	Pipe Run Insulation	(10" O.D.) Condensate line straights, elbow by overhead material door	5	Repair and O & M
15-139	Pipe Run Insulation	(10" O.D.) Steam line straight by west wall by overhead material door	5	Repair and O & M
28b-001	Pipe Run Insulation	(3" O.D.) Horizontal steam line, north wall	5	Repair and O & M
28b-005	Pipe Fitting Insulation	(4" O.D.) Elbow, south wall by double doors steam line	5	Repair and O & M
28b-014	Pipe Fitting Insulation	(3" O.D.) Condensate elbow	5	Repair and O & M
37-02	Pipe Run Insulation	(4" O.D.) Steam line	5	Repair and O & M
3d-01	Storage Tank / Exchanger Lagging	Black tar tank wrap	5	Repair and O & M
3e-07	Pipe Run Insulation	(4" O.D.) Tank line, at south end	5	Repair and O & M
3e-22	Pipe Run Insulation	(8" O.D.) Steam line at south wall	5	Repair and O & M
3e-28	Pipe Run Insulation	(8" O.D.) Abandoned steam line at south wall	5	Repair and O & M
3e-29	Pipe Fitting Insulation	(8" O.D.) Abandoned steam elbow at south wall	5	Repair and O & M
3f-02	Storage Tank / Exchanger Insulation	Sample taken at bottom of tank #1	5	Repair and O & M
3f-03	Pipe Fitting Insulation	(6" O.D.)	5	Repair and O & M
4a-006	Pipe Run Insulation	(6" O.D.) vertical treated water line, metal jacketed, by NE roll-up door	5	Repair and O & M
4a-006	Pipe Run Insulation	(3" O.D.) horizontal treated water line by column 6D	5	Repair and O & M
4a-017	Storage Tank / Exchanger Insulation	Tank insulation from the inside of tank 7	5	Repair and O & M
4a-022A	Gasketry	Woven gasketry wrapped around steam line	5	Repair and O & M
4a-023	Storage Tank / Exchanger Insulation	Tank insulation from tank by column 6C	5	Repair and O & M
4a-031	Pipe Fitting Insulation	(2" O.D.) emergency water line elbow by column 6D	5	Repair and O & M
4a-083	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 8	5	Repair and O & M
4a-086	Pipe Fitting Insulation	(2" O.D.) conduit line elbow on reactor 4 by column 3A	5	Repair and O & M
4a-100	Pipe Run Insulation	(4" O.D.) steam condensate line on the west side of the electrical room	5	Repair and O & M
54-040	Pipe Run Insulation	(4" O.D.) Dead line in refrigeration area, could not access	5	Repair and O & M
8a-010	Pipe Fitting Insulation	(6" O.D.) 90 degree condensate fitting by column A2	5	Repair and O & M
8a-011	Pipe Run Insulation	(6" O.D.) Condensate line above pumps	5	Repair and O & M
8a-019	Pipe Fitting Insulation	(4" O.D.) 90 degree water fitting by east end, column D8	5	Repair and O & M
011-027	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	4	Repair and O & M
02a-002	Pipe Run Insulation	(4" O.D.) Horizontal steam line in between tanks D1-7 and D1-8, metal -jacketed	4	Repair and O & M
02a-031A	Pipe Fitting Insulation	(4" O.D.) Steam line valve in south corner	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
02a-050	Pipe Fitting Insulation	(6" O.D.) Process water elbow by green gauge panel	4	Repair and O & M
02a-054	Pipe Fitting Insulation	(32" O.D.) Vent pipe elbow on tank D1-206	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(10" O.D.) Steam line elbow - A-12	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-10	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - A-11	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - C-11	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-11	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - A-8	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-11	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-10	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - C-10	4	Repair and O & M
02a-073	Transite Sheet Material	No sample taken, material assessed	4	Repair and O & M
02a-074	Transite Sheet Material	Interior transite west side of building; no samples taken, sampled elsewhere	4	Repair and O & M
05-001	Pipe Run Insulation	(6" O.D.) 150 pound steam, line near column 29C	4	Repair and O & M
05-006	Pipe Fitting Insulation	(4" O.D.) Potable water line tee, near column 26E	4	Repair and O & M
05-007	Pipe Fitting Insulation	(2" O.D.)	4	Repair and O & M
05-008	Pipe Run Insulation	(2" O.D.) Steam line, office 05-27	4	Repair and O & M
05-013	Acoustic Panel (2' X 4')	(2' X 4') Ceiling panel, hole and fissure	4	Repair and O & M
05-014	Transite Sheet Material	Transite walls from column 25 to column 29	4	Repair and O & M
05-037	Pipe Run Insulation	(8" O.D.) 150 pound steam line, near column 14	4	Repair and O & M
05-038	Pipe Fitting Insulation	(8" O.D.) 150 pound steam line elbow, near column 11F	4	Repair and O & M
05-040	Pipe Run Insulation	(6" O.D.) Condensate line, near column 10A	4	Repair and O & M
05-041	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow, near column 11B	4	Repair and O & M
05-044	Pipe Fitting Insulation	(6" O.D.) Potable water line elbow, near column 11F	4	Repair and O & M
05-046	Joint Compound	(4" O.D.) Transite pipe joint generator 11 and 12, near column 8D	4	Repair and O & M
05-047	Transite Pipe	(4" O.D.) Transite exhaust flue generator 11 and 12, near column 8D	4	Repair and O & M
05-048	Transite Sheet Material	1/4" Walls and ceiling	4	Repair and O & M
05-049	Transite Sheet Material	1/4" Transite corridor wall addition from 10A to 7A	4	Repair and O & M
05-051	Transite Pipe	(4" O.D.) Transite flue at remelt, near furnace column 6D	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
05-052	Gasketry	8" Gasket	4	Repair and O & M
05-056A	Heat Shield	Gloves at column 11F	4	Repair and O & M
05-056B	Heat Shield	Rope gasket, 1/4" X 1" flat ribbon, at column 11F	4	Repair and O & M
05-057	Pipe Run Insulation	(4" O.D.) Water line riser, at column 12G	4	Repair and O & M
05-057A	Transite Sheet Material	Transite on wall columns 13F and 10F	4	Repair and O & M
05-060	Transite Sheet Material	Transite walls, office 05-24, at column 9G	4	Repair and O & M
05-062	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	4	Repair and O & M
05-064	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, green	4	Repair and O & M
05-064	Floor Tile Mastic	Floor tile mastic, black	4	Repair and O & M
05-065	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 5G	4	Repair and O & M
05-069	Pipe Run Insulation	(3" O.D.) Steam line riser, near column 4E	4	Repair and O & M
05-070	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 2D	4	Repair and O & M
05-104	Pipe Run Insulation	(6" O.D.) 150 pound steam line, near column 26E	4	Repair and O & M
06-019B	Pipe Fitting Insulation	(8" O.D.) Steam; some metal clad	4	Repair and O & M
06-019B	Pipe Fitting Insulation	(2" to 4" O.D.) 2 of 5 are metal clad	4	Repair and O & M
06-029A	Pipe Run Insulation	(4" O.D.) Process water	4	Repair and O & M
06-047	Pipe Fitting Insulation	(8" O.D.) Steam tee at column C29 platform	4	Repair and O & M
06-051A	Pipe Fitting Insulation	Main steam line fitting at column C18	4	Repair and O & M
06-051B	Pipe Run Insulation	(10" O.D.) At column C18	4	Repair and O & M
06-055B	Pipe Fitting Insulation	(6" O.D.) Condensate elbow near column C23	4	Repair and O & M
06-077	Transite Sheet Material	Smooth interior wall	4	Repair and O & M
06-087B	Pipe Run Insulation	(2" O.D.) Steam line, metal clad	4	Repair and O & M
06-118	Pipe Run Insulation	(6" O.D.) Abandoned line leading to tocco furnace	4	Repair and O & M
06-138	Resilient Floor Tile (9" X 9")	Black	4	Repair and O & M
06-138	Resilient Floor Tile (9" X 9")	White	4	Repair and O & M
06-139	Fabric / Rope	Valve packing rope, north corner of pump pit	4	Repair and O & M
06-151	Pipe Fitting Insulation	(2" O.D.) Water line	4	Repair and O & M
06-161	Pipe Fitting Insulation	(6" O.D.) Steam elbow	4	Repair and O & M
06-165	Pipe Run Insulation	(2" O.D.) Steam line bypass	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-171	Pipe Run Insulation	(10" O.D.) Steam line	4	Repair and O & M
06-173	Pipe Run Insulation	(4" O.D.) Water line, at east wall	4	Repair and O & M
06-175	Pipe Fitting Insulation	(4" O.D.) Water elbow, at east wall	4	Repair and O & M
06-207	Pipe Run Insulation	(5" O.D.) steam line by column B-3 Assumed per WEMCO	4	Repair and O & M
069-003	Pipe Run Insulation	(4" O.D.) metal jacket	4	Repair and O & M
069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	4	Repair and O & M
069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	4	Repair and O & M
07-007	Storage Tank / Exchanger Insulation	Light gas surge tank insulation	4	Repair and O & M
07-012	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	4	Repair and O & M
07-013	Pipe Run Insulation	(4" O.D.) Condensate line insulation	4	Repair and O & M
07-017	Pipe Run Insulation	(4" O.D.) Service water line insulation	4	Repair and O & M
07-019	Duct Insulation	Duct insulation	4	Repair and O & M
07-026	Duct Insulation	Duct insulation	4	Repair and O & M
07-032	Pipe Run Insulation	(4" O.D.) Service water line insulation	4	Repair and O & M
07-037	Pipe Run Insulation	(4" O.D.) Condensate line insulation	4	Repair and O & M
07-042	Pipe Run Insulation	(3" O.D.) Potable water line insulation	4	Repair and O & M
07-046	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	4	Repair and O & M
07-048	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	4	Repair and O & M
07-051	Pipe Run Insulation	(4" O.D.) Service water line insulation	4	Repair and O & M
13a-003B	Pipe Run Insulation	(4" O.D.) Cooling water return line	4	Repair and O & M
13a-005	Pipe Run Insulation	(4" O.D.) Cooling water supply line on cooling water tank	4	Repair and O & M
13a-008	Pipe Fitting Insulation	No samples were taken, fittings not accessible	4	Repair and O & M
13a-019	Gasketry	Door gasket	4	Repair and O & M
13a-023	Transite Sheet Material	No samples taken per scope of work assumed positive	4	Repair and O & M
15-021	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, tan with red, brown and orange streaks, in southeast corner of	4	Repair and O & M
15-036	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, light brown with white and brown streaks, in southeast corner of room	4	Repair and O & M
15-039	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with beige streaks, in southwest corner of room C-15	4	Repair and O & M
15-045	Duct Insulation	Duct insulation taken in center wing hall outside lab C-43	4	Repair and O & M
15-051	Pipe Fitting Insulation	(4" O.D.) Water line fitting in room N-22, west wall	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-052	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, on north side of room N-40A by the door	4	Repair and O & M
15-058	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, on northwest side of room N-40	4	Repair and O & M
15-082	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, in hall outside room S-18	4	Repair and O & M
15-095	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, off white with black spec, in hall outside of room W-4	4	Repair and O & M
15-101	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with green streaks, in room W-28	4	Repair and O & M
15-111	Pipe Run Insulation	Pipe insulation run by column S-15 running north to south	4	Repair and O & M
20a-005	Pipe Run Insulation	(10" O.D.) Green line, center section	4	Repair and O & M
20e-001	Pipe Run Insulation	(12" O.D.) Water Line	4	Repair and O & M
24b-002	Pipe Fitting Insulation	(5" O.D.)	4	Repair and O & M
25c-01	Gasketry	(10"O.D.) Gasket pipe	4	Repair and O & M
28a-009	Pipe Run Insulation	(4" O.D.) Line corner of womens bath room #110	4	Repair and O & M
28a-010	Pipe Run Insulation	(4" O.D.) Line in womens bath room #110	4	Repair and O & M
28a-011	Pipe Fitting Insulation	(4" O.D.) Elbow above hot water heater in womens rest room #110	4	Repair and O & M
28a-012	Pipe Fitting Insulation	(4" O.D.) Elbow in womens rest room #110	4	Repair and O & M
28b-002	Pipe Run Insulation Lagging	(2" O.D.) North wall steam line	4	Repair and O & M
2b-005	Pipe Fitting Insulation	(4" O.D.) Steam line, elbow	4	Repair and O & M
2d-002	Pipe Run Insulation	(4" O.D.) Steam line	4	Repair and O & M
2d-010	Transite Sheet Material	South interior transite wall	4	Repair and O & M
30-005	Transite Sheet Material	Transite Wall	4	Repair and O & M
32-001	Pipe Fitting Insulation	(4" O.D.) Steam line fitting	4	Repair and O & M
32-003	Pipe Run Insulation	(4" O.D.) Steam line pipe run insulation	4	Repair and O & M
32-006	Pipe Run Insulation	(4" O.D.) Water line pipe run insulation, gray	4	Repair and O & M
32-007	Pipe Fitting Insulation	(3" O.D.) Water line elbow, gray	4	Repair and O & M
3e-18	Pipe Run Insulation	(8" O.D.) At half-level	4	Repair and O & M
45-018	Pipe Run Insulation	(3" O.D.) Abandoned straight line	4	Repair and O & M
4a-046	Duct Insulation	(18" O.D.) exhasust lines from reactor 12-A5	4	Repair and O & M
4a-047	Duct Insulation	Exhaust insulation from reactor 12-A5	4	Repair and O & M
4a-048	Pipe Run Insulation	(10" O.D.) Steam line by column 5B	4	Repair and O & M
4a-049	Pipe Fitting Insulation	(10" O.D.) Steam line elbow at 5B	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-053	Pipe Run Insulation	(6" O.D.) Unknown line around the perimeter of the 6th floor. B-1	4	Repair and O & M
4a-068	Pipe Run Insulation	(6" O.D.) lines from tank between reactors 2 and 3	4	Repair and O & M
4a-072	Pipe Run Insulation	(3" O.D.) potable water line column 5F	4	Repair and O & M
4a-075	Duct Insulation Lagging	Air handling unit lagging by column 8D	4	Repair and O & M
4a-076	Duct Insulation	Blow fan insulation by column 7C	4	Repair and O & M
4a-079	Transite Sheet Material	Transite sheet material with inner insulation air cell around freight elevator at	4	Repair and O & M
4a-081	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow going into reactor 8	4	Repair and O & M
4a-084	Pipe Run Insulation	(3" O.D.) pipe line by column 2A	4	Repair and O & M
4a-095	Pipe Fitting Insulation	(4" O.D.) HF recovery line elbow in the HF recovery room by the southwest corner	4	Repair and O & M
53-003	Other (Describe)	Tar on insulation fasteners,sample taken south side of Rm.#168	4	Repair and O & M
55a-004	Pipe Run Insulation Lagging	(4" O.D.) South Wall	4	Repair and O & M
71-002	Pipe Run Insulation	(3" O.D.)Water line by south wall	4	Repair and O & M
8a-014	Pipe Run Insulation	(3" O.D.) Potable water line	4	Repair and O & M
012a-001	Pipe Run Insulation	Over (10" O.D.) By west exit	3	O & M
012a-010	Resilient Floor Tile (9" X 9")	Green tile with white specks	3	O & M
06-099	Pipe Run Insulation	(2" O.D.) Condensate line, metal clad	3	O & M
09-025	Pipe Run Insulation	(2" O.D.) Vertical hot water line leading into heater	3	O & M
09-048B	Transite Sheet Material	Smooth transite wall by north roll up door	3	O & M
09-049B	Transite Sheet Material	Corrigated interior transite wall, north end	3	O & M
09-050	Transite Sheet Material	Transite wall, no sample taken	3	O & M
09-051	Transite Sheet Material	Transite wall, West side	3	O & M
10a-011	Storage Tank / Exchanger Insulation	Tank insulation	3	O & M
15-068	Duct Insulation	Duct on west side of in HVAC room S-1	3	O & M
4a-016	Pipe Run Insulation	(4" O.D.) steam line by tank 7	3	O & M
01-001	Pipe Run Insulation	(4" O.D.) 150# Steam Line	2	O & M
01-002	Pipe Fitting Insulation	(6" O.D.) 150# Steam line fitting	2	O & M
01-003	Pipe Run Insulation	(4" O.D.) Condensate return line	2	O & M
01-004	Pipe Fitting Insulation	(4" O.D.) Condensate return line, Tee fitting	2	O & M
01-007	Storage Tank / Exchanger Insulation	Condensate holding tank insulation	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
01-008	Pipe Fitting Insulation	(3" O.D.) Water line fitting	2	O & M
01-010	Pipe Fitting Insulation	(4" O.D.) 150# Steam line fitting	2	O & M
01-016	Pipe Fitting Insulation	(8" O.D.) 150# Pound Steam line fitting to heater	2	O & M
01-017	Pipe Run Insulation	(4" O.D.) 150# Pound Steam Line next to Column 6C	2	O & M
01-018	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting	2	O & M
01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	2	O & M
01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	2	O & M
01-021	Transite Sheet Material	Transite wall between columns 2F, E3	2	O & M
012a-049	Pipe Fitting Insulation	(5" O.D.) Steam elbow, by ladder at catwalk	2	O & M
012a-049	Pipe Fitting Insulation	(3" O.D.) Steam elbow, at catwalk	2	O & M
020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	2	O & M
020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	2	O & M
025a-01	Pipe Fitting Insulation	(3" O.D.) 90 degree fitting	2	O & M
025a-02	Pipe Run Insulation	(3" O.D.) Vertical line	2	O & M
02a-004	Pipe Run Insulation	(2" O.D.) Horizontal black process water line leading to F1-2	2	O & M
02a-008	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by rollup door	2	O & M
02a-040	Transite Sheet Material	Most transite in good repair, few patches of broken and delaminated areas	2	O & M
02a-047	Pipe Run Insulation	(3" O.D.)	2	O & M
02a-072	Transite Sheet Material	West side of plant 2a	2	O & M
03a-04	Pipe Fitting Insulation	(3" O.D.) south west corner by sink	2	O & M
03a-12	Transite Sheet Material	Interior transite walls	2	O & M
03a-13	Transite Sheet Material	No samples taken Per scope of work. Assumed positive	2	O & M
03b-04	Transite Sheet Material	No samples taken per scope of work. Assumed positive	2	O & M
04c-004	Transite Sheet Material	No samples taken	2	O & M
05-022	Transite Sheet Material	1/4" Transite wallboard	2	O & M
05-036	Transite Sheet Material	Corregated Transite wall	2	O & M
05-079	Transite Sheet Material	Corregated wall panel, next to elevator at column 1E	2	O & M
05-092	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting, between column 2F and 2D	2	O & M
05-093	Pipe Run Insulation	(3" O.D.) Condensate return line, by column 2D	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92 3242
Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
05-094	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, on heater by column 26F	2	O & M
05-095	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, by column 28F	2	O & M
05-097	HVAC Flexible Connector	26 connectors cloth like material (24" X 24"x4")	2	O & M
06-014	Storage Tank / Exchanger Insulation	Condensate tank	2	O & M
06-017B	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	2	O & M
06-017B	Pipe Fitting Insulation	(4" O.D.)Condensate elbow	2	O & M
06-044	Wallboard	Smooth cement wallboard, west wall	2	O & M
06-046	Resilient Floor Tile (9" X 9")	Green in quality control office	2	O & M
06-050	Resilient Floor Tile (12" X 12")	Break room	2	O & M
06-059	Pipe Fitting Insulation	(6" O.D.) Steam elbow, south AHU catwalk	2	O & M
06-068	Pipe Run Insulation	Water line	2	O & M
06-070	Pipe Fitting Insulation	Water fitting by restroom	2	O & M
06-072	Pipe Run Insulation	Water line outside restroom	2	O & M
06-095B	Pipe Run Insulation	(4" O.D.) Steam line, metal clad	2	O & M
06-190	Transite Sheet Material	North side of plant	2	O & M
06-209	Pipe Fitting Insulation	(6" O.D.) Steam elbows assumed positive per WEMCO	2	O & M
09-001A	Pipe Run Insulation	(6" O.D.) Condensate line, on heating unit	2	O & M
09-002A	Pipe Fitting Insulation	(6"O.D.)Condensate line elbow	2	O & M
10a-004	Pipe Run Insulation	(6" O.D.) Vertical steam line insulation	2	O & M
10a-026	Gasketry	On boiler stoker	2	O & M
10a-041	Pipe Run Insulation	(3" O.D.) Steam line going into heaters	2	O & M
15-025	HVAC Flexible Connector	Duct in hall outside room E-7	2	O & M
15-063	Floor Tile Mastic	Mastic, south side of hall outside of room N-24	2	O & M
15-064	Pipe Fitting Insulation	(4" O.D.) Steam line fitting by east wall in HVAC room S-1	2	O & M
15-065	Pipe Run Insulation	(4" O.D.) Steam line insulation by west wall in HVAC room S-1	2	O & M
15-066	Pipe Fitting Insulation	(3" O.D.) Condensate line fitting by northwest corner of HVAC room S-1	2	O & M
15-067	Pipe Run Insulation	(3" O.D.) Condensate line insulation by northwest wall in HVAC room S-1	2	O & M
15-072	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in north wall of HVAC room S-22	2	O & M
15-073	Pipe Run Insulation	(4" O.D.) Steam line insulation by main entrance to HVAC room S-22	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-076	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting by north wall in HVAC room S-22	2	O & M
15-077	Pipe Run Insulation	(4" O.D.) Condensate line insulation on floor. West side of unit by main entrance to	2	O & M
15-080A	Duct Insulation	HVAC duct insulation in room S-22 by northeast corner	2	O & M
15-114	Pipe Run Insulation	(4" O.D.) Cooling water supply and return, elevated line	2	O & M
15-116	Storage Tank / Exchanger Insulation	Heat exchanger tank insulation. South mechanical room, north central wall-west	2	O & M
15-118	Duct Insulation	Fan unit - Elevated duct core sample near north wall of south mechanical room	2	O & M
15-123	Pipe Fitting Insulation	(4" O.D.) A.C. condensate pump elbow. Off A.C. condenser pump-central part of south	2	O & M
15-127	Pipe Run Insulation	(2" O.D.) Cold water system - straight run. Room R-18 (elevated line, air cell)	2	O & M
15-128	Pipe Fitting Insulation	(3" O.D.) Elbow. Cold water system - Room R-16 (elevated line, mag)	2	O & M
15-129	Pipe Run Insulation	(2" O.D.) Hot water return system straight runs. Room R-18, (elevated line, mag)	2	O & M
15-130	Pipe Fitting Insulation	(2" O.D.) Hot water return system - Elbow, room R-16, (elevated line, mag)	2	O & M
15-131	Pipe Run Insulation	(3" O.D.) Hot water supply system - straight runs. Room R-18, (elevated line, mag)	2	O & M
15-132	Pipe Fitting Insulation	(3" O.D.) Hot water supply system - Elbow, room R-16, (elevated line, mag)	2	O & M
15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run. South mechanical room, black "stinkglass"	2	O & M
15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run in corrosion room running East to West -	2	O & M
20a-004	Transite Sheet Material	Interior transite panels in transformer, no samples taken	2	O & M
20g-01	Pipe Run Insulation	(12" O.D.) Water line	2	O & M
2b-015	Transite Sheet Material	Transite, no samples taken	2	O & M
2c-01	Pipe Run Insulation	(3" O.D.) Black lagging with white insulation	2	O & M
2d-011	Transite Sheet Material	Transite, No Samples Taken	2	O & M
30-006	Transite Sheet Material	Exterior transite, No samples taken per scope of work	2	O & M
31-001	Pipe Fitting Insulation	(2" O.D.) steam system	2	O & M
31-002	Pipe Run Insulation	(6" O.D.) steam system	2	O & M
31-004	Resilient Floor Tile (9" X 9")	Medium green w/ white/black splotches	2	O & M
3c-12	Transite Sheet Material	No samples taken	2	O & M
3d-02A	Pipe Run Insulation	(4" O.D.) Steam line	2	O & M
3d-04A	Pipe Run Insulation	(4" O.D.) Sump water insulation	2	O & M
3e-19	Pipe Fitting Insulation	(3" O.D.) Elbow leading from 8" O.D. line	2	O & M
3e-23	Pipe Fitting Insulation	(8" O.D.) Steam elbow	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
3e-32	Transite Sheet Material	No samples taken, Assumed positive	2	O & M
3g-004	Transite Sheet Material	No Samples Taken, assumed positive, exterior	2	O & M
45-007	Pipe Fitting Insulation	(6" O.D.) Steam line valve at air handling unit	2	O & M
45-008	Pipe Run Insulation	(8" O.D.) Steam Line at Air Handling Unit	2	O & M
4a-013	Pipe Run Insulation	(6" O.D.) vertical ammonia line by west side double doors	2	O & M
4a-028	Pipe Run Insulation	(6" O.D.) vertical steam line by column F-1	2	O & M
4a-080	Transite Sheet Material	Interior transite sheeting material by column 1E	2	O & M
4a-090	Transite Sheet Material	Material not sampled per Scope-of-Work exterior Transite	2	O & M
4a-092	Pipe Run Insulation	(8" O.D.) steam line, metal jacketed, by reactor 1	2	O & M
54-021	Pipe Fitting Insulation	Over (10" O.D.) steam line fitting on main line in steam room entrance	2	O & M
54-028	Pipe Run Insulation	(4" O.D.) Cooling water supply line over water pumps	2	O & M
54-031	Pipe Fitting Insulation	(5" O.D.) Cooling water return line elbow above condensate tank	2	O & M
54-032A	Pipe Run Insulation	(4" O.D.) Cooling water return line above water pumps	2	O & M
54-033	Pipe Run Insulation	(4" O.D.) Potable water line left of stairs	2	O & M
54-037	Pipe Run Insulation	(4" O.D.) Condensate line by condensate tank	2	O & M
54-041	Pipe Fitting Insulation	(4" O.D.) Dead line elbow in refrigeration area, could not access	2	O & M
68-004	Transite Sheet Material	Transite; no samples taken	2	O & M
8a-002	Pipe Run Insulation	(12" O.D.) Steam line, metal jacketed by column D9	2	O & M
8a-004	Pipe Run Insulation	(3" O.D.) Potable water line, metal jacketed by Column 7B	2	O & M
8a-005	Pipe Fitting Insulation	(6" O.D.) Process water line fitting by column D9	2	O & M
8a-006C	Pipe Run Insulation	(4" O.D.) Process water line by column 5a	2	O & M
8a-015	Pipe Run Insulation	(4" O.D.) Steam line by gauge door at column C1	2	O & M
8a-016	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting on catwalk by column C1	2	O & M
8a-017	Pipe Run Insulation	(3" O.D.) Condensate line on catwalk, south side of heater	2	O & M
8a-018	Pipe Fitting Insulation	(4" O.D.) 90 degree fitting on catwalk, south side of heater	2	O & M
8a-020	Pipe Run Insulation	(4" O.D.) Process water line by column D8	2	O & M
8a-032	Transite Sheet Material	Interior transite by roll-up door	2	O & M
01-011	Pipe Fitting Insulation	(4" O.D.) Condensate line valve B	1	O & M
01-012	Pipe Run Insulation	(4" O.D.) 150# Steam line	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
01-013	Pipe Run Insulation	(4" O.D.) Condensate return line	1	O & M
01-014	Resilient Floor Tile (12" X 12")	(12" x 12") Resilient Floor Tile White and Brown in Office 01-47	1	O & M
01-015	Resilient Floor Tile (9" X 9")	(9" x 9") Resilient Floor Tile Green, White and Blue streaks	1	O & M
01-024	Transite Sheet Material	No samples taken	1	O & M
011-001	Resilient Floor Tile (9" X 9")	Grey Floor Tile (9"x9")	1	O & M
011-002	Floor Tile Mastic	Black mastic	1	O & M
011-003	Resilient Floor Tile (9" X 9")	Green / white stripes (9"x9')	1	O & M
011-004	Floor Tile Mastic	Black mastic	1	O & M
011-009	Resilient Floor Tile (9" X 9")	Black floor tile border (9"x9")	1	O & M
011-010	Floor Tile Mastic	Black mastic, taken with sample 3227	1	O & M
011-010	Floor Tile Mastic	Black mastic, taken with sample 3231	1	O & M
011-016	Pipe Run Insulation	(10" O.D.) Horizontal Steam line	1	O & M
011-017	Pipe Fitting Insulation	(10" O.D.) Steam elbow	1	O & M
011-023	Pipe Run Insulation	(24" O.D.) Steam line	1	O & M
011-024	Pipe Fitting Insulation	(10" O.D.)Steam line Tee	1	O & M
011-026	Pipe Run Insulation	(6" O.D.) Horizontal steam line	1	O & M
011-031	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
011-033	Pipe Run Insulation	(6" O.D.) Horizontal steam line north-south metal jacketed	1	O & M
011-034	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	1	O & M
011-036	Pipe Run Insulation	(12" O.D.) Steam line, vertical between tanks 3 & 2	1	O & M
011-041	Pipe Run Insulation Lagging	Vertical metal jackets	1	O & M
011-047	Pipe Run Insulation	(12" O.D.) Steam line horizontal	1	O & M
011-048	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	1	O & M
011-051	Pipe Fitting Insulation	(6" O.D.)Steam line elbow	1	O & M
012a-007	Storage Tank / Exchanger Insulation	Condensate tank	1	O & M
012a-008	Pipe Fitting Insulation	(4"O.D.) Elbow,leading to tank	1	O & M
012a-011	Resilient Floor Tile (9" X 9")	Green / with white stripes	1	O & M
012a-012	Resilient Floor Tile (9" X 9")	Light green	1	O & M
012a-014	Resilient Floor Tile (9" X 9")	Weld shop,Green/white tile	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
012a-016	Duct Insulation Lagging	Lagging of fiberglass wrapped duct	1	O & M
012a-018	Pipe Run Insulation	(4" O.D.) East wall grey lagging,cold water line	1	O & M
012a-020	Resilient Floor Tile (9" X 9")	White with black streaks	1	O & M
012a-022	Pipe Run Insulation	(4" O.D.) Hot water line	1	O & M
012a-024	Resilient Floor Tile (9" X 9")	Green tile with black & white specks	1	O & M
012a-025	Resilient Floor Tile (9" X 9")	Dark green with black and white specks	1	O & M
012a-026	Resilient Floor Tile (9" X 9")	Green with white and black specks	1	O & M
012a-028	Resilient Floor Tile (9" X 9")	Green	1	O & M
012a-029	Resilient Floor Tile (9" X 9")	Dark green	1	O & M
012a-030	Pipe Run Insulation	(3" O.D.) Vertical by door 125+	1	O & M
012a-032B	Resilient Floor Tile (9" X 9")	Black tile with white specks	1	O & M
012a-033	Transite Sheet Material	Transite, No samples taken assumed to be positive.	1	O & M
012a-034	Transite Sheet Material	Transite, exterior west side of building	1	O & M
012a-035	Pipe Run Insulation	(4" O.D.) Steam line by column k-11	1	O & M
012a-035	Pipe Run Insulation	Steam line by column L-11	1	O & M
012a-036	Pipe Fitting Insulation	(4" O.D.)Steam, elbow by heater between Col. L 11-12	1	O & M
012a-037	Pipe Run Insulation	(4" O.D.) Condensate line by Col. L-11 north side	1	O & M
012a-038	Pipe Fitting Insulation	(2" O.D.) Condensate ,elbow by Col. L-11	1	O & M
012a-039	Pipe Run Insulation	(3" O.D.)Water line by Col. L-11	1	O & M
012a-040	Pipe Fitting Insulation	(3" O.D.) Water , elbow by Col. L-11	1	O & M
012a-041	Resilient Floor Tile (9" X 9")	Green floor tile W / white streaks, in office	1	O & M
012a-043	Transite Sheet Material	Transite wall covering at stores office (corragated)	1	O & M
012a-044	Pipe Run Insulation	(4" O.D.) Condensate line by exit door	1	O & M
012a-045	Pipe Fitting Insulation	(4" O.D.) Condensate elbow by exit door	1	O & M
012a-046	Pipe Run Insulation	(4" O.D.) Steam line , by west wall	1	O & M
012a-047	Pipe Fitting Insulation	(4" O.D.) Steam elbow by west wall	1	O & M
02a-010	Pipe Run Insulation	(2" O.D.) Horizontal steam line by D1-4 and D1-5	1	O & M
02a-011	Pipe Fitting Insulation	(1" O.D.) Steam line elbow off tank D1-1	1	O & M
02a-012	Transite Sheet Material	Inner wall by west exit	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
02a-024	Pipe Fitting Insulation	(4" O.D.) Water line elbow over slop sink	1	O & M
02a-026	Transite Sheet Material	Transite interior wall in south outer room	1	O & M
02a-027	Pipe Fitting Insulation	Steam line fitting by west wall	1	O & M
02a-030	Pipe Run Insulation	(4" O.D.) Vertical steam line by north window, metal-jacketed	1	O & M
02a-032	Pipe Run Insulation	(18" O.D.) Horizontal tank line between C-18 and C-19, metal-jacketed	1	O & M
02a-033	Pipe Fitting Insulation	(18" O.D.) Tank feed elbow between columns C-18 and C-19, covered in	1	O & M
02a-036	Pipe Run Insulation	(3" O.D.) Horizontal condensate line over tank by column C-15	1	O & M
02a-041	Pipe Run Insulation	(8" O.D.) Steam line in south side of the building near column A-6, metal-jacketed	1	O & M
02a-042	Pipe Fitting Insulation	(5" O.D.) Black steam line elbow by column A-5	1	O & M
02a-045	Pipe Run Insulation	(4" O.D.) Vertical steam line between A-15 and A-16, metal-jacketed	1	O & M
02a-046	Pipe Fitting Insulation	(6" O.D.) Steam elbow between columns A-16 and A-15	1	O & M
02a-049	Pipe Run Insulation	(6" O.D.) Vertical process water line by column C-15, metal-jacketed	1	O & M
02a-057	Duct Insulation	Insulation off HVAC system	1	O & M
02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column A-11	1	O & M
02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column C-11	1	O & M
02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-A-11	1	O & M
02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-C-11	1	O & M
02a-062	Pipe Run Insulation	(10" O.D.) Steam line-straight - A-12	1	O & M
02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-10	1	O & M
02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - A-11	1	O & M
02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-11	1	O & M
02a-062	Pipe Run Insulation	(3" O.D.) Steam line-straight - C-11	1	O & M
02a-063	Pipe Fitting Insulation	(6" O.D.) Process water elbow - A-12	1	O & M
02a-063	Pipe Fitting Insulation	(3" O.D.) Process water elbow - C-12	1	O & M
02a-063	Pipe Fitting Insulation	(10" O.D.) Process water elbow - A-12	1	O & M
02a-064	Pipe Run Insulation	(6" O.D.) Process water-straight - A-12	1	O & M
02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - C-12	1	O & M
02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - C-9	1	O & M
02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - A-12	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - A-8	1	O & M
02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - C-10	1	O & M
02a-066	Pipe Run Insulation	(6" O.D.) Straight run, not sampled	1	O & M
02a-066	Pipe Run Insulation	(4" O.D.) Condensate return-straight - A-10	1	O & M
02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	1	O & M
02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	1	O & M
02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	1	O & M
02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	1	O & M
02a-069	Pipe Run Insulation	(36" O.D.) Line - 2 overflow vessels - D-11	1	O & M
02a-070	Storage Tank / Exchanger Insulation	Second carbonate make-up tank @ D-13 (D=10, H=6), 11800 gallon tank	1	O & M
02a-076	Transite sheet material	Interior transite, east side of building; no samples taken, material assessed	1	O & M
02a-077	Pipe Run Insulation	(4" O.D.) metal jacketed cold water line next to tag 0219 s. wall	1	O & M
02a-078	Pipe Run Insulation	(8" O.D.) metal jacketed north of control panel	1	O & M
02a-079	Pipe Run Insulation	(5" O.D.) metal jacketed	1	O & M
02a-080	Storage Tank / Exchanger Insulation	Tank f1-211	1	O & M
03a-01	Pipe Fitting Insulation	(6" O.D.) elbow - west end	1	O & M
03a-02	Pipe Run Insulation	(4" O.D.) Steam, upper level catwalk	1	O & M
03a-03	Pipe Run Insulation	(3" O.D.)south west corner by sink	1	O & M
03a-05	Pipe Run Insulation	(1" O.D.) at water heater south west	1	O & M
03a-09	Resilient Floor Tile (9" X 9")	Office white	1	O & M
03a-10	Floor Tile Mastic	Office,north east corner	1	O & M
046-003	Resilient Floor Tile (9" X 9")	Green	1	O & M
04c-005	Transite Sheet Material	Interior transite	1	O & M
05-010	Transite Sheet Material	Transite wall, office 05-27	1	O & M
05-011	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, white with gray streaks, office 05-27	1	O & M
05-015	Transite Sheet Material	No sample taken, unsafe to enter elevator shaft, Assumed positive	1	O & M
05-016	Pipe Run Insulation	(8" O.D.) 150 pound steam line, metal jacketed, near column 19E	1	O & M
05-018	Pipe Run Insulation	(4" O.D.) Branch line off of (6" O.D.) condensate return line, dead line	1	O & M
05-019	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, by caged equipment storage	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
05-020B	Pipe Run Insulation	(3" O.D.) Potable water line, near column 19E, metal jacketed	1	O & M
05-021	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 19E	1	O & M
05-029	Pipe Run Insulation	(4" O.D.) Potable water line, metal jacketed, next to 16F	1	O & M
05-030	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 16F, metal jacketed	1	O & M
05-032	Pipe Run Insulation	(6" O.D.) Condensate line	1	O & M
05-033	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	1	O & M
05-053	Pipe Run Insulation	(4" O.D.) Steam line, at column F	1	O & M
05-054	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 10G	1	O & M
05-055	Gasketry	Sheet gasket material at column 11F	1	O & M
05-055	Gasketry	Sheet gasket material at column 10G	1	O & M
05-059	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, brown and white, office 05-24	1	O & M
05-059	Floor Tile Mastic	Black floor tile mastic, office 05-24	1	O & M
05-071	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, at North end of men's rest room	1	O & M
05-072A	Pipe Run Insulation	(4" O.D.) Potable water line, next to column 2E	1	O & M
05-073	Pipe Fitting Insulation	(4" O.D.) Sump water line, South of column 5F	1	O & M
05-077	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, North of column 6A	1	O & M
05-080	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, next to column 26F	1	O & M
05-081	Pipe Run Insulation	(4" O.D.) Steam line, next to column 26F	1	O & M
05-082	Pipe Run Insulation	(6" O.D.) Condensate line, near column 24E	1	O & M
05-083	Pipe Fitting Insulation	(6" O.D.) Condensate line fitting, next to column 25F	1	O & M
05-084	Transite Sheet Material	Transite wall, South of elevator wall	1	O & M
05-085	Transite Sheet Material	Interior Transite	1	O & M
05-086	Pipe Fitting Insulation	(6" O.D.) Condensate return line fitting, next to column 18F	1	O & M
05-087	Pipe Run Insulation	(6" O.D.) Condensate line, next to column 15A	1	O & M
05-088	Pipe Run Insulation	(4" O.D.) Steam line, North of column 3D	1	O & M
05-090	Transite Sheet Material	Smooth Transite wall, by elevator	1	O & M
05-096	Transite Sheet Material	Smooth Transite walls on elevator at south end of plant	1	O & M
05-098	Transite Sheet Material	South side of plant 5, No samples taken Assumed positive	1	O & M
05-099	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, Northwest side of plant	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-002	Pipe Fitting Insulation	(2" O.D.)Dead water fitting, by column C6	1	O & M
06-003	Pipe Fitting Insulation	(10" O.D.) Roof drain fitting; by north wall at men's restroom	1	O & M
06-004	Pipe Run Insulation	(10" O.D.) Roof drain line, north end at men's restroom	1	O & M
06-004	Pipe Run Insulation	(10" O.D.)Roof drain line, by north wall at men's restroom	1	O & M
06-007	Pipe Run Insulation	(6" O.D.)Steam line, on catwalk	1	O & M
06-016	Pipe Run Insulation Lagging	(8" O.D.) Treated water line	1	O & M
06-018A	Pipe Run Insulation	(8" O.D.)Treated water line over column	1	O & M
06-020	Pipe Fitting Insulation	(8" O.D.)	1	O & M
06-022	Pipe Run Insulation	(3" O.D.) Potable water	1	O & M
06-024	Pipe Fitting Insulation	(3" O.D.) Potable water elbow, over restroom	1	O & M
06-026	Pipe Fitting Insulation	(3" O.D.) Water elbow, above work station	1	O & M
06-028	Pipe Run Insulation	(10" O.D.) Metal clad steam line	1	O & M
06-029B	Pipe Fitting Insulation	(4" O.D.) Process water fitting	1	O & M
06-030	Pipe Fitting Insulation	(10" O.D.) Steam elbow	1	O & M
06-032	Pipe Run Insulation	(4" O.D.)Condensate, metal clad	1	O & M
06-036	Pipe Fitting Insulation	Condensate fittings	1	O & M
06-039A	Gasketry	Assembly 06-8044-Con, northwest corner	1	O & M
06-040	Pipe Run Insulation Lagging	(8" O.D.) Metal clad steam, interior lagging	1	O & M
06-040	Pipe Run Insulation	(8" O.D.) Metal clad steam, at column C6	1	O & M
06-041	Transite Sheet Material	Transite wall patch	1	O & M
06-042	Pipe Fitting Insulation	(8" O.D.) Steam elbow	1	O & M
06-052	Floor Tile Mastic	Break room, Black	1	O & M
06-053	Pipe Fitting Insulation	(4" O.D.) Steam elbow	1	O & M
06-056	Pipe Fitting Insulation	(4" O.D.) Water valve	1	O & M
06-058	Resilient Floor Tile (12" X 12")	Brown, in rad tech office	1	O & M
06-060	Pipe Fitting Insulation	(4" O.D.) Steam elbow	1	O & M
06-062	Pipe Run Insulation	(4" O.D.) 150 pound steam	1	O & M
06-064	Pipe Fitting Insulation	Potable water elbow	1	O & M
06-071	Storage Tank / Exchanger Insulation	500 gallon urea tank at column D29	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-080	Pipe Run Insulation	Steam line above restroom	1	O & M
06-082	Pipe Fitting Insulation	Steam valve above restroom	1	O & M
06-089	Transite Sheet Material	Interior transite panels, smooth green	1	O & M
06-091	Gasketry	Vacuum line woven band, 4" x 8'	1	O & M
06-098	Pipe Fitting Insulation	Hot water elbow at column B7	1	O & M
06-106	Pipe Run Insulation Lagging	(8" O.D.) Steam line running north-south	1	O & M
06-108A	Pipe Run Insulation	(6" O.D.) Vertical hot water line, by southwest roll-up door	1	O & M
06-109	Transite Sheet Material	North office walls	1	O & M
06-110	Pipe Fitting Insulation	(6" O.D.) Hot water fitting, southwest corner	1	O & M
06-110	Pipe Fitting Insulation	(3" O.D.) Hot water elbow	1	O & M
06-112	Storage Tank / Exchanger Insulation	Hot water condensate tank, south end, west of catwalk	1	O & M
06-114B	Pipe Run Insulation	(10" O.D.) Horizontal steam line, north of pickling area	1	O & M
06-114C	Pipe Run Insulation	(6" O.D.) Steam line, above enriched materials storage	1	O & M
06-116	Pipe Fitting Insulation	(6" O.D.) Steam elbow, southwest corner	1	O & M
06-123	Pipe Run Insulation	(8" O.D.) Elevated steam line	1	O & M
06-124	Pipe Run Insulation	(4" O.D.) Steam line, above office	1	O & M
06-125	Pipe Fitting Insulation	(4" O.D.) Steam tee	1	O & M
06-126	Pipe Fitting Insulation	Steam fitting above office	1	O & M
06-127	Pipe Fitting Insulation	(6" O.D.) Roof drain elbow	1	O & M
06-128A	Resilient Floor Tile (9" X 9")	Green with white streaks, in office	1	O & M
06-134	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate/steam elbow lagging	1	O & M
06-136	Transite Sheet Material	Cement board by central exit door	1	O & M
06-142	Pipe Run Insulation	(3" O.D.) Condensate line	1	O & M
06-143	Resilient Floor Tile (9" X 9")	Green	1	O & M
06-148	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate valve lagging	1	O & M
06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit	1	O & M
06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit, resample of 5147	1	O & M
06-158	Pipe Run Insulation	Line to XFMR switch gear, south end near boiler	1	O & M
06-160	Storage Tank / Exchanger Insulation	XFMR tank by boiler, 4'L x 1'D	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-162	Pipe Run Insulation	(4" O.D.) Steam line	1	O & M
06-164	Pipe Fitting Insulation Lagging	(4" O.D.) Steam elbow lagging, above waste water tank	1	O & M
06-166	Resilient Floor Tile (12" X 12")	Brown	1	O & M
06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting, southeast corner	1	O & M
06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting	1	O & M
06-170	Resilient Floor Tile (9" X 9")	Green	1	O & M
06-177	Pipe Fitting Insulation	(10" O.D.) Refer to 2318, steam fitting, east side	1	O & M
06-178	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
06-185	Transite Sheet Material	Cement board	1	O & M
06-187	Pipe Run Insulation	Air line, north side	1	O & M
06-189	Fire Retardant Clothing	Silver pants within cabinet	1	O & M
06-191	Storage Tank / Exchanger Insulation	Nitric acid tank by pickling	1	O & M
06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	1	O & M
06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	1	O & M
06-193	Pipe Run Insulation	(4"O.D.) Condensate, north side by empty tank	1	O & M
06-193	Pipe Run Insulation	(2"O.D.) Condensate line, west side, cloth clad	1	O & M
06-196	Pipe Run Insulation	(4" O.D.) Vertical waste water, metal clad, on east side of plant	1	O & M
06-196	Pipe Run Insulation	(4" O.D.) Waste water line, east side of tank	1	O & M
06-206	Pipe Run Insulation	(5" O.D.) Steam line insulation grey in color assumed per WEMCO	1	O & M
06-208	Pipe Fitting Insulation	(5" O.D.) steam fittings Assumed per WEMCO	1	O & M
06-210	Pipe Fitting Insulation	(4" O.D.) Steam elbows assumed Positive per WEMCO	1	O & M
06-211	Pipe Run Insulation	(4" O.D.) east side wall next to door hard line	1	O & M
06-213	Transite Sheet Material	No samples taken	1	O & M
069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	1	O & M
069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	1	O & M
069-002	Pipe Fitting Insulation	(8" 0.D.) steam line elbow, metal jacket N.E. heating unit	1	O & M
069-005	Pipe Run Insulation	(9" O.D.) contaminated rinse line metal jacket south side of building	1	O & M
07-002	Pipe Fitting Insulation	(4" O.D.) Steam line tee valve insulation	1	O & M
07-010	Pipe Fitting Insulation	(6" O.D.) LS steam line fitting insulation	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
07-015	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting insulation	1	O & M
07-021	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	1	O & M
07-025	Pipe Run Insulation	(4" O.D.) Potable water line insulation	1	O & M
07-027	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	1	O & M
07-028	Transite Sheet Material	Transite wall	1	O & M
07-029	Pipe Fitting Insulation	(3" O.D.) Steam line fitting insulation	1	O & M
07-033	Pipe Run Insulation	Potable water line pipe could not be sampled due to drums in the way,	1	O & M
07-034	Pipe Fitting Insulation	(4" O.D.) Steam line fitting insulation	1	O & M
07-036	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	1	O & M
07-038	Pipe Fitting Insulation	(6" O.D.) Service water line tee valve insulation	1	O & M
07-039	Pipe Run Insulation	(4" O.D.) Service water line insulation	1	O & M
07-040	Pipe Fitting Insulation	(4" O.D.) Service water line tee fitting insulation	1	O & M
07-041	Pipe Run Insulation	(4" O.D.) Service water line insulation	1	O & M
07-043	Pipe Fitting Insulation	(4" O.D.) Potable water line fitting insulation	1	O & M
07-045	Gasketry	Rope Gasket	1	O & M
07-052	Transite Sheet Material	Transite siding	1	O & M
07-53	Firebrick	Stored Firebrick, white in color inside room 7-19	1	O & M
07-56	Pipe Run Insulation	(5" O.D.) Live steam line	1	O & M
07-57	Pipe Run Insulation	(4" O.D.) Clean condensate line	1	O & M
07-58	Transite Sheet Material	Interior transite smooth sampled from broken section	1	O & M
09-001B	Pipe Run Insulation	(3" O.D.) Steam line, vertical	1	O & M
09-006	Pipe Run Insulation	(4" O.D.) Hot water line, to acid dip tank, metal jacketed	1	O & M
09-007	Pipe Run Insulation	(6" O.D.) Steam line on catwalk	1	O & M
09-008	Pipe Fitting Insulation	(6" O.D.) Steam line fitting	1	O & M
09-010	Pipe Fitting Insulation	(10" O.D.) High pressure steam line elbow	1	O & M
09-011B	Pipe Run Insulation	(6" O.D.) High pressure steam line, vertical run, by valve	1	O & M
09-013	Pipe Run Insulation	(8" O.D.) Condensate line leading off of tank	1	O & M
09-017	Pipe Run Insulation	(6" O.D.) Chilled water line, by valve	1	O & M
09-018	Pipe Fitting Insulation	(6" O.D.) Chilled water line fitting 5 feet off the ground by south door	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
09-019	Storage Tank / Exchanger Insulation	Condensate tank	1	O & M
09-020A	Pipe Run Insulation	(2" O.D.) Vertical cold water line leading from small tank	1	O & M
09-021	Pipe Fitting Insulation	(2" O.D.) Cold water line fitting along south wall	1	O & M
09-022A	Pipe Fitting Insulation	(2" O.D.) Hot water line fitting leading to heater, recently repaired	1	O & M
09-023	(9" X 9") Floor Tile and Mastic	Mastic	1	O & M
09-034	Resilient Floor Tile (9" X 9") & Mastic	(9" X 9") Floor tile, green with black and white specks	1	O & M
09-041	Pipe Fitting Insulation	(3" O.D.) Hot water line elbow on heater	1	O & M
09-042	Transite Sheet Material	West interior transite wall by vertical pipe	1	O & M
09-044	Pipe Fitting Insulation	(4" O.D.) Cold water line elbow above urinal	1	O & M
09-045	Pipe Run Insulation	(12" O.D.) Vertical hot water line leading to valve	1	O & M
09-046	Pipe Fitting Insulation	(8" O.D.) Hot water line elbow leading into HVAC	1	O & M
09-047	(9" x 9") Resilient Floor Tile & Mastic	Black mastic	1	O & M
09-048A	Transite Sheet Material	Transite wall painted light beige	1	O & M
09-052	Pipe Run Insulation	(24" O.D.) Sump water line, metal jacketed	1	O & M
09-054	Pipe Run Insulation	(6" O.D.) Waste water line, metal jacketed	1	O & M
09-058	Pipe Run Insulation	(6" O.D.) Vetical abandoned line, metal jacketed	1	O & M
09-061	Pipe Run Insulation	(2" O.D.) Horizontal cold water line, northeast corner	1	O & M
09-062	Gasketry	Stored material	1	O & M
10a-001	Storage Tank / Exchanger Insulation	(7' x 12') Blow down tank	1	O & M
10a-002	Storage Tank / Exchanger Insulation	(7' x 12') Plant air dryer tank	1	O & M
10a-005	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	1	O & M
10a-006	Pipe Run Insulation	(6" O.D.) Horizontal condensate line	1	O & M
10a-007	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow	1	O & M
10a-012	Boiler Insulation	Boiler tank insulation	1	O & M
10a-013	Boiler Insulation	West side, 4 feet off ground level	1	O & M
10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	1	O & M
10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	1	O & M
10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	1	O & M
10a-014C	Pipe Run Insulation	(10" O.D.) Vertical zeolite water line	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
10a-015	Pipe Fitting Insulation	(10" O.D.) Zeolite water line elbow	1	O & M
10a-016	Pipe Run Insulation	(6" O.D.) Vertical steam line	1	O & M
10a-017	Pipe Fitting Insulation	(12" O.D.) Steam line tee on heat exchanger	1	O & M
10a-018A	Pipe Run Insulation	(6" O.D.) Vertical water line	1	O & M
10a-019	Pipe Fitting Insulation	(4" O.D.) Water line valve	1	O & M
10a-020	Resilient Floor Tile (9" X 9") and Mastic	Resilient floor tile (9" X 9") gray with white specks	1	O & M
10a-021	Resilient Floor Tile (9" X 9")	Resilient floor tile (9" X 9") green with white and black flecks	1	O & M
10a-028	Storage Tank / Exchanger Lagging	Dust collector	1	O & M
10a-029	Boiler Insulation	Boiler plate insulation	1	O & M
10a-030	Flue Insulation	Boiler flue insulation	1	O & M
10a-031	Storage Tank / Exchanger Insulation	Southwest corner of tank	1	O & M
10a-032	Storage Tank / Exchanger Insulation	Condensate tank insulation	1	O & M
10a-035	Smoke stack insulation	Smoke stack insulation	1	O & M
10a-037	Transite Sheet Material	Transite wall no samples taken assumed positive	1	O & M
10a-039	Storage Tank / Exchanger Insulation	Gray, wrapped boiler insulation	1	O & M
10a-042	Transite Sheet Material	Interior transite	1	O & M
13a-004	Pipe Fitting Insulation	(4" O.D.) Cooling water return fitting	1	O & M
13a-006	Pipe Fitting Insulation	(4" O.D.) Cooling water supply end fitting	1	O & M
13a-014	Transite Sheet Material	Transite wall	1	O & M
13a-017	Duct Insulation	12" exhaust duct	1	O & M
13a-018	Pipe Fitting Insulation	(12" O.D.) Exhaust pipe duct fitting	1	O & M
13b-001	Pipe Run Insulation	(6" O.D.) Steam line at exit	1	O & M
13b-002	Pipe Fitting Insulation	(4" O.D.) Steam elbow, center	1	O & M
13b-004	Floor Tile Mastic	Black	1	O & M
13b-005	Transite Sheet Material	Interior transite	1	O & M
14-001	Pipe Run Insulation	(10" O.D.) Steam line South end of mechanical room 4	1	O & M
14-001	Pipe Run Insulation	(6" O.D.) Steam line mechanical room 4	1	O & M
14-001	Pipe Run Insulation	(3" O.D.) Steam line North end mechanical room 4	1	O & M
14-002	Pipe Fitting Insulation	(10" O.D.) Steam line fittings South end of mechanical room 4	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
14-003	Storage Tank / Exchanger Insulation	Condensate tank North end mechanical room	1	O & M
14-005A	Pipe Run Insulation	(6" O.D.) Condensate line mechanical room 4	1	O & M
14-005B	Pipe Run Insulation	(2" O.D.) Condensate line storage room 3	1	O & M
14-006	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting storage room 3	1	O & M
14-007	Pipe Run Insulation	(8" O.D.) Dead fire protection line South end mechanical room 4	1	O & M
14-008	Pipe Fitting Insulation	(4" O.D.) Potable water line fittings mechanical room 4 South end	1	O & M
14-010	Pipe Run Insulation	(6" O.D.) Fire sprinkler line South end of mechanical room 4	1	O & M
14-011	Pipe Fitting Insulation	(6" O.D.) Fire sprinkler fitting storage room 3 East end	1	O & M
14-012	Resilient Floor Tile (9" X 9")	Black West hall	1	O & M
14-012	Resilient Floor Tile (9" X 9")	White West hall	1	O & M
14-013	Floor Tile Mastic	Black in room 109	1	O & M
14-017	Acoustic Tile Mastic	Brown hallway outside room 152	1	O & M
14-019	Pipe Run Insulation	(3" O.D.) Steam line West wall vault room 1	1	O & M
14-019	Pipe Run Insulation	(6" O.D.) Steam line South wall vault room 1	1	O & M
14-020	Pipe Fitting Insulation	(3" O.D.) Steam line elbow South wall vault room 1	1	O & M
14-021	Pipe Run Insulation	(2" O.D.) Condensate line chalky brown South wall room 117	1	O & M
14-024	Pipe Run Insulation	(2" O.D.) Steam line South end computer room	1	O & M
14-025	Pipe Run Insulation	(8" O.D.) Abandoned fire sprinkler line by room 129 central hall	1	O & M
14-026	Pipe Run Insulation	(3" O.D.) Central hall near room 129	1	O & M
14-027	Pipe Run Insulation	(2" O.D.) Central hall by room 129	1	O & M
14-028	Pipe Run Insulation	(4" O.D.) Central hall by room 128	1	O & M
14-029	Pipe Fitting Insulation	(8" O.D.) Abandoned fire sprinkler line fittings by room 102	1	O & M
14-030	Pipe Fitting Insulation	(2" O.D.) Fittings room 102	1	O & M
14-031	Pipe Fitting Insulation	(4" O.D.) Fittings central hall by room 111	1	O & M
14-032	Pipe Fitting Insulation	(3" O.D.) Elbow central hall by room 117	1	O & M
14-033	Pipe Run Insulation	(2" O.D.) East hall by room 147	1	O & M
14-034	Pipe Run Insulation	(3" O.D.) East hall by room 147	1	O & M
14-035	Pipe Run Insulation	(4" O.D.) East hall by room 148	1	O & M
14-036	Pipe Run Insulation	(6" O.D.) Abandoned fire sprinkler line East hall by room 147	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
14-037	Pipe Fitting Insulation	(2" O.D.) Elbow East hall by room 144	1	O & M
14-038	Pipe Fitting Insulation	(3" O.D.) Elbow East hall by room 144	1	O & M
14-039	Pipe Fitting Insulation	(4" O.D.) Valve East hall by room 148	1	O & M
14-040	Pipe Fitting Insulation	(6" O.D.) Abandoned fire sprinkler line elbow East hall by computer operations	1	O & M
14-041	Pipe Fitting Insulation	(4" O.D.) Steam line elbow room 136	1	O & M
14-042	Pipe Run Insulation	(6" O.D.) Steam line West wing by heating unit	1	O & M
14-043	Pipe Fitting Insulation	(4" O.D.) Steam line West wing by heating unit	1	O & M
14-044	Resilient Floor Tile (9" X 9")	Black West wing Room 210	1	O & M
14-044	Resilient Floor Tile (9" X 9")	White West wing Room 210	1	O & M
14-048	Duct Insulation	Hall outside room 210	1	O & M
14-050	Acoustic Tile Mastic	Black central hall drafting room	1	O & M
14-053	Pipe Run Insulation	(4" O.D.) South end mechanical room 4	1	O & M
15-001	Pipe Fitting Insulation	(6" O.D.) Steam line fittings in room E-3 of southeast corner	1	O & M
15-002	Pipe Run Insulation	(4" O.D.) Room E-3 northwest corner	1	O & M
15-003	Pipe Fitting Insulation	(4" O.D.) Condensate line fittings in southeast corner of room E-3	1	O & M
15-007	Resilient Floor Tile (9" X 9")	(9" X 9") Green tile with white streaks in room E-5	1	O & M
15-008	Floor Tile Mastic	Black mastic in room E-5	1	O & M
15-009	Resilient Floor Tile (9" X 9")	(9" X 9") Tile in hall by door to south courtyard biege and grey	1	O & M
15-010	Floor Tile Mastic	Black mastic by door to south courtyard	1	O & M
15-011	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with gray streaks, outside room E-21	1	O & M
15-013	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with black and gray streaks, in hall outside of room E-25	1	O & M
15-014	Floor Tile Mastic	Black mastic sampled outside of room E-25	1	O & M
15-015	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, yellow, across from room E-27	1	O & M
15-016	Floor Tile Mastic	Black mastic across from room E-27	1	O & M
15-019	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown with brown streaks, in the southeast corner of room E-25	1	O & M
15-020	Floor Tile Mastic	Mastic sampled in the southeast corner of room E-25	1	O & M
15-022	Floor Tile Mastic	Mastic in southeast corner of room E-23	1	O & M
15-026	Pipe Run Insulation	(5" O.D.) West side by center hallway entrance	1	O & M
15-027	Pipe Run Insulation	(6" O.D.) West side by center hallway entrance	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-028	Pipe Run Insulation	(4" O.D.) Room C-41	1	O & M
15-029	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in northeast corner of room C-41	1	O & M
15-030	Pipe Run Insulation	(4" O.D.) Room C-41	1	O & M
15-031	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in northeast corner of room C-41	1	O & M
15-033	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting in room C-22, east wall above sinks	1	O & M
15-034	Floor Tile Mastic	Mastic in hallway to south courtyard across from rooms C-25 - C-29	1	O & M
15-037	Floor Tile Mastic	Southeast corner of room C-26	1	O & M
15-038	Floor Tile Mastic	Mastic in southwest corner of room C-15	1	O & M
15-040	Floor Tile Mastic	Mastic in southwest corner of room C-15	1	O & M
15-044	Floor Tile Mastic	Mastic in the southwest corner of room C-10	1	O & M
15-046	Pipe Fitting Insulation	(4" O.D.) Steam line valve in southwest corner of room N-42A	1	O & M
15-047	Pipe Run Insulation	(4" O.D.) Line in room N-26, south wall	1	O & M
15-048	Pipe Run Insulation	(4" O.D.) Southwest corner of room N-42A	1	O & M
15-049	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in southwest corner of room N-26	1	O & M
15-053	Floor Tile Mastic	Mastic on north side of room N-40A by the door	1	O & M
15-054	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown w/ white and dark brown streaks, on the E.side of rm N-42A	1	O & M
15-055	Floor Tile Mastic	Mastic, black, on east side of room N-42A by the entrance door	1	O & M
15-057	Floor Tile Mastic	Mastic on north side of room N-40	1	O & M
15-060	Floor Tile Mastic	Mastic in the center of room N-40	1	O & M
15-069	Pipe Fitting Insulation	(3" O.D.) Water line fitting in HVAC room S-21 above HVAC unit	1	O & M
15-071	Pipe Run Insulation	(3" O.D.) Water line insulation in HVAC room S-21 above HVAC unit	1	O & M
15-074	Floor Tile Mastic	Black mastic in northwest corner of room S-9	1	O & M
15-075	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in northwest corner of room S-9	1	O & M
15-084	Pipe Fitting Insulation	(2" O.D.) Water line fitting above drinking fountain in east hall outside of room E-7	1	O & M
15-085	Pipe Run Insulation	(2" O.D.) Water line insulation in east hall outside room E-7	1	O & M
15-086A	Pipe Run Insulation	(4" O.D.) Steam line insulation in hall across from room W-32	1	O & M
15-087	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in room W-18 by exit door	1	O & M
15-088	Pipe Run Insulation	(4" O.D.) Condensate line insulation in hall across from W-32	1	O & M
15-089	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in hall across from W-32	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-090	Pipe Run Insulation	(3" O.D.) Potable water line insulation across from room S-42 in hall	1	O & M
15-091	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation fitting in hall across from room W-10	1	O & M
15-097	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, in center of room W-18	1	O & M
15-098	Floor Tile Mastic	Black mastic in room W-18	1	O & M
15-100	Floor Tile Mastic	Black mastic on north side of room W-18	1	O & M
15-102	Floor Tile Mastic	Mastic in room W-28	1	O & M
15-103	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in room W-28	1	O & M
15-104	Floor Tile Mastic	Black mastic in room W-28	1	O & M
15-124	Duct Insulation	Fan/blower duct insulation by column R-18 in corrosion room	1	O & M
15-140	Pipe Fitting Insulation	(4" O.D.) Steam and condensate fitting in west central mechanical room leading into	1	O & M
15-141	HVAC Flexible Connector	Flexible connector on HVAC's. No samples taken, material assessed and	1	O & M
15-142	Pipe Run Insulation	(4" O.D.) steam line south wall near exit	1	O & M
16a-001	Roof Flashing	Transite Flashing Material	1	O & M
16a-002	Roof Flashing	Transite Flashing Material, Assumed Positive	1	O & M
20a-001	Pipe Run Insulation	(6" O.D.) West wall	1	O & M
20a-002	Pipe Fitting Insulation	(8" O.D.) West wall	1	O & M
20a-003	Transite Sheet Material	East wall, south section Interior	1	O & M
20a-006	Pipe Fitting Insulation	(6" O.D.) Valve - east wall, center section	1	O & M
20a-007	Pipe Run Insulation	(3" O.D.) East wall, center section	1	O & M
20a-009	Pipe Fitting Insulation	(8" O.D.) Elbow, metal jacket, north wall, center	1	O & M
20a-011	Transite Sheet Material	Exterior Transite, no sample taken, assumed positive	1	O & M
20b-001	Pipe Run Insulation	Over (24" O.D.)Vertical Line Metal Jacketed	1	O & M
20b-005	Pipe Fitting Insulation	(6" O.D.) Leading into heater	1	O & M
20b-009	Pipe Run Insulation	(8" O.D.) Filter influent line	1	O & M
20b-009	Pipe Run Insulation	(10" O.D.) Filter influent line	1	O & M
20b-010	Pipe Run Insulation	(8" O.D.) Backwash discharge	1	O & M
20b-012	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
20b-013	Transite Sheet Material	All interior walls are transite	1	O & M
20e-002	Pipe Fitting Insulation	(12" O.D.) Elbow, water line	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
24b-001	Pipe Run Insulation	(3" O.D.) Condensate; west wall, center	1	O & M
24b-003	Pipe Run Insulation	(4" O.D.) Steam; east wall, center	1	O & M
24b-004	Pipe Fitting Insulation	(2" O.D.) Steam elbow; west wall, north end	1	O & M
28a-004	Floor Tile Mastic	Green Tile in Room 107	1	O & M
28a-005	Floor Tile Mastic	White Tile in Room 107	1	O & M
28a-007	Pipe Run Insulation	(4" O.D.) Line insulation in room 101	1	O & M
28b-004	Pipe Run Insulation	PIR(6" O.D.) Vertical leading to duct	1	O & M
28b-006	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, by duct	1	O & M
28b-008	Duct Insulation	Duct along south wall by double doors	1	O & M
28b-011	Pipe Fitting Insulation	(3" O.D.) Steam elbow	1	O & M
28b-015	Pipe Fitting Insulation	Fittings above ceiling; not accessible	1	O & M
28b-016	Pipe Fitting Insulation	(4" O.D.) Steam elbow, line	1	O & M
28b-018	Pipe Fitting Insulation	(3" O.D.)Condensate elbow by heater next to toilet	1	O & M
28b-019	Duct Insulation	Air duct	1	O & M
28b-021	Resilient Floor Tile (9" X 9")	(9"x9") Green tile covered by brown tile	1	O & M
28b-022	Floor Tile Mastic	Black	1	O & M
28b-023	Pipe Fitting Insulation	(3" O.D.) Steam line, elbow in lounge	1	O & M
28b-024	Pipe Run Insulation Lagging	(4" O.D.) Steam line	1	O & M
28b-025	Resilient Floor Tile (12" X 12")	(12"x12") Blue/gray	1	O & M
28b-027	Pipe Fitting Insulation	Steam elbows above drop ceiling; not accessible	1	O & M
2b-003	Transite Sheet Material	Transite lab top, no samples taken	1	O & M
2b-007	Pipe Fitting Insulation	(8" O.D.) Elbow	1	O & M
2b-009	Transite Sheet Material	Interior transite wall	1	O & M
2b-010	Pipe Run Insulation	(4" O.D.) Line from refrigeration F1-617	1	O & M
2b-010b	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
2b-011	Pipe Fitting Insulation	(4" O.D.)	1	O & M
2b-013	Pipe Run Insulation	(4" O.D.) Condensate return	1	O & M
2c-02	Transite Sheet Material	Exterior transite	1	O & M
2c-03	Transite Sheet Material	Transite walls	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
2d-005	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
2d-006	Pipe Run Insulation	(4" O.D.) Process water	1	O & M
2d-009	Pipe Run Insulation	(4" O.D.) D1-10	1	O & M
2e-001	Pipe Run Insulation	(4" O.D.) Metal jacketed, condensate line	1	O & M
2e-002	Pipe Run Insulation	(6" O.D.) Metal jacketed, steam line	1	O & M
2e-003	Pipe Fitting Insulation	(4" O.D.) Elbow, black in color, steam line	1	O & M
2e-004	Pipe Fitting Insulation	(3" O.D.) Elbow, black in color, condensate line	1	O & M
30-002	Pipe Fitting Insulation	(3" O.D.) Elbow leading to sink	1	O & M
30-003	Resilient Floor Tile (9" X 9")	North Corner Gray	1	O & M
30-004	Floor Tile Mastic	West End	1	O & M
31-003	HVAC Flexible Connector	Over 15' Multiplier	1	O & M
31-006	Resilient Floor Tile (12" X 12")	Brown w/ brown & white splotches	1	O & M
31-007	Floor Tile Mastic	Black & gummy	1	O & M
31-009	Pipe Run Insulation	(2" O.D.) water line	1	O & M
31-010	Pipe Fitting Insulation	(2" O.D.) cold water	1	O & M
31-011	Pipe Fitting Insulation	(2" O.D.) hot water	1	O & M
31-012	Pipe Run Insulation	(2" O.D.) hot water	1	O & M
31-013	Resilient Floor Tile (9" X 9")	Off white w/ grey splotches	1	O & M
31-014	Floor Tile Mastic	Black & gummy	1	O & M
32-004	Storage Tank / Exchanger Insulation	Condensate tank insulation	1	O & M
37-01	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting by exit door	1	O & M
37-03	Pipe Run Insulation	(3" O.D.) Condensate line	1	O & M
37-04	Pipe Fitting Insulation	(3" O.D.) 90 degree condensate fitting	1	O & M
37-06	Pipe Fitting Insulation	(3" O.D.) 90 degree potable water fitting above entrance	1	O & M
37-08	Pipe Run Insulation	(3" O.D.) Cooling water line	1	O & M
37-09	Storage Tank / Exchanger Insulation	Molten salt tank	1	O & M
38-01	Pipe Run Insulation	(5" O.D.) Steam, gray in color, near exit door	1	O & M
38-02	Pipe Fitting Insulation	(4" O.D.) Steam elbow, white re-wrapped	1	O & M
38-03	Pipe Run Insulation	(3" O.D.) Steam line, green in color, west wall	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
38-04	Pipe Fitting Insulation	(3" O.D.) Steam elbow, green, south corner	1	O & M
39a-006	Transite Sheet Material	No samples taken	1	O & M
3c-01	Resilient Floor Tile (9" X 9")	Green (9"x9")	1	O & M
3c-02	Floor Tile Mastic	Brown	1	O & M
3c-04	Pipe Run Insulation	(4" O.D.) Steam line with gray lagging	1	O & M
3c-05	Pipe Run Insulation	(4" O.D.) Cold water line, north wall	1	O & M
3c-06	Pipe Fitting Insulation	(3" O.D.) Cold water elbow, north wall	1	O & M
3c-07	Pipe Run Insulation	(3" O.D.) Condensate line, south wall	1	O & M
3c-08	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, south wall	1	O & M
3c-13A	Pipe Run Insulation	(6" O.D.) Steam line; white material	1	O & M
3d-05	Pipe Fitting Insulation	(4" O.D.) Sump water line insulation elbow, by WEMCO sample # 0826	1	O & M
3d-06	Pipe Fitting Insulation	(3" O.D.) Steam line insulation elbow, near WEMCO sample # 0645	1	O & M
3d-07	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation valve	1	O & M
3e-01A	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
3e-02	Pipe Fitting Insulation	(6" O.D.) Steam elbow	1	O & M
3e-03B	Pipe Run Insulation	(4" O.D.) Condensate line	1	O & M
3e-04	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	1	O & M
3e-12	Pipe Fitting Insulation	(6" O.D.) Metal jacketed steam elbow at railing	1	O & M
3e-13	Pipe Run Insulation	(6" O.D.) Steam line by window, re-wettable canvas	1	O & M
3e-14	Pipe Fitting Insulation	(6" O.D.) Steam elbow, re-wettable canvas	1	O & M
3e-20	Pipe Fitting Insulation	(4" O.D.) Abandoned elbow	1	O & M
3e-21	Pipe Run Insulation	(4" O.D.) Abandoned line, at tank F1-309	1	O & M
3e-24A	Pipe Run Insulation	(10" O.D.) Abandoned pump line	1	O & M
3e-25	Pipe Fitting Insulation	(6" O.D.) Abandoned pump elbow	1	O & M
3e-31	Transite Sheet Material	Interior transite at exit	1	O & M
3g-002	Transite Sheet Material	Northwest Corner interior wall	1	O & M
3g-003	Pipe Run Insulation	(6" O.D.) North Wall	1	O & M
45-004	Transite Sheet Material	Interior Transite wall	1	O & M
45-010	Pipe Fitting Insulation	(8" O.D.) Steam line elbow at air handling unit, metal jacketed	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
45-011	Pipe Run Insulation	(8" O.D.) Steam line at air handling unit, metal jacketed	1	O & M
45-013	Pipe Fitting Insulation	(4" O.D.) Gray Pipe run insulation, abandoned West wall	1	O & M
45-017	Pipe Run Insulation	(2" O.D.) Cold water line straight	1	O & M
4a-001	Pipe Run Insulation	(4" O.D.) horizontal steam line, metal jacketed, by south stairwell	1	O & M
4a-002	Pipe Fitting Insulation	(3" O.D.) steam line valve on column 4E	1	O & M
4a-003A	Pipe Run Insulation	(4" O.D.) horizontal condensate line by column 9C by roll-up door	1	O & M
4a-004	Storage Tank / Exchanger Insulation	(6" x 2") condensate tank by column 8A, sample missing (5906 taken to replace it)	1	O & M
4a-005	Pipe Fitting Insulation	(3" O.D.) condenate line valve by column 3B	1	O & M
4a-007	Pipe Fitting Insulation	(8" O.D.) treated water line valve by NE roll-up door	1	O & M
4a-008	Pipe Run Insulation	(3" O.D.) horizontal potable water line by column 2D	1	O & M
4a-009	Pipe Fitting Insulation	(3" O.D.) potable water line elbow by column 2D	1	O & M
4a-010	Pipe Run Insulation	(3" O.D.) vertical cold water line by column 4B	1	O & M
4a-011	Pipe Fitting Insulation	(4" O.D.) cold water line elbow on column 4F	1	O & M
4a-015	Pipe Fitting Insulation	(2" O.D.) hydrogen line valve from tank 1	1	O & M
4a-018	Pipe Fitting Insulation	(6" O.D.) steam line elbow by tank 11	1	O & M
4a-019	Resilient Floor Tile (9" X 9")	Floor tile, green with black flecks in the office at the south end	1	O & M
4a-021	Pipe Run Insulation	(6" O.D.) vertical steam line by column 6C	1	O & M
4a-022	Pipe Fitting Insulation	(6" O.D.) steam line elbow by column 6C	1	O & M
4a-024	Pipe Run Insulation	(6" O.D.) verticle steam line, metal jacketed, by emergency shower	1	O & M
4a-025	Pipe Fitting Insulation	(8" O.D.) steam line elbow by center rescubber tank	1	O & M
4a-026	Pipe Run Insulation	(3" O.D.) horizontal cold water line by south wall	1	O & M
4a-027	Pipe Fitting Insulation	(3" O.D.) cold water line elbow by south wall	1	O & M
4a-029	Pipe Fitting Insulation	(8" O.D.) steam line valve by column E-1	1	O & M
4a-030A	Pipe Run Insulation	(3" O.D.) vertical emergency water line by column 2D	1	O & M
4a-035A	Pipe Run Insulation	(6" O.D.) vertical pipe system from reactor 6	1	O & M
4a-041	Pipe Run Insulation	(3" O.D.) vertical treated water line by column 7B	1	O & M
4a-042	Pipe Run Insulation	(6" O.D.) Steam line by column 6C	1	O & M
4a-043	Pipe Fitting Insulation	(6" O.D.) Steam line elbow by column 6C	1	O & M
4a-044	Pipe Run Insulation	(2" O.D.) vertical potable water line by column 6A	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-050	Pipe Run Insulation	(6" O.D.) Abandoned line, metal jacketed, around the perimeter of the 6th floor.	1	O & M
4a-051	Pipe Run Insulation	(6" O.D.) Abandoned line elbow around the perimeter of the 6th floor. B-1	1	O & M
4a-052	Pipe Fitting Insulation	(6" O.D.) Unknown line elbow around the perimeter of the 6th floor. F-1	1	O & M
4a-054	Fabric / Rope	Suspect miscellaneous rope at column E2	1	O & M
4a-055	Pipe Fitting Insulation	(6" O.D.) anhydrous line valve in the recovery room by column 1E	1	O & M
4a-056	Pipe Run Insulation	(6" O.D.) anhydrous line in the recovery room by column 1E	1	O & M
4a-058	Pipe Run Insulation	(36" O.D.) insulated vertical pipe riser by column 6F	1	O & M
4a-063	Pipe Run Insulation	(16" O.D.) straight run off rear of reactor 2	1	O & M
4a-064	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 2	1	O & M
4a-065	Pipe Run Insulation	(2" O.D.) insulated conduit lines going into reactor 2	1	O & M
4a-066	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow on lines going into reactor 3	1	O & M
4a-067	Gasketry	gasketry from abandoned tank at the rear of reactor 3	1	O & M
4a-069	Pipe Fitting Insulation	(2" O.D.) line valve from tank between reactos 2 and 3	1	O & M
4a-070	Pipe Run Insulation	(6" O.D.) steam line by column 1F	1	O & M
4a-070	Pipe Run Insulation	(2" O.D.) steam line by column 3F	1	O & M
4a-071	Pipe Fitting Insulation	(3" O.D.) steam line elbow at column 1F	1	O & M
4a-073	Pipe Run Insulation	(3" O.D.) steam line by column 8E on the south wall	1	O & M
4a-074	Pipe Fitting Insulation	(10" O.D.) steam line elbow by column 8D on the south wall	1	O & M
4a-077	Pipe Run Insulation	(4" O.D.) abandoned steam line by column 4B	1	O & M
4a-078	Pipe Fitting Insulation	(2" O.D.) abandoned steam line elbow by column 4B	1	O & M
4a-082	Pipe Run Insulation	(3" O.D.) unknow pipe line going into reactor 8 by column 3C	1	O & M
4a-085	Pipe Fitting Insulation	(3" O.D.) pipe line elbow by column 2A	1	O & M
4a-087	Pipe Run Insulation	(2" O.D.) line off of the conduit line going into reactor 7	1	O & M
4a-088	Pipe Run Insulation	(8" O.D.) exhaust line coming from reactor 8 by column 2B	1	O & M
4a-089	Pipe Fitting Insulation	(8" O.D.) exhaust line elbow coming from reactor 9 by column 3B	1	O & M
4a-091	Pipe Fitting Insulation	(6" O.D.) steam line elbow by reactor 1	1	O & M
4a-094	Pipe Run Insulation	(4" O.D.) HF recovery line in the HF recovery room	1	O & M
4a-097	Pipe Run Insulation	(2" O.D.) condensate line, metal jacketed, in the HF recovery room	1	O & M
4a-101	Transite Sheet Material	Transite sheeting material inside transformer banks, Not sampled due to	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-103	Pipe Run Insulation	(8" O.D.) anhydrous hydrogen line by column 5B	1	O & M
4a-104	Pipe Fitting Insulation	(8" O.D.) unknow line elbow by column 5B, next to containment	1	O & M
4a-105	Pipe Fitting Insulation	(8" O.D.) unknown line elbow by column 5B, next to containment	1	O & M
4a-106	Pipe Run Insulation	(4" O.D.) steam line on the west wall by column 4A	1	O & M
4a-109	Storage Tank / Exchanger Insulation	Tank 4-6	1	O & M
54-003	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting near garage door	1	O & M
54-013	Resilient Floor Tile (12" X 12")	White with gray splotches in office on NW corner of building 54	1	O & M
54-013	Floor Tile Mastic	Black in office on NW corner of building 54	1	O & M
54-013	Resilient Floor Tile (12" X 12")	Computer room hallway	1	O & M
54-013	Floor Tile Mastic	Computer room hallway	1	O & M
54-013	Resilient Floor Tile (12" X 12")	Hallway of ladies restroom	1	O & M
54-013	Floor Tile Mastic	Hallway of ladies restroom	1	O & M
54-022	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	1	O & M
54-024	Transite Sheet Material	Interior walls north side of plant	1	O & M
54-026	Pipe Fitting Insulation	(5" O.D.) Cooling water supply line elbow above condensate tank	1	O & M
54-027	Pipe Run Insulation	(4" O.D.) Cooling water supply line off catwalk south side	1	O & M
54-034	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow by stairs	1	O & M
54-035	Pipe Run Insulation	(4" O.D.) Instrument air line in main steam room	1	O & M
54-036	Pipe Fitting Insulation	(4" O.D.) Instrument air line elbow	1	O & M
55a-001	Transite Sheet Material	No sampleTaken, electrical transformer panel	1	O & M
55a-002	Transite Sheet Material	By control room	1	O & M
55a-005	Pipe Fitting Insulation	(4" O.D.) Elbow , south wall at catwalk	1	O & M
55a-006	Pipe Run Insulation	(4" O.D.) at South wall	1	O & M
55a-009	Transite Sheet Material	Exterior No Samples Taken, assumed to be positive	1	O & M
55a-010	Transite Sheet Material	No samples taken	1	O & M
61-01	Duct Insulation	taken from abandoned blower unit in SE corner	1	O & M
62-01	Transite Sheet Material	1/2" transite sheeting, stored material	1	O & M
66-01	Pipe Run Insulation	Water line	1	O & M
66-02	Pipe Fitting Insulation	Water fittings	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

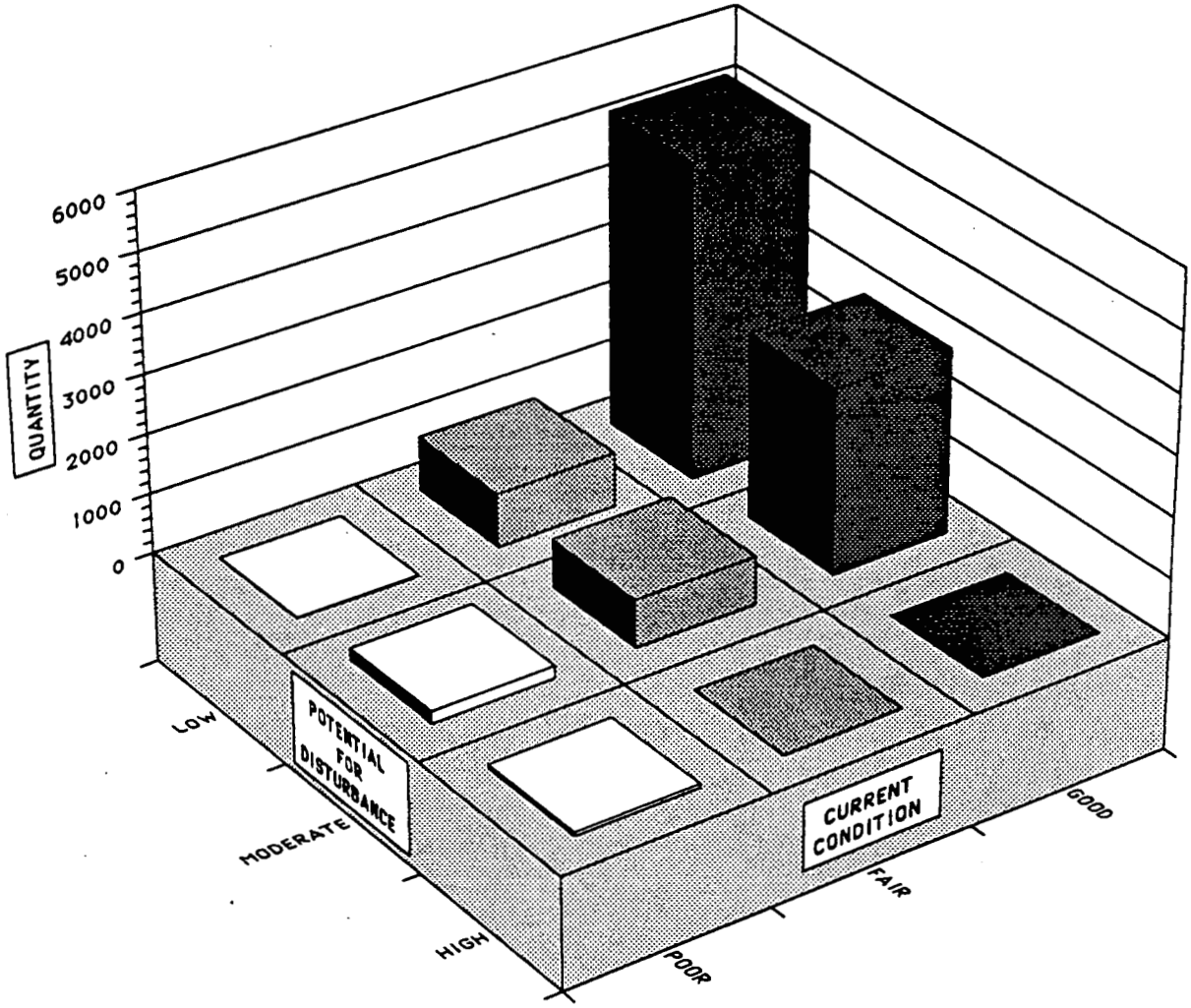
Report Date:
2/28/92

Revision Date:

3242

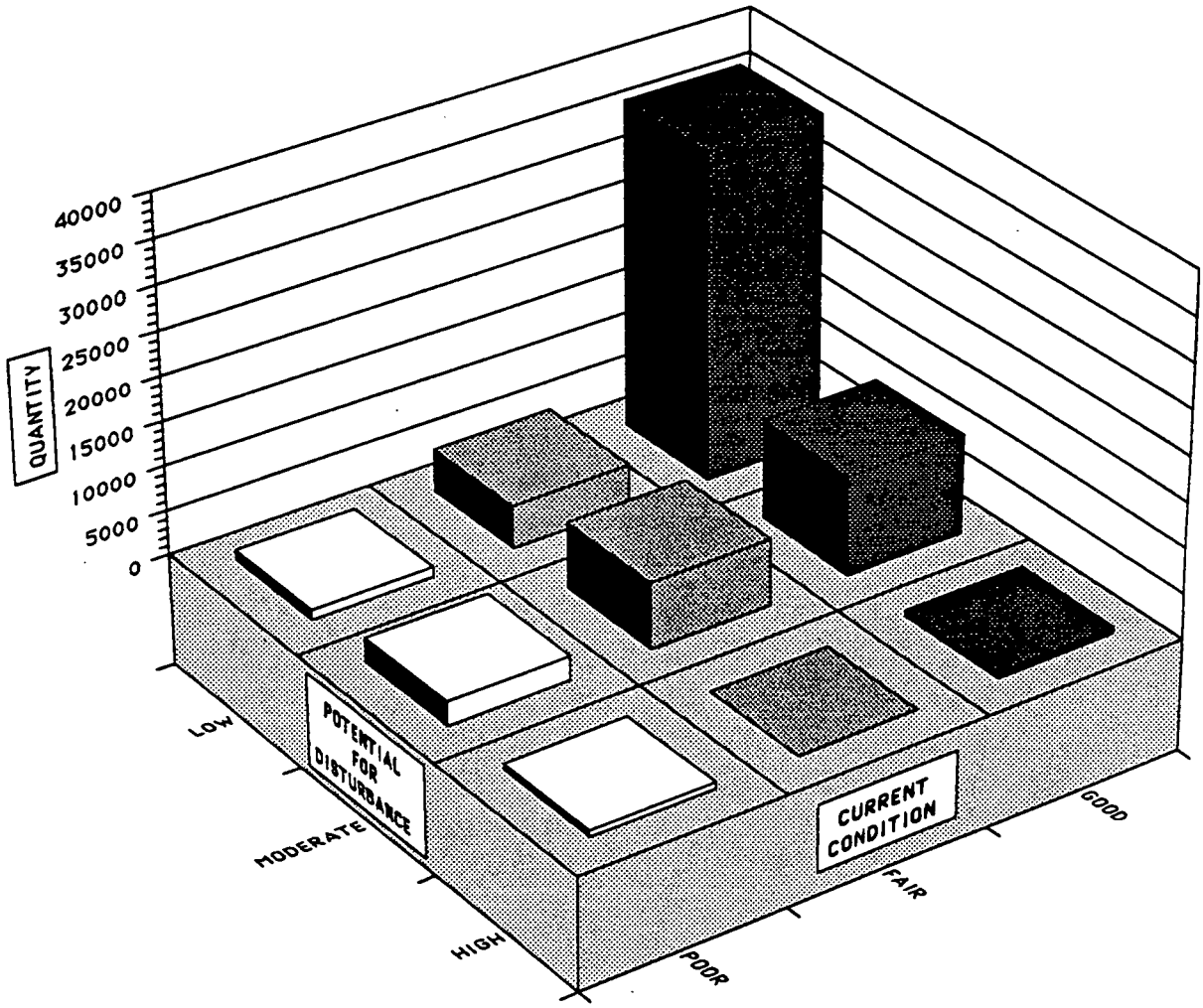
Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
66-03	Transite Sheet Material	Interior transite	1	O & M
66-08	Pipe Run Insulation	(3" O.D.) Steam line leading to heater	1	O & M
66-09	Pipe Fitting Insulation	(3" O.D.) Steam fitting by heater	1	O & M
68-001	Resilient Floor Tile (9" X 9")	Resilient Floor Tile (9" X 9") Light gray with white streaks	1	O & M
68-002	Floor Tile Mastic	Black, with 9" x 9" tile	1	O & M
68-003	Transite Sheet Material	Interior transite; no samples taken	1	O & M
8a-001	Pipe Fitting Insulation	(12" O.D.) Steam line fitting by column D9	1	O & M
8a-003	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting next to men's restroom	1	O & M
8a-008	Pipe Fitting Insulation	(6" O.D.) Cooling water line fitting by column 2A	1	O & M
8a-022	Transite Sheet Material	Corrugated, by walk-thru door, column A5	1	O & M
8a-023	Transite Sheet Material	East end wall on men's bathroom	1	O & M
8a-024	Resilient Floor Tile (9" X 9")	(9" x9") Green with white streaks in supervisor's office	1	O & M
8a-025	Transite Sheet Material	West side of building	1	O & M
8a-035	Pipe Fitting Insulation	(3" O.D.) Metal jacketed Not sampled per WEMCO	1	O & M
8a-036	Pipe Run Insulation	(4" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M
8a-037	Pipe Fitting Insulation	(4" O.D.) Metal jacketed not sampled per WEMCO	1	O & M
8a-038	Pipe Run Insulation	(3" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M
8a-039	Pipe Fitting Insulation	(5" O.D.) Metal jacketed not sampled per WEMCO	1	O & M
8a-040	Pipe Run Insulation	(5" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M
8a-041	Pipe Fitting Insulation	(6" O.D.) Metal jacketed not sampled per WEMCO	1	O & M
8a-042	Pipe Run Insulation	(6" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M
8b-001	Pipe Run Insulation	(4" O.D.) Steam Line Located on North Side of Wall	1	O & M
8b-002	Pipe Fitting Insulation	(4" O.D.) Elbow North Side of Wall East Corner	1	O & M
8b-004	Floor Tile Mastic	Floor Tile Mastic Black	1	O & M

VIII. FACILITY SURVEY TABULATION GRAPHICS



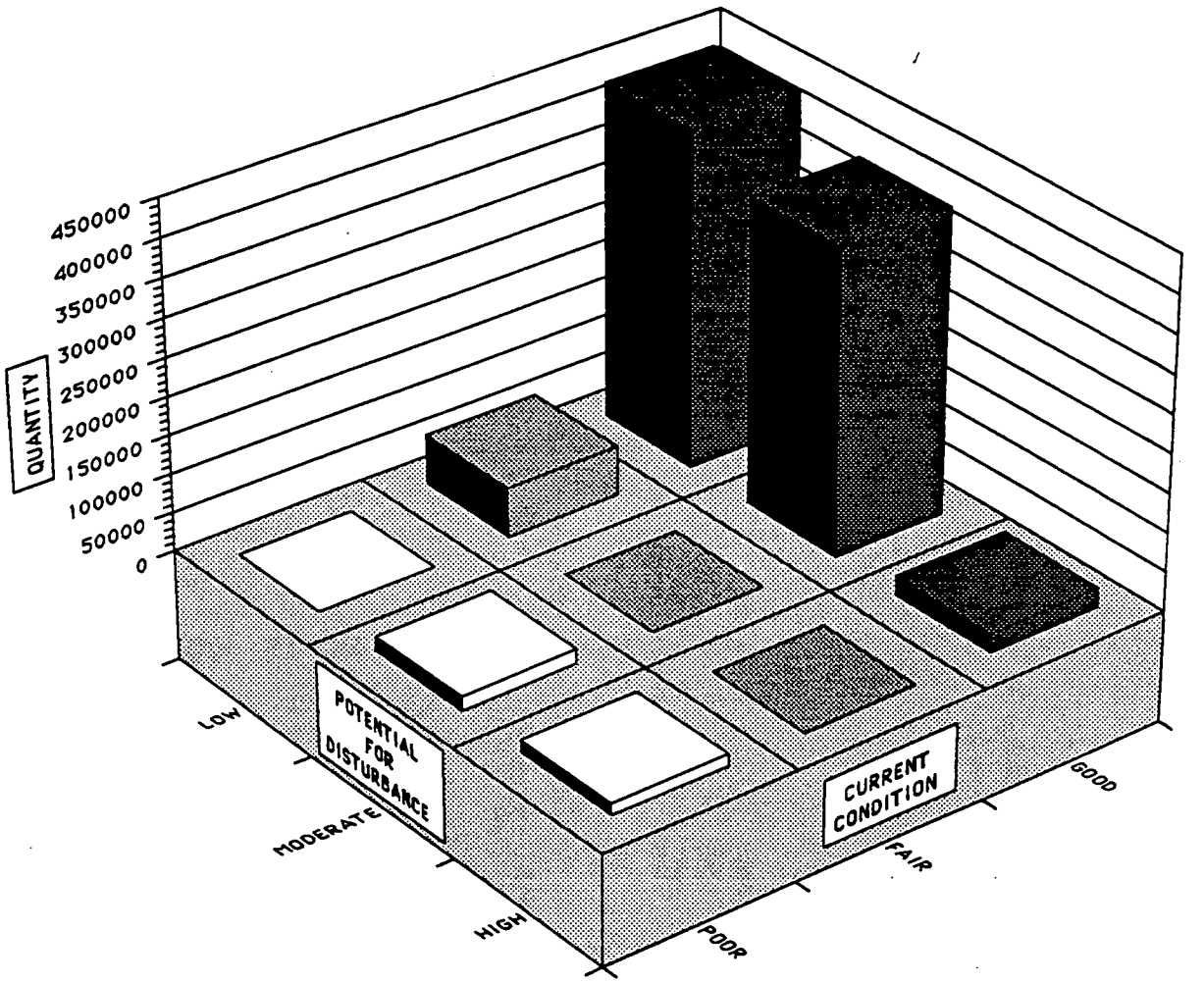
ACM THERMAL SYSTEM INSULATION
FITTINGS (EACH)
NOTE: CONDITION PATTERNS CORRESPOND TO
THOSE SHOWN ON TOP OF 3D COLUMN

GOOD
FAIR
POOR



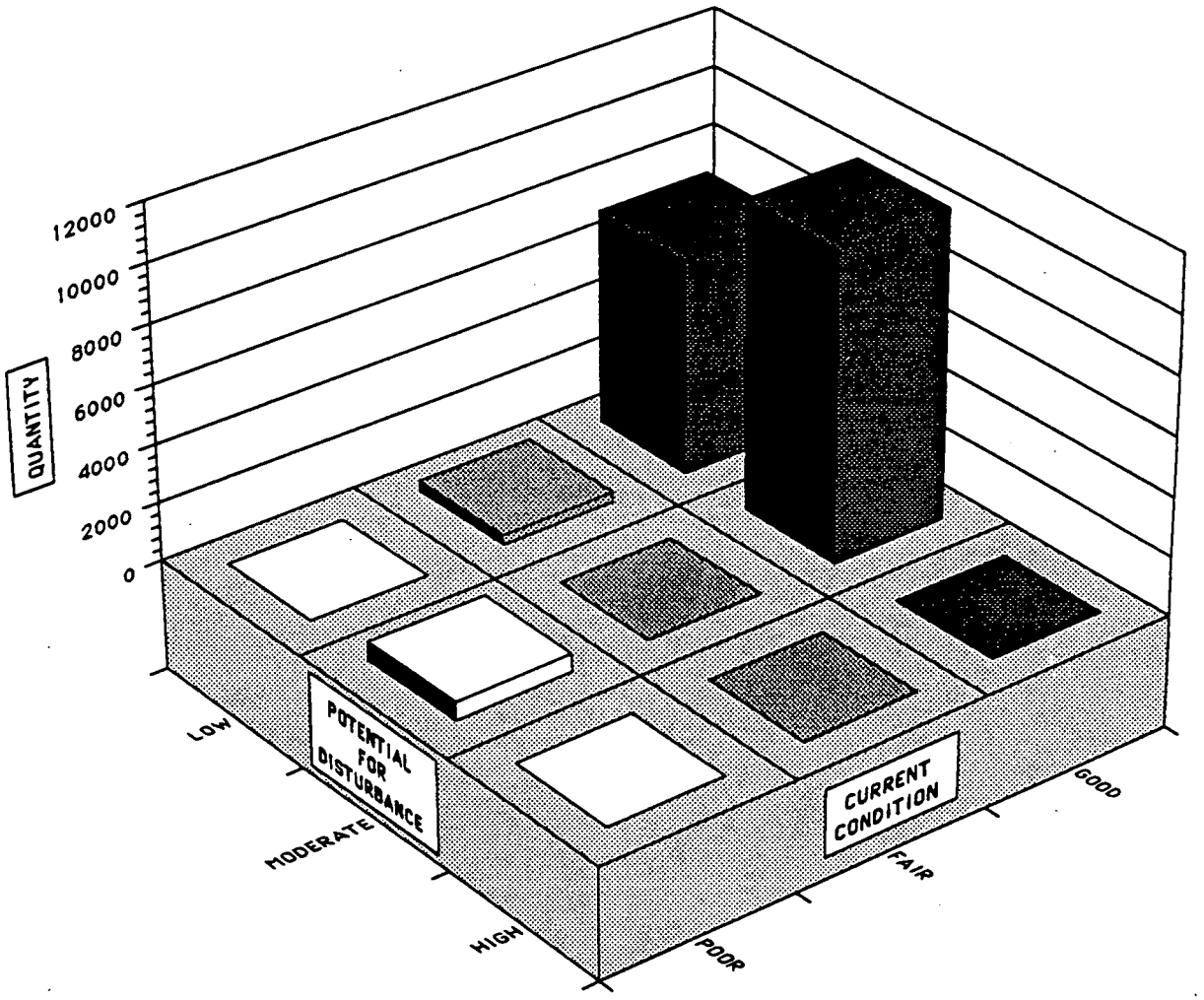
ACM THERMAL SYSTEM INSULATION
PIPING (BY LINEAR FOOTAGE)
NOTE: CONDITION PATTERNS CORRESPOND TO
THOSE SHOWN ON TOP OF 3D COLUMNS

■ GOOD
▒ FAIR
□ POOR



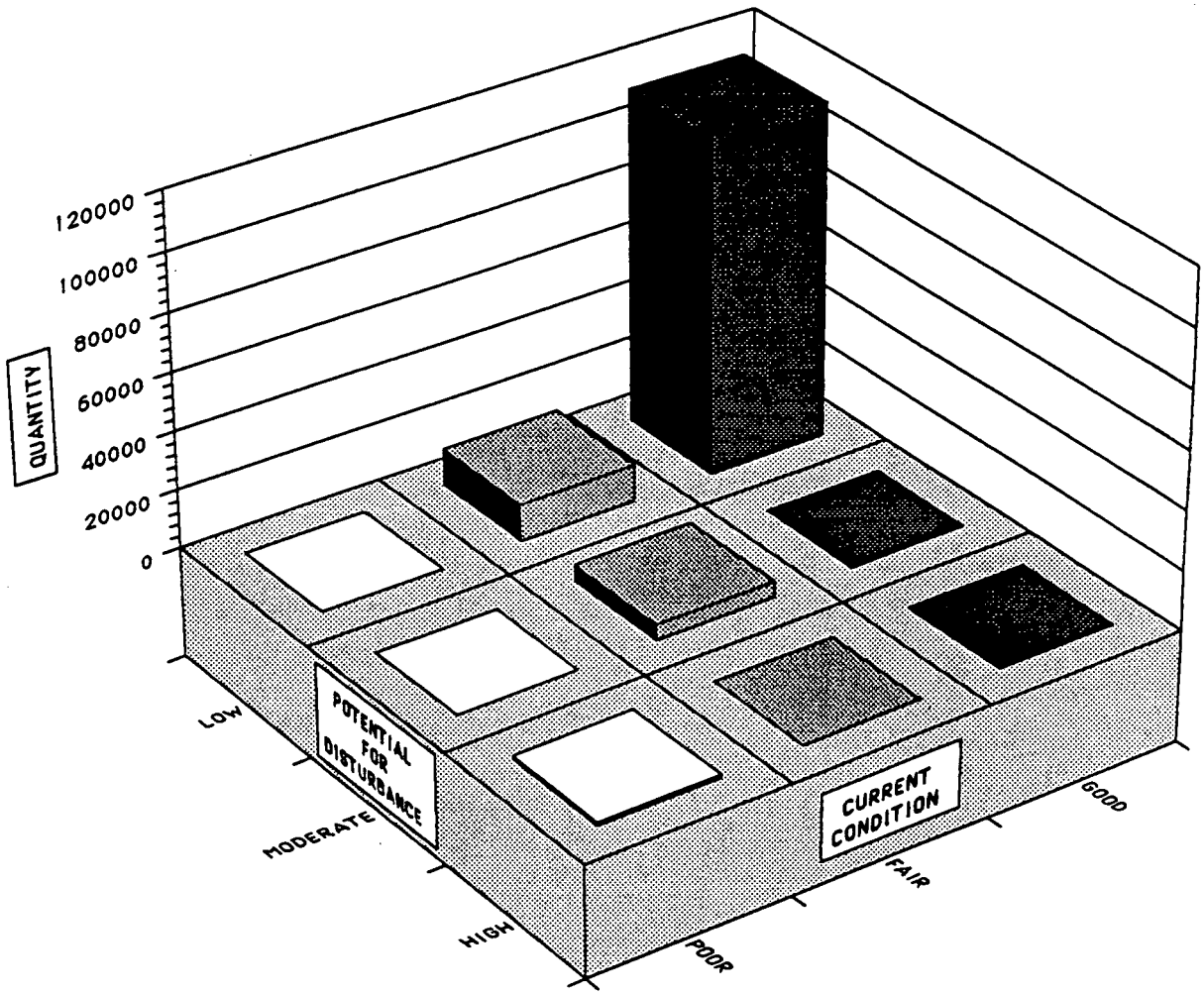
TRANSITE SHEET MATERIAL
(BY SQUARE FOOTAGE)
NOTE: CONDITION PATTERNS CORRESPOND TO
THOSE SHOWN ON TOP OF 3D COLUMNS

■ GOOD
▨ FAIR
□ POOR



ACM MISCELLANEOUS MATERIALS
(BY SQUARE FOOTAGE)
NOTE: CONDITION PATTERNS CORRESPOND TO
THOSE SHOWN ON TOP OF 3D COLUMNS

■ GOOD
▨ FAIR
□ POOR



ACM FLOOR TILE AND MASTIC
(BY SQUARE FOOTAGE)
NOTE: CONDITION PATTERNS CORRESPOND TO
THOSE SHOWN ON TOP OF 3D COLUMNS

GOOD
FAIR
POOR

3242

IX. GENERAL DISCUSSION, RECOMMENDATIONS AND CONCLUDING REMARKS

3242

IX. GENERAL DISCUSSION, RECOMMENDATIONS AND CONCLUDING REMARKS

Asbestos-containing materials (ACM) were found throughout the facilities surveyed at the FEMP site. Material quantity estimates and response actions for all homogeneous areas are presented in sections V, VI, VII, VIII, and IX of this report. Contained in this section is information and discussion about items of high priority concern, special circumstance items, definitions for response actions and comments on overall asbestos management issues at FEMP.

High Priority Areas of Concern

Through the survey and assessment, using the ranking and prioritization system described in Section II of this report, twenty-one (21) areas have been identified in that are of concern. Fifteen (15) of these areas are associated with Transite sheet material, which are addressed separately. The remaining (6) areas all have hazard ratings of 6 or above. There are numerous homogeneous areas throughout the site that also have hazard ratings of 6 or above and are not mentioned here, because either the quantity of material is small, access is restricted, or occupancy is minimal. Summaries for each of these areas are listed below and their Exposure Risk Assessment Forms are attached at the end of this section.

- *Building 3e - The Hot Raffinate facility.* Homogeneous area 3e-16, 3e-10 and 3e-09. This is a two story, Transite clad, 3,750 square feet abandoned facility. The TSI on the second floor is in poor condition. Friable ACM is lying on the floor. Total abatement or repair is needed before this facility could be reoccupied.

- *Building 4a - The Green Salt Plant.* Homogeneous area 4a-102. There is 720 linear feet of badly damaged ACM pipe insulation, running from the first to the fifth floor, inside a make shift containment. The containment is constructed of plastic sheeting and is without the benefit of negative air. These pipes are in need of repair or abatement.

- *Building 12a - Main Maintenance Building.* Homogeneous areas 012a-048 and 12a-049. In the ladder room of this building the thermal system Insulation is 30 percent damaged and is falling on to the catwalk below. This debris needs to be cleaned up and the TSI abated or repaired.

- *Building 3d - NAR Tower.* Homogeneous area 3d-08. A steam line that runs through the entire length of the facility and through all 5 floors presents a hazard. Due to the fact that the NAR Tower is an outdoor facility this TSI could deteriorate quickly due to exposure to the elements. Therefore it should be abated or repaired quickly.

- *Building 10a - The Boiler Plant.* The upper levels are a concern since a fire broke out in the coal bunker after DEI had performed the initial survey. DEI did not make any changes to the Facility Owner's report denoting the impact fire and fire suppression activities may have had on the ACM. As part of the O&M program DEI recommend an experienced

asbestos inspector should inspect the and note the facility revisions in asbestos quantity and condition.

- *Plant 7.* This is a 41,572 square feet former process facility. The plant is now abandoned except for the first level which is used for drum storage. Because it has been abandoned, it has not been maintained as have other facilities. The TSI is in poor, deteriorated condition and is falling off the lines and Transite sheet material is broken in numerous places. Before Plant 7 can safety be reoccupied or demolished it needs extensive abatement attention.

Damaged Exterior Cementitious Sheeting Material

Transite sheeting material was used extensively as a building material at the FEMP. Twenty-eight (28) of the seventy four (74) buildings surveyed have Transite sheet material used for either exterior or interior walls or roofing. DEI has identified 15 areas where Transite sheet material has a hazard rank of 4 or above. As defined in the ranking and prioritization system used, any ACM assessed with a hazard rank of 4 or above should be removed enclosed, encapsulated, or repaired to correct damage. Summaries for each of these areas are listed below and their Exposure Risk Assessment Forms are attached at the end of this section.

Exterior Transite Materials:

- *Building 2a (2/3) - Ore Refinery.* Homogeneous area 02a-073. Exterior Transite roof, 25,000 square feet, hazard rank of 4.
- *Plant 2d - Metal Dissolver Building.* Homogeneous area 05-012. South exterior Transite wall, 1,520 square feet, extensively damaged, hazard rank of 7.
- *Building 3e - Hot Raffinate Building.* Homogeneous area 3e-33. Exterior Transite wall north side of the building, 2,376 square feet, extensively damaged, friable, hazard rank of 7.
- *Building 13a - Pilot Plant Wet Side.* Homogeneous area 13a-023. Exterior Transite wall of entire facility, 8,000 square feet, hazard rank of 4.

Interior Transite Materials:

- *Building 2a (2/3) - Ore Refinery.* Homogeneous area 02a-039. Interior Transite walls of the digestion area, 5,000 square feet, hazard rank of 4.
- *Building 2a (2/3) - Ore Refinery.* Homogeneous area 02a-075. Interior Transite walls of extraction area, 18,000 square feet, hazard rank of 7.

3242

- *Plant 2d - Metal Dissolver Building.* Homogeneous area 2d-010. Interior Transite wall located South end of the second floor, 3,440 square feet, hazard rank of 4.

- *Plant 5 - Metal Production Plant.* Homogeneous area 05-014. Interior Transite wall between columns 25 and 29, 1,000 square feet, hazard rank of 4.

- *Plant 5 - Metal Production Plant.* Homogeneous area 05-048. Interior Transite wall and ceilings in the generator room, 8,140 square feet, hazard rank of 4.

- *Plant 5 - Metal Production Plant.* Homogeneous area 05-049. Interior Transite wall in the reduction area between columns A-10 and A-7, 900 square feet, hazard rank of 4.

- *Plant 5 - Metal Production Plant.* Homogeneous area 05-057a. Interior Transite wall in the general maintenance shop between columns F-13 and F-10, 1,460 square feet, hazard rank of 4.

- *Plant 5 - Metal Production Plant.* Homogeneous area 05-060. Interior Transite wall in offices 05-24 by column G-9, 1,668 square feet, hazard rank of 4.

- *Building 6 - Metal Fabrication Plant.* Homogeneous area 06-031. Interior Transite walls and ceilings of the Pickling area, 6,250 square feet, extensively damaged, hazard rank of 7.

- *Building 6 - Metal Fabrication Plant.* Homogeneous area 06-077. Interior Transite walls of the Chips Briquietting area, 300 square feet, hazard rank of 4.

- *Building 9 - Special Products Plant.* Homogeneous area 09-022b. Interior Transite roof the north supervisor's office, 500 square feet. The material is brittle and extensively damaged, hazard rank of 7.

Of the fifteen (15) homogeneous areas listed above nine (9) are areas where acid was used in the uranium processing procedures. These nine (9) areas were also the areas with the greatest deterioration and damage. It can be concluded that when Transite sheet material is exposed to an acid mist for an extended period of time it greatly increases the deterioration process.

Asbestos Materials Still in use at FEMP

DEI is concerned about the continued use of ACM replacement materials and ACM equipment materials at FEMP. An example is the continued use of (9"x9") green asbestos containing floor tile. This type of floor tile has repeatedly tested positive yet there is still replacement tile stored in the upper level of the carpenter shop of Building 12a. When a new Radiation Technician office was recently installed in Building 13b, the Pilot Plant, this ACM tile was installed.

3242

In addition ACM's that are not building materials such as fire retardant clothing, gaskets, brake shoes, and welding curtains may be a hazard to WEMCO personnel if these materials are not either removed or properly labeled.

DEI recommends the continued use of these materials should be stopped. Any remaining ACM floor tile that is in storage should be properly disposed of. All future replacement tile should be (12"x12") in size and have "asbestos free" clearly labeled on the shipping box. Unless appropriate replacement items can not be found, ACM's such as gaskets, welding curtains, and protective clothing should be replaced with non ACM alternatives and the original ACM properly disposed of. If ACM has to be used due to lack of suitable non ACM replacements these items should be clearly marked ACM and become part of the O&M program.

Debris in Roof Gutters

As an addition to the project scope-of-work, WEMCO requested DEI to provide an assessment of the residual suspect asbestos containing material present in the exterior gutters of FEMP facilities that have Transite roofs. This issue was raised because of concern that as the buildings age at FEMP the effects of weather and processes inside the buildings are causing the roofs to slowly lose structural integrity. Further, as rain, wind and ultraviolet radiation cause the roofs to erode the material is collecting in the exterior roof gutters. In order to safely perform maintenance on these gutters, more extensive investigation is needed to determine the asbestos content.

DEI visually reviewed each building roof at FEMP to determine if the roof was made of Transite sheet material. If it was concluded that the roof was made of Transite sheet material, then the exterior gutters were inspected for residual material and material quantity. A listing of the facilities observed follows.

Building Number	Amount of Debris
1a	25%
2a	25%
2b	25%
2c	25%
2d	25%
3a	25%
3b	None observed
3c	None observed
3e	25%
3g	None observed
4a	50%
4c	None observed
5	50%
6	25%
7	25%
8a	25%
9	25%
10a	75%
12a	25%
20a	No gutter present
30a	25%
39a upper	None observed

3242

39a lower	75%
55a	25%
55b upper	None observed
55b lower	75%
68	50%
72	No gutter present

Twenty-six (26) of FEMP facilities have roofs made of Transite sheeting material. Of the 26 buildings, 2 facilities do not have gutters. Of the 24 facilities with gutters, 6 did not have residual materials in it's gutters. The content of material in gutters of the remaining facilities range from 25% to 75% full.

Samples of the residual materials in the gutters were collected and analyzed by both polarized light microscopy techniques (PLM) and transmission electron microscopy techniques (TEM). The PLM analysis yielded results of 2% to 10% chrysotile asbestos. The asbestos content of the samples analyzed by TEM ranged from 0.2% to 2.4%. The residual material in the gutters of buildings is also addressed in the Fiber Migration study performed at FEMP.

The asbestos containing roof gutter debris found throughout the site were not identified as homogeneous areas in the individual Facility Owner's reports. DEI recommends that the facility owner's of facilities where debris in roof gutters is present be notified about the debris. It is further recommended that the debris be properly removed as asbestos containing material as soon as possible. Until the time of removal, the debris should be included in the FEMP asbestos O&M program. Appropriate WEMCO personnel should be notified that the debris is asbestos containing and that precautions need to be taken to avoid potential exposure.

Metal Scrap Pile, North of Building No. 69

As an addition to the project scope-of-work, WEMCO requested DEI to provide an assessment of the metal scrap pile located north of Building 69, the Decontamination Building. The scrap pile is composed of waste metal such as abandoned vehicles, discarded construction materials, and obsolete processing equipment. It occupies approximately 4,000 square feet and is approximately 15 feet high at it's highest point. The main portion of the pile is on the decontamination pad of building 69. Smaller piles of miscellaneous debris are scattered around the decontamination pad.

DEI collected eight bulk samples from the pile and the surrounding soil. The bulk samples were taken from suspect material located in the scrap pile to be tested for asbestos content. The soil samples were taken to determine if any ACM had migrated from the pile to the adjacent soil. These samples were immediately turned over to WEMCO for radiation level testing and shipment to Hygeia Laboratories for analysis. The bulk material samples collected from debris in the pile were analyzed by PLM and ranged in asbestos content from none detected to forty (40%) percent chrysotile asbestos. As of the issuance of this final report, Hygeia has not received for analysis, the soil samples collected surrounding the scrap pile.

DEI recommends several actions with regards to the scrap pile. Further sampling of the scrap pile contents is recommended in order to accurately quantify the amount of asbestos material present and the appropriate response action. It is recommended

that WEMCO have the soil samples analyzed to determine whether or not asbestos fibers are migrating from the scrap pile.

Metal Covered Piping

The majority of the exterior piping and approximately twenty (20) percent of the interior piping is metal clad. The metal cladding greatly reduces the risk of the insulation it encloses from becoming friable. However it also makes it difficult to establish with any certainty or accuracy, homogeneous areas because the underlying insulation is not visible. Approximately mid-project, WEMCO instructed DEI to assumed all metal jacketed piping to be positive.

Before the abatement of metal clad pipe insulation that has been assumed positive, DEI suggests the insulation be sampled. DEI suggests a sample be taken every 10 feet along the run to be abated. Sampling should be done on an as needed basis. In emergency repair situations or if time constraints precludes sampling, the task should be handled as an asbestos job.

DEI recommends the program of replacing metal cladding with "crinkle wrap" be expanded to all newly installed piping and be mandatory on all replacement jobs. The practice of putting "crinkled wrapped" metal cladding on new asbestos free insulation is a practical and cost effective means of identifying asbestos free insulation. Using "crinkled wrapped" cladding and "asbestos free" labels when new pipe is insulated will reduce sampling costs in the future and help track changes for the O&M program.

Pipe Insulation Fittings

Due to past inconsistencies with sample results of thermal insulation fittings WEMCO instructed DEI to assumed all fittings positive. If a fitting is on a positive pipe run it should be assumed positive. However, if it is on a negative pipe run, DEI recommends it be sampled prior to abatement. When fittings are replaced they should be labeled asbestos free to save future sampling costs and to help track changes for the O&M program.

Floor Tile and Resilient Floor Coverings

Resilient floor coverings and mastic cement cannot be prepared according to the Environmental Protection Agency (EPA) interim method for analysis due to the presence of high consistency binder materials. This can present a detection problem for asbestos and may warrant additional analysis such as electron microscopy. Asbestos may be present and be completely obscured by this binder in some samples. Normal physical and chemical preparation methods cannot always break down this binder to release asbestos fibers large enough to be detected by Polarized Light Microscopy (PLM). In addition, those asbestos fibers which may be released from the binder are quite often very fine and thus below the limit of resolution of the polarizing microscope. Although electron microscopy can provide greatly increased reliability in results, it cannot guarantee absolute accuracy.

Accordingly, DEI recommends where no asbestos was detected by PLM, the resilient floor covering samples be further analyzed by electron microscopy so that a more conclusive determination can be obtained. Several samples of the material should be

3242

submitted for analysis, so that any manufacturing variations in composition can be determined.

The policy adopted for this project was, where floor coverings and mastic cement have been sampled, tested, and found to be negative for asbestos content by polarized light microscopy, they be listed as a negative material.

Available Response Actions

The following is a brief summary of alternative asbestos response actions used in dealing with asbestos-containing materials. For a more complete discussion, refer to the EPA Document, 560/5-85-024, "Guidance for Controlling Asbestos-Containing Materials in Buildings", June 1985.

Response Action - Encapsulation

This technique involves the application of a membrane layer to the surface of the friable asbestos-containing material to contain the material and prevent the potential release of airborne asbestos fibers. Typically, a latex paint or a special compound is sprayed onto the asbestos to seal the surface. There are also encapsulants that penetrate the surface reinforcing its adhesion, and restoring the surface. Encapsulation is generally the least expensive form of abatement, but has the disadvantage of being relatively fragile. The surface can be easily broken to expose the asbestos when it is struck by a hard or sharp object. There is a need to monitor the material and to take proper precautions when working around the material. It may be necessary to eventually remove the material during renovations, or if it continues to be damaged. Over time, encapsulation may prove to be more expensive than removal of asbestos-containing material. Encapsulation is not generally recommended.

Response Action - Repair

This technique involves the restoration of all damaged material with loose debris removed to return the material to its original condition. Pipe insulation, and other material contained within a cover, is repaired by replacing the cover, typically with wetable glass fiber cloth, and sealing up exposed material. Other material is repaired by removing loose material and applying a non-asbestos replacement material to fill all cavities. Certain nonfriable materials, such as floor tile and asbestos cement "Transite" products cannot be simply repaired and the loose and damaged material should be removed and the exposed broken edges sealed and any surfaces leveled with a non-asbestos-containing material.

Response Action - Repair and Enclosure

This technique involves the initial repair of the damaged material and then the construction of a solid, air-tight barrier to contain the friable asbestos-containing material and control the spread of airborne asbestos fibers. Typically, a solid framework and plaster board construction is used for the enclosure, although it could be constructed of metal or other material. The protection of the canvas or

3242

glass fiber jacket normally applied to pipe, duct and other thermal system insulation, with painting and the possible application of protective sleeve, is also considered to be an enclosure. Enclosure does provide more protection against accidental damage and contact than encapsulation and can be more expensive than encapsulation, but it is still generally less expensive than removal of the asbestos-containing material. In addition, enclosure could be more expensive than removal because of the need to maintain records of the location of material, and the need to take proper precautions when working around the material, and, the asbestos-containing material must be removed during a major renovation/ reconstruction project. Repair and enclosure is not generally recommended.

Response Action - Removal

The technique of a controlled removal of asbestos-containing materials is the most effective form of abatement. This also removes the hazard and the potential hazard of exposure to airborne asbestos completely. While the initial construction cost is highest, removal of asbestos eliminates the necessity to continue monitoring the material, to maintain records, and to inform contractors and maintenance staff during construction and maintenance projects of its presence. However, it must also be recognized that any removal must be completed in a controlled manner to avoid any potential contamination and exposure of building occupants to the hazard of airborne asbestos.

Response Action - Asbestos Operations and Maintenance Program

Once asbestos-containing materials have been identified in a building and the damaged material has been repaired and/or enclosed, as appropriate, steps should be taken to maintain the material in good condition by implementing a an on going Operations and Maintenance (O & M) Program. The program should begin with training of the maintenance and custodial staff in the identification of asbestos-containing materials, instruction of regulated handling and maintenance techniques, and information regarding health risks associated with asbestos exposure. This training is designed to increase the awareness of the personnel who come into contact with the asbestos-containing materials, and potentially reduce the amount of damage sustained through improper work practices. An O&M Program would also provide guidelines to be followed in the event that asbestos-containing materials are disturbed or damaged.

The choice of response action chosen depended on the various parameters assigned to the material. The physical condition of the material is of primary importance. Damaged material that exposes friable asbestos must be repaired or removed if it is beyond repair. Generally, significantly damaged material is recommended for removal since simple repairs are not possible. The impact of water damage, deterioration, air movement and accessibility (including the likelihood of accidental contact) were included in the assessment and choice of response action.

In practice, the inspectors and Project Manger used a recommendation tempered towards the maintenance of the material, repairing it as necessary and then maintaining it under an on going operations and maintenance (O&M) program. This approach is considered to be more responsive to WEMCO's needs than the alternative of a blanket recommendation for the total removal of all asbestos-containing material

3242

found. Only where the material was considered to be beyond repair, or the simple presence of the material and the activities of the space suggested an existing or a potential hazard of exposure to airborne asbestos, was the recommendation for removal made.

Asbestos Management Issues

The proper management of asbestos at FEMP is an important component of the "Safe Shut Down" of the site. It has been DEI's observation that the structure is in place to accomplish this task, however, some components are missing that do not allow for complete success of the project. From DEI's perspective, the largest missing component is organizational support for the Asbestos Coordinator who is responsible for asbestos activities at FEMP. It does not appear there is support for the Coordinator's responsibilities from the various departments with whom he must coordinate activities.

Asbestos management at FEMP has to be a team effort if it is be successful. Four groups with which the Coordinator must interact and in some respects manage, need to be clearly aware of the Coordinator's authority and responsibilities. Management needs to structurally and organizationally support the Coordinator for the asbestos management program to be successful. From DEI's perspective the four groups which the Coordinator must interact with and have support from are Management, Facility Owner's, Maintenance Department, and the Industrial Hygiene Department. In addition there should be open lines of communication between the Coordinator and the Human Resources Department so that all FEMP employees can have access to the Coordinator if the necessity should arise to answer question or address employee concerns regarding asbestos issues at FEMP.

The Asbestos Coordinator should have support from the Facility Owner's in order to be appraise of the amount, location and condition of ACM in their facility. The Coordinator should be able to offer options to the Facility Owner's on how to safely manage the asbestos in their building and inform the Facility Owner of any problems or potential problem areas. The Facility Owner's in turn need to be receptive and open to the Coordinator's direction.

The Asbestos Coordinator should have support from the Maintenance Department to make sure they are using the most efficient means possible for abatement or repairs of ACM. He should make sure maintenance is kept abreast of equipment and procedure changes in the asbestos industry. Open communication with the Maintenance Department is essential for the successful implementation of the FEMP asbestos O&M program.

The Asbestos Coordinator should have support from the Industrial Hygiene and Safety Department . When the presence of ACM becomes a safety concern the Coordinator needs to be made aware of this to make sure the situation is being handled properly. The Coordinator should make sure the Industrial Hygiene department is using proper air and bulk sampling techniques. And proper protective equipment is available for workers who handle ACM.

Central to the successful management of asbestos-containing materials at FEMP is the asbestos Operations and Maintenance (O&M) Program. The success of the O&M Program will be closely tied to the Coordinator's ability to track the asbestos work

accomplished. DEI suggest that the most efficient way to track asbestos related work is through the use of the Asbestos Work Permits program. Before an asbestos job is allowed to begin, the Industrial Hygiene Department should be contacted to issue an Asbestos Work Permit. The permit should describe the type of work to be accomplished (removal, repair etc). If the job requires removal then the quantity to be removed is stated on the permit.

DEI recommends a section be added to the Asbestos Work Permit form so sample numbers associated with the ACM to be altered, can be recorded and the changes properly logged in the central database. The sample numbers would inform the Coordinator which homogeneous area is affected by the abatement activities. The sample tags should be saved and returned to the Coordinator as proof of removal. It is recommended that the Asbestos Work Permit form be changed from a triplicate form to a quadruplicate form with the Asbestos Coordinator receiving the fourth form. This should facilitate tracking quantity changes and area assessments when areas are repaired or removal takes place.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 4/2/91

DEI ENGINEERS
Mike Bossert
Tom Ernstes

BUILDING # and NAME: 2a (2/3) Ore Refinery Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 02a-039

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
2a-3598	1	Digestion	5000	S.F.	Sample taken by column B-8	P	42	Chrysotile	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [6] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [1] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [2] Activity: H = 5: M = 2: L = 0

g. [2] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [4] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [2] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[25] EXPOSURE FACTOR TOTAL (E)
E = sum e thru j
Max = 45: Min = 6

DAMAGE

k. [5] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [3] Water: Yes = 3: No = 0

m. [3] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [8] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[26] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[3.4241] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [10]
Damage: ☐ Localized ■ Distributed
Type Damage: ☐ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ☐ Fair ■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ■ High ☐ Moderate ☐ Low
Influence of Vibration: ■ High ☐ Moderate ☐ Low
Potential for Air Erosion: ■ High ☐ Moderate ☐ Low
Overall Rating: ■ High ☐ Moderate ☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Michael R Bossert

ASSESSOR: Mike Bossert

Ohio Certificate Number: 31438

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 5/20/91

DEI ENGINEERS
atrick Miller
m Ernstes

BUILDING # and NAME: 2a (2/3) Ore Refinery Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 02a-075

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
N/A		Extraction	18,000	S.F.	Interior transite, middle of building; no samples taken, material assessed	P	1+	Assumed	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [6] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [3] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[17] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [2] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[10] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[7.4713] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [15]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ☐ Fair ■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ■ Moderate ☐ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ■ Moderate ☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Deceased (MRB)

ASSESSOR: Patrick Miller

Ohio Certificate Number: 3738

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 5/20/91

DEI ENGINEERS
Patrick Miller
[illegible]ym Ernstes

BUILDING # and NAME: 2a (2/3) Ore Refinery Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 02a-073

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
N/A	Roof	Ore Refinery Plant	25,000	S.F.	No sample taken, material assessed	P	1+	Assumed	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [3] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[13] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [1] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[9] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.3168] HARM SCORE (H)
H = 12.0324-(0.1883 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [5]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ☐ Accessible ■ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

Deceased (MRB)

ASSESSOR: Patrick Miller
Ohio Certificate Number: 3738

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 5/08/91

DEI ENGINEERS
Tom Ernstes
Patrick Miller
Mike Bossert

BUILDING # and NAME: 2d Metal Dissolver

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 2d-010

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
2d-5839	2	South wall	3440	S.F.	South interior transite wall	P	1+	Assumed	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [1] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [1] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [2] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [1] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[9] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [4] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[12] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.4891] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [5]
Damage: ☐ Localized ■ Distributed
Type Damage: ☐ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

Tom Ernstes

ASSESSOR: Tom Ernstes

Ohio Certificate Number: 31708

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 5/8/91

DEI ENGINEERS
[illegible]n Ernstes
[illegible]rick Miller
[illegible]ike Bossert

BUILDING # and NAME: 2d Metal Dissolver

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 2d-012

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
None	Exterior	Exterior walls & roof	1,520	S.F.	Entire south wall between Plant 2a & 2d	P	1+	Assumed	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [6] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [3] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [1] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [3] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [2] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[22] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [5] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [3] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [8] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[24] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[4.2686] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* if A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [90]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ☐ Physical
Overall Rating: ☐ Good ☐ Fair ■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ■ High ☐ Moderate ☐ Low
Influence of Vibration: ☐ High ■ Moderate ☐ Low
Potential for Air Erosion: ■ High ☐ Moderate ☐ Low
Overall Rating: ■ High ☐ Moderate ☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Michael R Bossert

ASSESSOR: Mike Bossert

Ohio Certificate Number: 31438

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 1-8-92

DEI ENGINEERS
Mike Bossert

BUILDING # and NAME: 3e Hot Raffinate Building

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 3e-33

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
N/A	Ground	Exterior wall	2,376	S.F.	Delaminated section north wall by overhead door	P	1+	Assumed	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [6] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [5] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [2] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [3] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [2] Location: Outside = 2: Inside = 1

j. [2] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[28] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [5] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [3] Water: Yes = 3: No = 0

m. [2] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [8] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[23] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[3.4211] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [90]
Damage:
☐ Localized
■ Distributed

Type Damage: ☐ Deterioration
☐ Water
■ Physical

Overall Rating: ☐ Good
☐ Fair
■ Poor

Y. POTENTIAL FOR DISTURBANCE

Accessibility: ■ Accessible
☐ Non Accessible

Potential for Damage: ■ High
☐ Moderate
☐ Low

Influence of Vibration: ☐ High
☐ Moderate
■ Low

Potential for Air Erosion: ☐ High
■ Moderate
☐ Low

Overall Rating: ■ High
☐ Moderate
☐ Low

WEMCO Hazard Rank: [7]

Response Action: [1]

Michael R Bossert

ASSESSOR: Mike Bossert

Ohio Certificate Number: 31438

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 4/30/91

DEI ENGINEERS
Tom Ernstes
Patrick Miller
Mike Bossert

BUILDING # and NAME: 3e Hot Raffinate Building

BLDG. TYPE:

MATERIAL: Pipe Run Insulation

Homogeneous Area # 3e-09

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
3e-4370	2	West end	210	LF.	(8" O.D.) Steam line	P	20	Amosite	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [3] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [1] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or half =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[11] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [4] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[9] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.6554] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [15]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ☐ Fair ■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Tom Ernstes

ASSESSOR: Tom Ernstes

Ohio Certificate Number: 31708

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 4/30/91

DEI ENGINEERS
m Ernstes
ick Miller
e Bossert

BUILDING # and NAME: 3e Hot Raffinate Building

BLDG. TYPE:

MATERIAL: Pipe Fitting Insulation

Homogeneous Area # 3e-10

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
3e-4372	2	West end	25	EA	(6" O.D.) Steam elbow, by light	P	40	Chrysotile	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [1] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [1] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [1] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[6] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [4] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[11] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.8267] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: 15
Damage:
☐ Localized
■ Distributed
Type Damage: ■ Deterioration
☐ Water
■ Physical
Overall Rating: ☐ Good
■ Fair
☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible
☐ Non Accessible
Potential for Damage: ■ High
☐ Moderate
☐ Low
Influence of Vibration: ☐ High
☐ Moderate
■ Low
Potential for Air Erosion: ■ High
☐ Moderate
☐ Low
Overall Rating: ■ High
☐ Moderate
☐ Low

WEMCO Hazard Rank: 6
Response Action: 2

Tom Ernstes

ASSESSOR: Tom Ernstes

Ohio Certificate Number: 31708

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 5/1/91

DEI ENGINEERS
[illegible]m Ernstes
[illegible]ick Miller
[illegible]ke Bossert

BUILDING # and NAME: 3e Hot Raffinate Building

BLDG. TYPE:

MATERIAL: Debris samples from floor

Homogeneous Area # 3e-16

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
3e-4386	2	West side	1	EA	Northwest corner	P	1+	Assumed	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [3] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [0] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [4] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[12] EXPOSURE FACTOR TOTAL (E)
E = sum e thru j
Max = 45: Min = 6

DAMAGE

k. [5] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [8] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [5] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[20] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[6.6348] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [10]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ☐ Fair ■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ■ High ☐ Moderate ☐ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ■ High ☐ Moderate ☐ Low
Overall Rating: ■ High ☐ Moderate ☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Tom Ernstes

ASSESSOR: Tom Ernstes

Ohio Certificate Number: 31708

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 1/06/92

DEI ENGINEERS
Mike Bossert

BUILDING # and NAME: 3d NAR Tower

BLDG. TYPE:

MATERIAL: Pipe Run Insulation

Homogeneous Area #: 3d-08

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
3d-5987	1	North	30	LF.	(4" O.D.) Horizontal steam line, tar wrapped	P	9 6	Amosite Chrysotile	
3d-5921	2	South	12	LF.	(3" O.D.) Vertical steam line, tar wrapped	P	10	Amosite	
3d-5922	3	Center to south end	24	LF.	(3" O.D.) Vertical steam line, tar wrapped	P	5 5	Chrysotile Amosite	X
3d-5934	3	Center to south end	R-5922		QC to 5922	P	2 5	Amosite Chrysotile	X
3d-5944	4	Northwest	12	LF.	(3" O.D.)Vertical steam line, tar wrapped	P	8 2	Chrysotile Amosite	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [3] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [1] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [1] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [5] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [2] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[17] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [4] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [3] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[12] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[7.1347] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [5]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ■ Moderate ☐ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ■ High ☐ Moderate ☐ Low
Overall Rating: ■ High ☐ Moderate ☐ Low

WEMCO Hazard Rank: [6]
Response Action: [2]

Michael R Bossert

ASSESSOR: Mike Bossert

Ohio Certificate Number: 31438

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 04/18/91

DEI ENGINEERS
trick Miller
e Bossert
m Emstes

BUILDING # and NAME: 4a Green Salt Plant

BLDG. TYPE:

MATERIAL: Pipe Run Insulation

Homogeneous Area # 4a-102

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
No samples	3	Hydrofloridation	720	L.F.	Pipe Run Insulation in containment, preventing accessibity	P	1+	Assumed positive	
No samples	4	Hydrofloridation	R-3rd FL	L.F.	Pipe Run Insulation in containment, preventing accessibity	P	1+	Assumed positive	
No samples	5	Hydrofloridation	R-3rd FL	L.F.	Pipe Run Insulation in containment, preventing accessibity	P	1+	Assumed positive	
No samples	6	Hydrofloridation	R-3rd FL	L.F.	Pipe Run Insulation in containment, preventing accessibity	P	1+	Assumed positive	

3242

GRADE (PRIORITIES)

EXPOSURE

a. [6] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [2] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [2] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[16] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [4] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [5] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[12] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[7.304] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [25]
Damage: ☐ Localized ☐ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ☐ Fair ■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ☐ Accessible ■ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Deceased (MRB)

ASSESSOR: Patrick Miller
Ohio Certificate Number: 3738

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

3242

Assessment Date: 03/05/91

DEI ENGINEERS
Sherman Russell
Andrew Hanson
Dave Pennington

BUILDING # and NAME: 5 Metals Production Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 05-057A

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
05-2675	Ground	Gen. maint. shop	1460	S.F.	Transite on wall columns 13F and 10F	P	40	Chrysotile	
05-2676	Ground	Gen. maint. shop	R-2675		Transite on wall columns 13F and 10F	P	40	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [0] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [2] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [2] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[13] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [1] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [0] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[8] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.4851] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

David Pennington (HAB)

ASSESSOR: David Pennington

Ohio Certificate Number: 3357

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

3242
Assessment Date: 03/04/91

DEI ENGINEERS
Therman Russell
drew Hanson
ave Pennington

BUILDING # and NAME: 5 Metals Production Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 05-049

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
05-2659	Ground	Reduction area	900	S.F.	1/4" Transite corridor wall addition from 10A to 7A	P	20 5	Chrysotile Amosite	

GRADE (PRIORITIES)

EXPOSURE

a. [0] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [2] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [3] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[12] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [2] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[8] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.6544] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ☐ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

David Pennington

ASSESSOR: David Pennington
Ohio Certificate Number: 3357

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 02/26/91

DEI ENGINEERS
erman Russell
e Pennington

BUILDING # and NAME: 5 Metals Production Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 05-014

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
05-2513	Ground	Holding area for containers	1000	S.F.	Transite walls from column 25 to column 29	P	40 20	Chrysotile Amosite	
05-2514	Ground	Holding area for containers	R-2513		Transite walls from column 25 to column 29	P	30 30	Chrysotile Amosite	
05-2515	Ground	Holding area for containers	R-2513		Transite walls from column 25 to column 29	P	50	Chrysotile	
05-2516	Ground	Holding area for containers	R-2513		Transite walls from column 25 to column 29	P	55	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [0] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [2] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [1] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[10] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [2] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [0] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [5] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[11] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.4881] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage:
☐ Localized
■ Distributed
Type Damage: ■ Deterioration
☐ Water
■ Physical
Overall Rating: ☐ Good
■ Fair
☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible
☐ Non Accessible
Potential for Damage: ☐ High
☐ Moderate
■ Low
Influence of Vibration: ☐ High
☐ Moderate
■ Low
Potential for Air Erosion: ☐ High
☐ Moderate
■ Low
Overall Rating: ☐ High
☐ Moderate
■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

David Pennington (MLS)

ASSESSOR: David Pennington

Ohio Certificate Number: 3357

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 03/04/91

DEI ENGINEERS
[illegible]rman Russell
[illegible]ew Hanson
[illegible]e Pennington

BUILDING # and NAME: 5 Metals Production Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 05-048

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
05-2657	Ground	Generator room	8140	S.F.	1/4" Walls and ceiling	P	35	Chrysotile	X
05-2658	Ground	Generator room	R-2657		1/4" Walls and ceiling	P	35	Chrysotile	X

GRADE (PRIORITIES)

EXPOSURE

a. [0] Friable: H=6: M=3: L=1
Nonfriable=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [1] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[11] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [1] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[9] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.6554] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [1]
Damage:
☐ Localized
■ Distributed
Type Damage: ■ Deterioration
☐ Water
■ Physical
Overall Rating: ☐ Good
■ Fair
☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible
☐ Non Accessible
Potential for Damage: ☐ High
☐ Moderate
■ Low
Influence of Vibration: ☐ High
☐ Moderate
■ Low
Potential for Air Erosion: ☐ High
☐ Moderate
■ Low
Overall Rating: ☐ High
☐ Moderate
■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

David Pennington (1/1/93)

ASSESSOR: David Pennington

Ohio Certificate Number: 3357

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

3242

Assessment Date: 03/05/91

DEI ENGINEERS
[illegible]rman Russell
[illegible]rew Hanson
[illegible]ve Pennington

BUILDING # and NAME: 5 Metals Production Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area #: 05-060

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
05-2680	Ground	North offices	1668	S.F.	Transite walls, office 05-24, at column 9G	P	35	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [0] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [2] Activity: H = 5: M = 2: L = 0

g. [2] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[15] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [1] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [0] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[8] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[8.1465] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

David Pennington (MPB)

ASSESSOR: David Pennington

Ohio Certificate Number: 3357

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 02/14/91

DEI ENGINEERS
[illegible]rman Russell
[illegible] Pennington
[illegible]rew Hanson

BUILDING # and NAME: 6 Metals Fabrication Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 06-077

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
06-2251	Ground	Chip Briqueting	3000	S.F.	Smooth interior wall	P	40	Chrysotile	
06-2252	Ground	Chip Briqueting	R-2251		Smooth interior wall	P	45 40	Chrysotile Amosite	
06-2253	Ground	Chip Briqueting	R-2251		Smooth interior wall	P	65	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [1] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [1] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[12] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [2] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] *Proximity to Items Repair:*
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [5] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[12] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[7.9812] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ☐ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

David Pennington (MB)

ASSESSOR: David Pennington

Ohio Certificate Number: 3357

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

3142

Assessment Date: 02/11/91

DEI ENGINEERS
Sherman Russell
[illegible] Pennington
[illegible]rew Hanson

BUILDING # and NAME: 6 Metals Fabrication Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 06-031

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
06-2081	Ground	Pickling	6250	S.F.	Transite	P	35	Chrysotile	
06-2083	Ground	Pickling	R-2081		Transite	P	40	Chrysotile	
06-2086	Ground	Pickling	R-2081		Transite	P	35	Chrysotile	
06-2087	Ground	Pickling	R-2081		Transite	P	25	Chrysotile	
06-2082	Ground	Pickling	R-2081		Transite	P	50	Chrysotile	
06-2084	Ground	Pickling	R-2081		Transite	P	50	Chrysotile	
06-2085	Ground	Pickling	R-2081		Transite	P	20	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [6] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [3] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [3] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [2] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [3] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[20] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [5] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[13] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[6.4585] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* if A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [>2]
Damage:
☐ Localized
■ Distributed
Type Damage: ■ Deterioration
☐ Water
■ Physical
Overall Rating: ☐ Good
☐ Fair
■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible
☐ Non Accessible
Potential for Damage: ☐ High
■ Moderate
☐ Low
Influence of Vibration: ☐ High
☐ Moderate
■ Low
Potential for Air Erosion: ☐ High
☐ Moderate
■ Low
Overall Rating: ■ High
☐ Moderate
☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

David Pennington (MBR)

ASSESSOR: David Pennington

Ohio Certificate Number: 3357

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

3242

Assessment Date: 02/25/91

DEI ENGINEERS
'ike Bossert
m Emstes

BUILDING # and NAME: 9 Special Products Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 09-022B

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
09-2540	Ground	Roof of office	500	S.F.	Transite ceiling	P	35	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [1] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [2] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [2] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [0] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [4] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[11] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [4] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [3] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [8] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [3] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[22] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[6.4675] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [30]
Damage:
☐ Localized
■ Distributed
Type Damage: ☐ Deterioration
☐ Water
■ Physical
Overall Rating: ☐ Good
☐ Fair
■ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ☐ Accessible
■ Non Accessible
Potential for Damage: ■ High
☐ Moderate
☐ Low
Influence of Vibration: ☐ High
☐ Moderate
■ Low
Potential for Air Erosion: ☐ High
☐ Moderate
■ Low
Overall Rating: ■ High
☐ Moderate
☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

Michael P Bossert

ASSESSOR: Mike Bossert

Ohio Certificate Number: 31438

3242

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 12/02/91

DEI ENGINEERS
'rew Hanson
Emstes

BUILDING # and NAME: 12a-c Main Maint. Bldg., other Storage

BLDG. TYPE:

MATERIAL: Pipe Run Insulation

Homogeneous Area # 012a-048

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
12-5894	Ground	Ladder Room	80	L.F.	(8" O.D.) Steam line by heater at catwalk	P	60	Chrysotile	
12-5895	Ground	Ladder Room	R-5894		(5" O.D.) Steam line by heater at ladder	P	60	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [3] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [1] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [3] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[12] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [5] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [1] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [3] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [5] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[15] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[7.4763] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [30]
Damage:
☐ Localized
■ Distributed

Type Damage: ■ Deterioration
☐ Water
■ Physical

Overall Rating: ☐ Good
☐ Fair
■ Poor

Y. POTENTIAL FOR DISTURBANCE

Accessibility: ■ Accessible
☐ Non Accessible

Potential for Damage: ■ High
☐ Moderate
☐ Low

Influence of Vibration: ☐ High
☐ Moderate
■ Low

Potential for Air Erosion: ☐ High
■ Moderate
☐ Low

Overall Rating: ■ High
☐ Moderate
☐ Low

WEMCO Hazard Rank: [7]
Response Action: [1]

ASSESSOR: Andrew Hanson
Ohio Certificate Number: 22495

DIAGNOSTIC ENGINEERING INC.

PROJECT NO. D/278091001-1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 12/02/91

DEI ENGINEERS
Andrew Hanson
Ernstes

BUILDING # and NAME: 12a-c Main Maint. Bldg., other Storage

BLDG. TYPE:

MATERIAL: Pipe Fitting Insulation

Homogeneous Area # 012a-049

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
12-5896	Ground	Ladder Room	20	EA	(5" O.D.) Steam elbow, by ladder at catwalk	P	60	Chrysotile	
12-5897	Ground	Ladder Room	20	EA	(3" O.D.) Steam elbow, at catwalk	P	60	Chrysotile	

GRADE (PRIORITIES)

EXPOSURE

a. [0] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [0] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [3] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [0] Air Movement: H = 5: M = 2: L=0

f. [0] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [1] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [1] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 500 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[7] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [0] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [0] Water: Yes = 3: No = 0

m. [0] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [1] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [2] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [5] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[8] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[9.5009] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage:
☐ Localized
■ Distributed

Type Damage: ■ Deterioration
☐ Water
☐ Physical

Overall Rating: ■ Good
☐ Fair
☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible
☐ Non Accessible

Potential for Damage: ☐ High
☐ Moderate
■ Low

Influence of Vibration: ☐ High
■ Moderate
☐ Low

Potential for Air Erosion: ☐ High
☐ Moderate
■ Low

Overall Rating: ☐ High
■ Moderate
☐ Low

WEMCO Hazard Rank: [2]
Response Action: [5]

ASSESSOR: Andrew Hanson
Ohio Certificate Number: 22495

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)
EXPOSURE RISK ASSESSMENT / EVALUATION FORM

Assessment Date: 2-7-92

DEI ENGINEERS
Sherman Russell

BUILDING # and NAME: 13a Pilot Plant

BLDG. TYPE:

MATERIAL: Transite Sheet Material

Homogeneous Area # 13a-023

SAMPLE #	FLOOR	LOCATION	QUANTITY	UNIT	COMMENTS (refer by letter)	P/N	%	ASBESTOS TYPE	QC
N/A	Exterior	Exterior walls & roof	18,000	S.F.	No samples taken per scope of work assumed positive	P	1+	assumed	

GRADE (PRIORITIES)

EXPOSURE

a. [1] Friable: H=6: M=3: L=1
Nonfriable:=0

b. [0] Amount of Visible Surface Area (sf)
<10 = 0: 10 to <100 = 1:
100 to <1,000 = 2: ≥1,000 = 3

c. [3] Walls: Rough = 4: Pitted = 3
Moderate =2: Smooth = 1

d. [0] Ventilation: (maximum of 5) relative to friable material.
Int. Supply = 5: Int. Return = 2:
Friable Supply = 1: None = 0

e. [5] Air Movement: H = 5: M = 2: L=0

f. [2] Activity: H = 5: M = 2: L = 0

g. [1] Floor: Carpet = 4: Wood = 3:
Tile = 2: Concrete = 1: Other = 0

h. [2] Barriers:
A.* Spray / Trowel: Susp. = 1
Encap. = 2: Railing = 3: None = 4
B.* Pipe / Boiler / Duct (material exposed)
<25% = 1: 25 to 50% = 2:
50 to 75% = 3: 75 to 100% = 4
C.* Miscellaneous (condition)
Excellent = 1: Fair =2: Poor = 3

i. [2] Location: Outside = 2: Inside = 1

j. [1] Population:
1 to 9 or hall =1: 10 to 200 = 2:
201 to 600 = 2: 501 to 1,000 = 4:
≥ 1,000 = 5

[17] EXPOSURE FACTOR TOTAL (E)
E = sum a thru j
Max = 45: Min = 6

DAMAGE

k. [1] Physical: H = 5: M = 4: L = 2:
Min. = 1: N = 0

l. [3] Water: Yes = 3: No = 0

m. [0] Proximity to Items Repair:
A.* Spray / Trowel:
<1' or ceiling panel = 3:
1' to <5' = 2: ≥5'=1:
5' & No Maint. = 0
B.* Pipe / Boiler / Duct:
No = 0: Yes = 1: Ceiling Panel = 3
C.* Miscellaneous:
No = 0: Yes = 1: Ceiling Panel =3

n. [4] Type of Material:
Pipe / Boiler / Duct =1: HVAC = 3:
Ceilings / Walls = 4: Other = 0 to 4

o. [0] Potential for Damage:
<10': H = 8: M = 5: L = 2
>10': H = 5: M = 3: L = 0

p. [1] Asbestos Content (%)
≤1 = No Hazard: >1 to ≤30 = 1:
>30 to ≤50 = 3: >50 =5

[9] DAMAGE TOTAL (D)
D =sum k thru p
Max = 28: Min = 1

[7.6396] HARM SCORE (H)
H = 12.0324-(0.1683 * D) - (0.1693 * E)

* If A, B and C apply in (h.) and (m.) use the higher of the three.

AHERA (RESPONSE ACTIONS)

X. CONDITION
Damage %: [<1]
Damage: ☐ Localized ■ Distributed
Type Damage: ■ Deterioration ■ Water ■ Physical
Overall Rating: ☐ Good ■ Fair ☐ Poor

Y. POTENTIAL FOR DISTURBANCE
Accessibility: ■ Accessible ☐ Non Accessible
Potential for Damage: ☐ High ☐ Moderate ■ Low
Influence of Vibration: ☐ High ☐ Moderate ■ Low
Potential for Air Erosion: ☐ High ☐ Moderate ■ Low
Overall Rating: ☐ High ☐ Moderate ■ Low

WEMCO Hazard Rank: [4]
Response Action: [4]

Sherman Russell

ASSESSOR: Sherman Russell

Ohio Certificate Number: 31606

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastic	Throughout offices

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive sampling
Roofing Materials	Roof	Per scope of work
Transite Sheeting Material	Breakroom Walls	Sampled Elsewhere
Residual Material	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #1a is 5 (where a rank of 7 represents the most hazardous condition). Therefore homogeneous areas 01-005, 01-006, and 01-020 should be removed, enclosed, encapsulated or repaired to correct damage. When this is accomplished all ACM can be managed in place per the operation procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #2a, Ore Refinery Facility a 40,000 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 3, to April 4, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Storage tank insulation	Digestion
Wall Insulation	Denitration
Transite sheet material	Digestion Interior wall
Storage tank insulation	Denitration
Duct insulation	Denitration
Storage tank insulation	Extraction
Transite sheet material	West side Interior wall

Nonfriable Materials	Sample Location
Transite sheet material	Digestion interior wall
Transite sheet material	Extraction interior wall

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Tank insulation	Digestion
Pipe fitting insulation	Throughout facility
Floor tile mastic	Breakroom digestion
Resilient Floor tile (9"x9")	Breakroom digestion
Baseboard	Breakroom digestion
Baseboard mastic	Breakroom digestion
Resilient floor tile (9"x9")	Control room
Floor tile mastic	Control room
Pipe run insulation	Throughout facility
Storage tank insulation	Denitration
HVAC Flexible connector	Denitration
HVAC Flexible connector	Extraction

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Residual Material	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #2C, Bulk Lime Handling Building a 1,000 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 7, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 2b, Lime Handling, a 2,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 7, 8, and 9, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Rope insulation	North wall

Nonfriable Materials	Sample Location
Transite lab top	South side of facility
Transite interior wall	South wall
Transite wall	Exterior

Suspect materials sampled which do not contain detectable levels of asbestos fibers include

Suspect Materials	Material Location
Resilient floor tile (12"x12")	South side of facility
Floor tile mastic	South side of facility
Pipe run insulation	Throughout facility
HVAC Flexible connector	Upper level air handler

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Pipe run insulation adjacent to fitting	Steam line at west, south, and north walls

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Residual material	Exterior gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD to POOR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #2b is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items above the hazard rank of 4, then manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #2d, Metal Dissolver a 2,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 8, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Transite wall	South wall between plants 2g and 2d

Nonfriable Materials	Sample Location
Transite interior wall	South wall
Transite wall	Exterior

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe fitting insulation	Throughout facility

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work
Residual Material	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 2d is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items above the hazard rank of 4, then manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #2e, NFS Storage Pump House a 19,490 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 6, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
None	

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 2e is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace the (4"O.D.) elbow and clean up debris in HA2e-005, then manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #3a Maintenance Building a 9,425 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 29, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	Office & breakroom
Floor tile mastic	Office & breakroom
Transite	Interior walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Northside
Resilient floor tile	Office
Acoustic ceiling tile (12"x12")	Office & breakroom

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastic	Breakroom & Offices

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite insulation panels	Transformers	Risk to surveyors
Roofing Materials	Roof	Per scope of work
Transite	Exterior walls, cylinder storage	Per scope of work
Residual Materials	Exterior gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition, except for homogenous area # 03a-06 which was assessed to be in FAIR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 3a is 5 (where a rank of 7 represents the most hazardous condition). Therefore it is recommended that homogenous area # 03a-06, pipe fitting insulation located in the southwest corner by a sink, be removed, enclosed, encapulated, or repaired to correct damage. All remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #3b, The Ozone Building a 1,050 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 29 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

SPECIAL NOTE: During a routine field quality control reinspection, DEI found that sample #3b-4115, homogeneous area 03b-03, gasketry, was no longer present in 3b.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Northwest corner
Pipe fitting insulation	Northwest corner

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Gasketry	Storage shelf

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite	Exterior walls & roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #3b is 5 (where a rank of 7 represents the most hazardous condition). Therefore all ACM assessed with the hazard rank of 5 should be removed, enclosed encapsulated, or repaired to correct damage. Steps should be taken to reduce potential for disturbance. O&M is required for all remaining friable ACM.

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #3c, The Control House a 2,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 29, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility

Nonfriable Materials	Sample Location
Transite wallboard	Interior walls
Resilient floor tile (9"x9")	Throughout facility
Floor tile mastic	Throughout facility

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #3c is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #3d, the NAR Tower a 7,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 30, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Nonfriable Materials	Sample Location
Storage tank lagging	North side

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
None observed		

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 3d is 6 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair to correct damage all ACM with a hazard rank of 4 or above. All enclosed, encapsulated, repaired, or remaining friable ACM can be managed in place per the operations and maintenance procedures described in IN-6029, "Asbestos Operations and Maintenance Manual."

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

3242

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #3e, Hot Raffinate Building, a 3,750 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 30, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout
Pipe fitting insulation	Throughout
Debris samples	Northwest corner
Transite sheet material	North interior wall

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Tank insulation	Tanks on first & third floor

226

ASSUMPTIONS:

3242

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Exterior Transite Wall	North Wall by Roll-up Door	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #3e is 7 (where a rank of 7 represents the most hazardous condition). Of particular concern are homogeneous areas HA-06, 09, 16, 26, 33, and 27, which have a hazard ranking of 7 and should be addressed immediately. Remove and replace or repair all items above the hazard rank of 7 then manage in place the repaired and remaining asbestos-containing materials per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 3f, Harshaw Tower, a 1,250 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 4, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Nonfriable Materials	Sample Location
Tank / exchanger lagging	Tanks 1&2
Tank / exchanger insulation	Tank 2
Pipe fittings insulation	Throughout facility tank area
Pipe run insulation	Throughout facility tank area

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Pipe run insulation	(6"O.D.) next to tank #1
Tank / exchanger insulation	Bottom of tank #2

ASSUMPTIONS:

Materials samples which are considered to contaminated due to the proximity to asbestos-containing materials include:

Suspect Materials	Material Location
No suspect materials	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
No suspect materials		

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR or POOR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #3f is 7 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair all ACM.

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #3g, Refrigeration Building a 1250 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 7, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	East wall
Transite sheet material	North west corner
Pipe run insulation	North wall

ASSUMPTIONS:

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite sheet material	Exterior walls	Per scope of work
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 3g is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #4a, Green Salt Plant a 109,400 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 9, 1991, through April 14, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Storage tank insulation	First floor by Column 8A
Storage tank insulation	First floor tank 7
Woven gasketry	Second floor around steam line
Storage tank insulation	Second floor by Column 6C
Gasketry (rope)	Third floor reactors
Cloth gasketry	Reactor 6
Duct insulation	Fifth floor
Rope	Sixth floor Column 2E
Duct insulation	Seventh floor air handling unit
Storage insulation	Sixth floor reactors
Storage tank insulation	First floor HF recovery room

3242

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	First floor
Gasket	Sixth floor reactor 3
Transite sheet material	Interior walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Storage tank insulation	First floor Hydrofluoridation
Pipe run insulation	Throughout facility
Floor tile mastic	First floor tank 2
Insulation brick	First floor offices
Pre-formed block insulation	Inside reactors
Reactor screw insulation	Inside reactors
Mineral wool insulation	Reactors
Gasket	Third floor offices
Resilient floor tile (9"x9")	Sixth floor recovery room
Floor tile mastic	Sixth floor southeast office
Acoustic panel (2'x4')	Sixth floor southeast office
Pipe fitting insulation	Throughout facility

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastic	First floor offices

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Residual Material	Exterior Gutters	Per scope of work
Transite sheet material	Exterior Walls	Per scope of work
Transite sheet panels	Electrical Transformer	Risk to Surveyors
Pipe run insulation & fittings	Containment Area	Could not Access

3242

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 4a is 7 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair to correct damage all ACM with a hazard rank of 4 or above. All enclosed, encapsulated, repair, or remaining ACM can be managed in place per the operations and maintenance procedures described in IN-6029, "Asbestos Operations and Maintenance Manual".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company of Ohio (WEMCO): Building #4b, Plant 4 Warehouse a 11400 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 29, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring on the roof, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

Bulk samples were not taken because no suspect material was visually located in the interior or exterior of the building.

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #4c, Plant 4 Maintenance Building a 3,364 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 4, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation. The ceiling tile in the supervisor's office is made of fiberglass and therefore was not sampled.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
Transite sheeting material	Break Room

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout Building
Resilient floor tile (brown)	West office
Floor mastic	West office

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Electrical wiring	Junction Boxes	Risk to surveyors
Roofing Materials	Roof	Per scope of work
Transite	Exterior walls and roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM are shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #4c is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #5, Metals Production Plant a 126,320 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) from February 26, thru March 12, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Acoustic ceiling panel (2'x4')	Rad Tech Offices
Gasketry on blower flange	Reduction area
Joint compound (tape)	Generator room
Gasketry	Reduction area
Gasketry	General maintenance
HVAC Flex connector	Break room
HVAC Flex connector	Reduction area
Debris in gutter	Exterior, roof gutters

Nonfriable Materials	Sample Location
Transite sheet material	Interior walls
Resilient floor tile (9"x9")	Offices
Transite pipe	Generator room
Gloves	General maintenance shop
Rope gasket	General maintenance shop

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Acoustic panel (2'x4')	Offices
Baseboard mastic	Office 05-27
Firebrick	Reduction area
Thermal coupling	Reduction area
Mortar in furnace door	Reduction area
Firebrick	Rockwell furnace
Electric wire insulation	Rockwell furnace
Heat shield	Remelt furnace
Weld curtain	General maintenance shop
HVAC Flex connector	Furnace repair shop
HVAC Flex connector	Reduction area

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastic	Office 05-27

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Transite Sheet Material	Elevator shaft	Shaft unsafe to enter
Residual Material	Exterior gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD to POOR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #5 is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items at or above the hazard rank of 4, then manage in place the repaired and remaining asbestos-containing materials per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #6, Metals Fabrication Plant a 227,000 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on February 6, 1991, to February 21, 1991 for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Storage tank insulation	Inspection
Transite sheet material (Interior)	Pickling
Gasketry	Pickling (Northwest corner)
Transite sheet material (Interior)	Pickling (Pacthed area southwest corner)
Wallboard	Inspection
Resilient floor tile (9"x9")	Inspection quality control office
Transite sheet material (Interior)	Chip Briqueting
Gasketry	Electric panel room
Gasketry	Machine shop
Transite sheet material (Interior)	Maintenance machine shop
Storage tank insulation	Machining
Resilient floor tile (9"x9")	Maintenance
Transite sheet material (Interior)	Rolling Mill
Gasketry	Machine shop
Resilient floor tile (9"x9")	Rolling Mill
Fabric Rope	Machine shop
Resilient floor tile	Foreman's office
Storage tank insulation	Rolling Mill
Resilient floor tile (12"x12")	Inventory
Transite sheet material (Interior)	East warehouse
Fire retardant clothing	Rolling Mill

3242

Nonfriable Materials	Sample Location
Resilient floor tile (12"x12")	Inspection break room
Resilient floor tile (12"x12")	Inspection RAD tech office
Transite sheet material	Machine shop

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Storage tank insulation	Machining
Storage tank insulation	Pickling
HVAC Flexible connector	Pickling
Gasketry	Pickling
Floor tile mastic	Inspection quality control office
Floor tile mastic	Inspection break room
Acoustic panel	Inspection break room
HVAC Flexible connector	Machine shop
Storage tank insulation	Machine shop
Fiber panel	Air handling unit in Machine shop
Fire hose	Rolling Mill
Batt insulation	Walls Rolling Mill
Heat shield (firebrick)	Rolling Mill
Duct insulation lagging	Mechanical room
HVAC Flexible connector	Mechanical room
Floor tile mastic	Maintenance
Acoustic panel (2'x4")	Maintenance
Floor tile mastic	Rolling Mill
Floor tile mastic	Foreman's office
Baseboard	Foreman's office
Storage tank insulation	Rolling Mill
Baseboard mastic	Foreman's office
Boiler insulation	Rolling Mill
Gasketry	Rolling Mill
Floor tile mastic	Inventory control office

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastic	Inspection quality control office
Floor tile mastic	Maintenance
Floor tile mastic	Rolling Mill
Floor tile mastic	Foreman's Office
Floor tile mastic	Inventory control office
Acoustic panel (2'x4')	Machining
HVAC Flexible connector	East warehouse
Storage tank insulation	Exterior
Gasketry	Exterior
Resilient floor tile	New water treatment
Resilient floor tile	New water treatment

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Transite sheet material	Exterior walls	Per scope of work
Residual Materials	Exterior walls	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 6 is 7 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair to correct damage all ACM with hazard rank of 4 or above. All enclosed, encapsulated, repaired, or remaining ACM can be managed in place per the operations and maintenance procedures described in IN-6029 "Control of work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #7, Plant # 7 a 41,572 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) from April 24, thur April 30, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation. Boxes of replacement insulation are located throughtout the facility. These boxes are labeled asbestos free and were not sampled.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Tank insulation	6th floor Dissociation Room
Duct insulation	4th floor Process area
Firebrick	Room 7-19 and 6th floor

Nonfriable Materials	Sample Location
Duct insulation	5th floor Process area
Transite sheet material	Interior walls
Resilient floor tile (9"x9")	2nd floor Production office
Floor tile mastic	2nd floor Production office
Gasketry	Storage room 719
Transite sheet material	Exterior Walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
HVAC Flexible connector	7th floor, column D-1

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Residual Material	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 7 is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all ACM in categories 4 through 7. After these measures are taken all remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #8a, Recovery Plant a 77,542 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 11, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility

Nonfriable Materials	Sample Location
Transite sheet material	Throughout facility
Resilient floor tile	Supervisor's office

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Gasketry	Kiln trough & Drumming station
Kiln feed hose	Center of kiln
Gasketry	Portable vacuum
Canvas like material	Drumming station
Rubber Flex hose	By south tank

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Residual Materials	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD to POOR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 8a is 7 (where a rank of 7 represents the most hazardous condition). Homogeneous area 8a-021 has a hazard rank of 7 and should be addressed immediately. After repairs recommended with several other homogeneous areas, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 8b, Maintenance, a 1,195 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on 8 May, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	Break room
Floor tile mastic	Break room

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
None	

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #8b is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #9, Special Products Plant a 48,197 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on February 25, 26, 27, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Dust collector, southwest corner
Pipe run insulation	On top of Northwest offices
Pipe run insulation	Machining
Pipe run insulation	South side exterior, west side exterior
Pipe run insulation	Women's rest room
Pipe fitting insulation	Dust collector, catwalk south wall
Pipe fitting insulation	On top of Northwest offices
Pipe fitting insulation	Northeast offices, women's rest room
Pipe fitting insulation	Machining
Pipe fitting insulation	South side exterior, west side exterior
Condensate tank insulation	On top of offices

Nonfriable Materials	Sample Location
Transite roof	Office
Resilient floor tile	South office, maintenance offices
Resilient floor tile	Supervisor's office
Floor tile mastic	South office & Supervisor's Office
Transite interior walls	Northeast offices, Machining
Transite exterior walls	Exterior

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Dust collector
Pipe fitting insulation	Dust collector, south wall
Pipe fitting insulation	Northwest side exterior
Pipe fitting insulation	South wall
Pipe fitting insulation	On top of offices
Pipe fitting insulation	North women's rest room
Pipe fitting insulation	South side exterior
Ceiling tile (12"x12")	South offices
Heat sheild	Victor fire master
Furnace gasket	Dust collector South
Ceiling panel (2'x4')	Supervisor's office
Tank lagging	Southeast corner
Gasketry	Furnace
Acoustic panel (2'x4')	Supervisor's office

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Pipe fitting insulation	Various locations
Pipe run insulation	Various locations
Floor tile mastic	Maintenance office

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Residual Materials	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 9 is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items at the hazard rank of 5, or greater. Of particular concern are homogeneous areas 09-003B, 09-022B, 09-040, 09-055, and 09-059. These areas have hazard rankings of 7 and should be addressed as a priority. Manage in place the repaired and remaining asbestos-containing materials per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #10a, Boiler Plant a 24,682 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 11 through March 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Storage Tank Insulation	Throughout Facility
Pipe Run Insulation	Throughout Facility
Pipe Fitting Insulation	Throughout Facility
Rope Gasketry	Basement Maintenance Cage
Boiler Insulation	Ground Floor on all Four Boilers
Gasketry	Ground Floor Boiler Stoker
Boiler Plate Insulation	Fourth Floor Boilers 1 and 4
Flue Insulation	Fourth Floor Boilers 2 and 4
Gasketry	Fourth Floor Boiler 2
Smoke Stack Insulation	Leading from Boilers
Gasketry	Storage Shelf Basement

Nonfriable Materials	Sample Location
(9" X 9") Resilient Floor Tile, Gray	Ground Floor Control Room
Floor Tile Mastic	Ground Floor Control Room
(9" X 9") Resilient Floor Tile, Green	Ground Floor Supervisor's Office

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Gasketry - Matting Rolls	Basement Maintenance Cage
Stored Pipe Insulation	Basement North Wall Bottom Shelf
Fire Bricks	Basement North Side
Pipe Run Insulation	Throughout Ground, 2nd & 4th Floors
Floor Tile Mastic, Tan	Ground Floor Supervisor's Office
Floor Tile Mastic, Red	Ground Floor Control Room
Fire Rated Door Insulation	East Exit to Coal Pile
HVAC Flexible Connector	Ground Floor Boiler #3
Heat Shield (Fire Brick)	Inside the Four Boilers
Thermal Insulation	Where Wall Meets the Floor
Pipe Fitting Insulation	Ground Floor Condensate Pump

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor Tile Mastic, Tan	Ground Floor Supervisor's Office
Floor Tile Mastic, Red	Ground Floor Control Room

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per Scope of Work
HVAC Flexible Connector	Fourth Floor Boilers	Maintain Boiler Integrity
Transite Walls	Exterior	Per Scope of Work
Residual Materials	Exterior Gutters	Per Scope of Work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #10a is 7 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate or repair to correct damage to all ACM falling into categories 4 through 7. ACM falling into category 7 should be addressed immediately. All repaired and remaining ACM can be managed in place per the operations and maintenance procedures described in IN-6029, "Asbestos Operations and Maintenance Manual".

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #10b, Boiler Plant Maintenance a 2,340 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 29, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Resilient floor tile	Men's room
Resilient floor tile	North east office
Floor tile mastic	Men's room
Acoustic ceiling panel (2"x4")	Hallway
Acoustic ceiling panel (2"x4")	Room 107

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #10b is N/A (where a rank of 7 represents the most hazardous condition). All sampled building material tested negative for asbestos. If suspect ACM is observed the facility owner, the AEDO, and Industrial Hygiene should be contacted immediately.

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #11, The Service Building a 103,304 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 18, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Tank insulation	Tanks 1,2,3,4

Nonfriable Materials	Sample Location
Resilient floor tile (gray) (9"x9")	Kitchen
Floor tile mastic (black)	Kitchen
Resilient floor tile (green) (9"x9")	Cafeteria
Floor tile mastic (black)	Cafeteria
Resilient floor tile (black) (9"x9")	South wall of kitchen
Floor tile mastic (black)	South wall of kitchen
Resilient floor tile (beige) (9"x9")	South side of second floor

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Duct insulation lagging	Kitchen
Pipe run insulation	Throughout
Pipe fitting insulation	Throughout
Fire hose	Dishwasher
Pipe fitting insulation	Laundry
Rubber hosing	Laundry
Duct insulation lagging	Maintenance
HVAC Flexible connector	Maintenance
Resilient floor tile beige (12"x12")	Maintenance Offices
Floor tile mastic (brown)	Maintenance Offices
Acoustic panel (2'x4')	Offices
Plaster composite	Various locations
Wallboard	Old lunch box room
Sound suppression board	Firing range
Acoustic tile mastic	Dishwashing room
Acoustic tile (12"x12")	Dishwashing room
Acoustic tile (12"x12")	Serving area
Residual acoustic tile mastic	Cafeteria
HVAC Flexible connector	Laundry
Building expansion joint	Hallways

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition, with the exception of pipe fitting insulation identified in HA11-030 which is assessed to be in POOR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

APPENDICES

(A) INDIVIDUAL FACILITY REPORT CONCLUSIONS

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #1a, The Preparation Plant a 60,693 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 15, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Storage tank insulation	Ground floor condensate tank
Resilient floor tile (12"x12")	Office 01-47
Resilient floor tile (9"x9")	Throughout offices
Duct Insulation	Third floor
Transite sheet material	Interior and exterior walls

Nonfriable Materials	Sample Location
Floor tile mastic	Throughout offices

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Break room
Pipe run insulation	2nd Floor men's rest room
Floor tile mastic yellow	Room between column D2,1 & E12
Acoustic panel (2'x4')	Radiation Technician Office
Resilient floor tile	Preparation office
Floor tile mastic	Preparation office

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #11 is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items at or above the hazard rank of 4. These items include pipe fitting insulation (HA11-027, 11-030, 11-054) and storage tank/exchanger insulation (HA11038). After initial response actions manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

SPECIAL NOTE:

The rubber clad pipes in the second floor lady's room were not sampled because rubber is not traditionally suspect ACM. The acoustical ceiling tile in the physical fitness center's office are made of fiber glass and are not suspect material.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #12a, Main Maintenance Building, a 58,831 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 4, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Steam Line TSI	Hallway
Abandoned Line TSI	Hallway
Abandoned Line Fittings	Hallway
Condensate Fittings	Hallway
Condensate Tank	Hallway
Condensate Fittings	Men's Restroom
Coldwater Line TSI	Instrument Shop
Abandoned Line TSI	Instrument Shop
Hot Water Line TSI	Stores
Hot Water Fittings TSI	Stores
Hot Water Line TSI	Offices
Duct Lagging	Instrument Shop

Nonfriable Materials	Sample Location
Floor Tile (9"x9")	Carpenter's Shop
Floor Tile Mastic	Carpenter's Shop
Floor Tile (9"x9")	Offices
Floor Tile Mastic	Offices
Floor Tile (9"x9")	Weld Shop Offices
Floor Tile Mastic	Weld Shop Offices
Floor Tile (9"x9")	Instrumentation
Floor Tile Mastic	Instrumentation
Floor Tile (9"x9")	Stores
Floor Tile Mastic	Stores
Black Baseboard	Offices
Black Baseboard Mastic	Offices
Floor Tile (9"x9")	Hallway to Roof & Rooms
Floor Tile (9"x9")	Between Office and Hallway
Floor Tile (9"x9")	Machine Shop Break Room
Floor Tile Mastic	Machine Shop Break Room
Transite Sheet Material	Exterior Walls (excluding block addition)
Transite Sheet Material	Interior Walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe Fitting Insulation	Stores
Mastic	Stores Office
Mastic	Room 205A
Black Baseboard	Throughout Building
Mastic	Hallway
Mastic	Between Office and Hallway
Floor Tile (9"x9")	Stores Office
Pipe Run Insulation	Throughout Facility

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor Tile Mastic	Offices

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per Scope of Work
Transite Ceilings	Rest rooms	Per Scope of Work
Residual Materials	Exterior gutters	Per Scope of Work
Transite Freeze Point Standards	Room 12-26	Damage to instrument
(9"x9") stored green floor tile	Mezz above carpenter shop	Sampled elsewhere
Transite Transformer Panels	Electric Shop	Risk to Surveyors

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition with the exception of the pipe fitting insulation in the mezzanine of The Instrument Shop and the pipe run insulation above the machine shop door. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #12a is 7 (where a rank of 7 represents the most hazardous condition). This hazard rank calls for removal and replacement of thermal system insulation, and the removal only (no replacement) of the 4" O.D. abandon line on the mezzanine of the instrument shop located by the pipe shop. The remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos."

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #12B, Cylinder Storage Building a 1,375 S.F. facility, located at the Fernald Environmental Management Project (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM. No suspect material was found, except for the roof which is assumed to contain asbestos. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring on the roof or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken.

ASSUMPTIONS:

Identified below are the other materials which may contain asbestos but which was not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such material should be assumed to contain asbestos until it is confirmed to be asbestos-free.

Friable Materials	Material Location	Reason Excluded
Roofing Material	Roof	Per scope of work

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #12C, Lumber Storage Building a 2,400 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surreyed by Diagnostic Engineering Inc. (DEI) on June 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #13a, Pilot Plant Wet Side a 1,375 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) March 27, to April 31, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Duct insulation	Column K1

Nonfriable Materials	Sample Location
Storage tank insulation	Tank D1
Transite sheet material	Interior walls
Gasketry	Furnace Door
Rope Gasketry	Furnace Door
Exterior transite	Exterior

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #13a is 7 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair to correct damage all ACM with a hazard rank of 4 or above. All repaired, enclosed, encapsulated, or remaining ACM can be managed in place per the operations and maintenance procedures described in IN-6029, "Asbestos Operations and Maintenance Manual".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 13b, Pilot Plant Maintenance, a 1,708 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 12, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation. The drop-in ceiling tile in the new office was not sampled because it was not present at the time of the survey.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Nonfriable Materials	Sample Location
Floor tile mastic	Old calcium and magnesium storage room
Transite sheeting material	Interior breakroom wall and Rad Tech office

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Resilient floor tile (12"x12")	Old calcium and magnesium storage room

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Resilient floor tile	Old calcium and magnesium storage room

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work
Transite Sheet Material	Covering Windows West Wall	Per scope of work
Resilient Floor Tile (9"x9")	New Office	Installed after survey

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #13b is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #14, Administration Building a 37,398 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 22,through April 24, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility
Storage tank insulation	Basement North mechanical room
Duct insulation	Second floor outside room 210

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	West hallway first floor
Floor tile mastic (black)	Throughout first floor
Acoustic tile mastic	Throughout first floor
Resilient floor tile (9"x9")	Throughout second floor
Acoustic tile mastic	Drafting room

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Storage tank insulation	Basement Mechanical room
Pipe run insulation	Throughout facility
Duct insulation lagging	Throughout facility
Acoustic tile (12"x12")	First floor by leading to basement
HVAC Duct work	Vault room 1
Acoustic panel (2'x2')	EOC room
Acoustic tile mastic	EOC room
Acoustic tile (12"x12")	Throughout second floor
Acoustic tile mastic	Throughout second floor
Acoustic panel (2'x4')	Throughout second floor
Resilient floor tile (12"x12")	Second floor room 236
Resilient floor tile (12"x12")	Second floor room 410

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Acoustic tile (12"x12")	Throughout first floor
Acoustic panel	Throughout second floor

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 14 is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #15, Laboratories a 84,253 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 14, through June 6, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Duct insulation	Basement
Storage tank insulation	Basement

3242

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	East wing
Floor tile mastic	East wing
HVAC Flexible connector	East wing
Floor tile mastic	Center wing
Resilient floor tile	Center wing
Duct insulation	Center wing
Resilient floor tile (9"x9")	North wing
Floor tile mastic	North wing
Duct insulation	South wall
Floor tile mastic	South wall
Resilient floor tile (9"x9")	South wall
Resilient floor tile (9"x9")	West wing
Floor tile mastic	West wing

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Resilient floor tile (9"x9")	East win g
Floor tile mastic	East wing
Acoustic tile (12"x12")	East wing
Resilient floor tile	Center wing
Acoustic tile (12"x12")	Center wing
Acoustic tile (12"x12")	North wing
Resilient floor tile (9"X9")	North wing
Heater fire board	North wing
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
HVAC Flexible connector	South wall
Acoustic tile (12"x12")	South wall
Floor tile mastic	South wall
Floor tile mastic	West wing
Resilient floor tile (12"x12")	West wing
HVAC Flexible connector	West wing
Acoustic panel (2'x4')	West wing
Tar expansion joint	Basement
HVAC Flex connector	Basement

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Resilient floor tile (9"x9")	East wing
Floor tile mastic	East wing
Resilient floor tile (9"x9")	Center wing
Resilient floor tile (9"x9")	North wing
Floor tile mastic	South wall
Floor tile mastic	West wing

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Transite Lab Counter Tops	Rooms S-42, W-22a, C-43, C-37, and C-23	Destructive Sampling
Transite Lab Hood Lining	Room C-15	Destructive Sampling

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 15 is 7 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair, to correct damage all ACM with the hazard rank of 4 or above. All enclosed, encapsulated, repaired, or remaining ACM can be managed in place per the operations and maintenance procedures described in IN-6029, "Asbestos Operations and Maintenance Manual".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #16a, Main Electrical Station a 40,000 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 30, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Transite Flashing Material	Exterior

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
None	

ASSUMPTIONS:

3242

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite panels	Control panels	Risk to surveyors
Transite	Roof	Per scope of work
Electrical wiring	Control panels	Risk to surveyors

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #16a is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #18b, General Sump, a 1,880 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 7, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, all suspect material found was metal jacketed and assumed positive. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as all suspect ACM is metal jacketed and assumed positive as per WEMCO's instructions.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #19a, Tank Farm Control a 2,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 3, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Acoustic panel (2'x4')	Throughout facility
Floor tile (12"x12")	Throughout facility
Floor tile mastic	Throughout facility

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #19a is not applicable. There were no asbestos-containing material sampled or observed.

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #20a, Valve Control Building a 1296 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Nonfriable Materials	Sample Location
Transite sheet material	Interior walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Rope gasket	North wall center section
Rubber pipe insulation	East wall center section

3242

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite panels	Transformer	Risk to surveyors
Transite panels	Exterior walls & roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition except for homogeneous area 20a-05 that is assessed to be in FAIR condition.
A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #20a is 4 (where a rank of 7 represents the most hazardous condition). Homogeneous area 20a-05 requires removal, encapsulation, or repair to correct damage. All remaining ACM can be managed in place per the operation and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #20b, Filter/Chemical Building a 1,125 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe Run Insulation	Throughout Facility
Pipe Fitting Insulation	Throughout Facility

Nonfriable Materials	Sample Location
None Observed	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
HVAC Flexible Connector	Second Floor Space Heater
Pipe Run Insulation	Water treatment area
Gasketry	Lime Hopper

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None Observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per Scope of Work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #20b is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

SPECIAL NOTE:

The 12"x12" floor tile in the break room was being installed at the time of the survey. The box which contained the tile stated that the tile was asbestos free. Therefore it was not sampled.

The ceiling insulation in the breakroom is fiberglass per AHERA this is not suspect, therefore it was not sampled.

REPORT CONCLUSIONS

3242

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #20c, The Cooling Tower a 3,125 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on September 16, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring, submerged in water or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None observed	

Nonfriable Materials	Sample Location
Transite	Exterior walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
None observed	

Special Note:

The interior transite walls are in constant contact with flowing water. This contact could enhance the deterioration process.

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite sheeting	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #20c is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #20e, Pump House 1 a 100 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 12, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	East wall
Pipe fitting insulation	East wall

ASSUMPTIONS:

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in either FAIR or GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #20e is 4 (where a rank of 7 represents the most hazardous condition). Therefore, remove, enclose, encapsulate, or repair to correct damage. All remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #20g, Well House #3, a 100 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on 12 June, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility

Nonfriable Materials	Sample Location
None observed	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Pipe fitting insulation	Throughout facility

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Pipe fitting insulation	Throughout facility

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #20g is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 24a, The Railroad Scale House a 400 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on October 30, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring, under the wooden trap door, or in other inaccessible areas; caution should be exercised regarding these areas.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
None	

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #24b, Railroad Engine Building, a 1,125 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #25a, The Chlorination Building a 6,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on August 12, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
Pipe run insulation	Ground floor south and east sides
Pipe fittings insulation	Ground floor south and north sides

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
None	

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #25a is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #25C, Sewage Lift Station Building a 500 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 26a, Fire Proctection Pump House a 2,000 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	South end near wall
Pipe run insulation lagging	South end

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Pipe run insulation	Throughout facility
Pipe run insulation lagging	North & South wall

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Pipe run insulation	Steam line

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 26a is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #28a, The Security Building a 7500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 8, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout building
Pipe run insulation	Throughout building

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9") green	Room 107
Resilient floor tile (9"x9") white	Room 107

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Heat shield	Safe in room 105
Resilient floor tile	Room 106d
Resilient floor tile (12"x12")	Room 111
Flex duct	Room 107a

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Permanent Safes	Destructive Sampling
Roofing materials	Exterior	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM remaining in Building #28a is 4 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items at or above the hazard rank of 4, then manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #28b, Human Resources Building, an 8,500 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 10 and 11, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Utility room
Pipe run insulation lagging	Utility room
Pipe fitting insulation	Utility room
Duct insulation	Utility room
Pipe fitting insulation	Room #126
Pipe fitting insulation	Room #145
Pipe fitting insulation	Men's room
Pipe fitting insulation	Women's room
Duct insulation	Men's room
Pipe run lagging	Room #126
Pipe fitting insulation	Rooms 124 and 137

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	Under (12"x12") floor tile
Resilient floor tile (12"x12")	Throughout facility
Floor tile mastic	Under (9"x9") floor tile

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation lagging	Utility room
HVAC Flexible connector	Utility room
Acoustic panel (2'x4')	Throughout facility
Pipe fitting insulation and lagging	Room #126
Pipe fitting insulation	Men's room
Resilient floor tile (12"x12")	Throughout facility
Floor tile mastic (yellow)	Rooms 107, 106 and 116 North hallway

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Resilient floor tile (12"x12")	Throughout facility

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Pipe fitting insulation	Room #45	Inaccessible
Pipe fitting insulation	Room #137 & 124	Inaccessible

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #28b is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items at or above the hazard rank of 4, then manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 30a, The Chemical Warehouse, a 25,900 S.F. facility, located at the Fernald Environmental Management Project (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 3, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Water system - straight runs	Bathroom and sprinkler room
Water system - fittings	Bathroom and sprinkler room

Nonfriable Materials	Sample Location
9" x 9" Floor tile	Sprinkler room
Floor tile mastic	Sprinkler room
Transite sheet materials	Sprinkler room

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Water system - straight runs	Bathroom

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing materials	Roof	Per scope of work
Floor tile & mastic	North office	Sampled elsewhere

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition with the exception of the transite wall in the sprinkler room which was in fair condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 30a is 4 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM, after the repair of the sprinkler room transite wall, (HA30-005) can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building # 31, Engine House Garage a 8,300 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on February 22, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Steam System - Fittings	Throughout Facility
Steam System - Straight Runs	Throughout Facility
HVAC Flexible Connector	Mezzanine Air Handling Unit
Cold Water Line - Straight Run	Throughout Facility
Cold Water Line - Fittings	Throughout Facility
Hot Water Line - Straight Run	Throughout Facility
Hot Water Line - Fittings	Throughout Facility

Nonfriable Materials	Sample Location
(9" x 9") Floor Tile - Green	Southeast Corner Addition - Office Space
(12" x 12") Floor Tile - Light Brown	Southeast Corner of Building
(9" x 9") Floor Tile - Off White	Northeast Corner Office

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
(4' x4') Lay-in Ceiling Tiles	Southeast Corner of Building

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor Tile Mastic	Southeast Corner Addition - Office Space, Southeast Corner Building, Northeast Corner Office

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	To Protect Roof Integrity
Raybestos Brake Shoes	Mezzanine Storage Area	Destructive Sampling

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #31 is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #32, Scale House a 5,375 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 14 & 18, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Steam line fitting insulation	West end of facility
Steam line run insulation	West end of facility
Condensate tank insulation	West end of facility on top of rest room
Water pipe run insulation	East end of facility
Water pipe fitting insulation	East end of facility

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Steam line pipe run insulation lagging	West end of facility
HVAC Flexible connector	West end of facility

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Steam line pipe run	Insulation lagging

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 32 is 4 (where a rank of 7 represents the most hazardous condition). Therefore, after repair of steam and water pipe run and fitting insulation these and ACM can be managed in place per the operations and maintenance procedures described in IH&S-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #37, Pilot Plant Annex a 5,987 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 21, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Storage tank insulation	Molten salt tank

Nonfriable Materials	Sample Location
None observed	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Men's restroom
Pipe fitting insulation	Men's restroom
Insulated door core	Furnace

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 37 is 5 (where a rank of 7 represents the most hazardous condition). Remove, enclose, encapsulate, or repair to correct damage on homogeneous area 37-02 pipe run insulation. All repaired and remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #39a, Incinerator Building, a 2,703 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 12, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
Transite sheet material	Exterior

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
None	

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive sampling
Roofing Materials	Roof	Per scope of work
Residual Materials	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #39a is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #38, Propane Storage a 1880 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout facility
Pipe fitting insulation	Throughout facility

Nonfriable Materials	Sample Location
No suspect materials	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
No suspect materials	

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
No suspect materials	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #38 is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #45, Rust Engineering a 16,120 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 7, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe Fitting Insulation	Upper level storage
Pipe Run Insulation	Upper level storage, men's room and above office entrance

Nonfriable Materials	Sample Location
Floor tile mastic	Men's room and break room
Transite sheet material	East side center entrance

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Resilient Floor Tile	Throughout
Acoustic Panel	Room # 20
Wallboard	Throughout
Acoustic Panel (2'x4')	Offices
HVAC Flexible Connector	Upper Level
PipeRun Insulation	Throughout
Pipe Fitting Insulation	Throughout

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Resilient Floor Tile	Break room
Resilient Floor Tile	Men's rest room

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #45 is 4 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items at or above the hazard rank of 4, then manage in place the repaired and remaining asbestos-containing material per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #46, Heavy Equipment Garage a 13,338 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on February 22, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
Floor Tile	Shop Office

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Mastic	Shop Office
TSI	Laborer's shop
Acoustical panels	Break area
Lagging	Northwest corner
Cement board	By fire suppression system

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastics	Shop office

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #46 is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #53a, The Health & Safety Building a 29,040 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on April 4, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall to the following categories:

Friable Materials	Sample Location
None observed	

Nonfriable Materials	Sample Location
Tar fasteners	Room #168 above drop ceiling

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	Room #163
Pipe fitting insulation	Room #163

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Basement	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #53a is 4 (where a rank of 7 represents the most hazardous condition). Homogeneous area 53a-003 should be removed, enclosed, encapsulated, or repaired to correct damage. All remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

SPECIAL NOTES:

1) Building 53b, the In-Vivo Building, was not surveyed as per Roger Grant's instructions.

2) After this report was submitted a lengthy list of previous sampled asbestos containing material was presented to DEI. The facility was reinspected with Roger Grant on November 20, 1991 and it was determined that the only remaining ACM on this list were floor tile under a Xray table on the first floor, floor tile under fume hoods on the second floor and tar fasteners in the boiler room (sampled by DEI during initial survey). See ACM list and survey log (attached).

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #54a, UF Reduction Facility 1 a 14,183 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 18, through March 20, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility

Nonfriable Materials	Sample Location
Resilient floor tile	Offices and rest rooms
Transite sheet materials	Interior walls

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe fitting insulation	Throughout facility
Pipe run insulation	Throughout facility
Storage tank insulation	Near exit to hallway
Storage tank insulation	North west corner
Acoustic panel (2'x4')	Offices hallways & rest rooms
Thermal insulation	Furnace south side of plant
Duct insulation lagging	South side electrical room

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Floor tile mastic	Offices and rest room

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Transite Sheet Material	Lab Hood Lining	Protect Hood Integrity

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #54a is 2 (where a rank of 7 represents the most hazardous condition). Therefore ACM can be managed in place per the operations and maintenance procedures described in IN-6029, "Asbestos Operations and Maintenance Manual".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #54B, Pilot Plant Warehouse a 3,600 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 12, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #55a, The Slag Recycling Building a 7,320 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 6, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Transite sheet material	Control room
Pipe insulation lagging	Southwall
Pipe fitting insulation	Throughout facility
Pipe run insulation	South wall

Nonfriable Materials	Sample Location
None observed	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Pipe run insulation	South wall
Pipe fitting insulation	North wall

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None observed	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Transite	Roof & exterior walls	Per scope of work
Transite panel	Electrical transformers	Risk to surveyors
Residual material	Exterior gutters	Perscope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition, except for homogeneous area 55a-004 which was assessed to be in FAIR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #55a is 4 (where a rank of 7 represents the most hazardous condition). Therefore, remove, enclose, encapsulate, or repair to correct damage to all ACM with a hazard rank of 4. All remaining ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 " Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #56,CP Storage Warehouse a 8,600 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 25, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Wallboard	Warehouse
Interior Wallboard	Warehouse
Expansion material	Warehouse

ASSUMPTIONS:

Material which were not sampled but are assumed to contain asbestios include.

Suspect Materials	Material Location	Reason Excluded
Transite exterior office wall	Office	Sampled elsewhere

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Material	Roof	Per scope of work
Built up roof	Fire suppression shed	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #56 is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

3242

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #60, Quonset Hut #1 a 15,000 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

REPORT CONCLUSIONS

3242

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #61, Quonset Hut #2 a 2520 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Duct insulation	Blower unit south east corner

Nonfriable Materials	Sample Location
none	

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #61 is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

3242

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #62, Quonset Hut #3 a 2520 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Nonfriable Materials	Sample Location
Stored transite sheeting	On pallets

Friable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Firebrick	1 Open skid, 2 wrapped skids

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #62 is 1 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #63, KC-2 Warehouse a 26,505 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 2, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Resilient floor tile (off white)	Office
Resilient floor tile (brown)	Office
Roof felt	Stocked
Heat shield	Stocked
Conveyor belt	Stocked

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Electrical wiring	Junction Boxes	Risk to surveyors
Roofing Materials	Roof	Per Scope of Work

CONDITION:

All material sampled and analyzed did not have detected levels of asbestos.

RECOMMENDED RESPONSE ACTIONS:

All sampled building material tested negative for asbestos. If suspect ACM is observed the facility owner, the AEDO, and Industrial Hygiene should be contacted immediately.

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #64, Thorium Warehouse a 15,625 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #65, Plant 5 Warehouse a 10,500 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM. No suspect material was found, except for the roof which is assumed to contain asbestos. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, on the roof of the fire protection building, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken.

ASSUMPTIONS:

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Fire Protection Room	Per scope of work

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #66, Drum Reconditioning Building, a 938 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on March 25, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Throughout, including office
Pipe fitting insulation	Throughout, including office
Transite sheet material	Office
Storage tank/exchanger lagging	Tank area

Nonfriable Materials	Sample Location
None observed	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
Storage tank/exchanger insulation	Tank area
Floor tile mastic	Throughout facility

3242

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in POOR to GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building # 66 is 7 (where a rank of 7 represents the most hazardous condition). Remove and replace or repair all items above the hazard rank of 4. Of particular concern is HA-06, storage tank insulation lagging which has a hazard rank of 7. Manage in place the repaired and remaining asbestos-containing materials per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #67, Plant 1 Thorium Warehouse a 5,300 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 13, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

3242

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Materials Company of Ohio (WMCO): Building #77, Finish Product Warehouse a 15,000 S.F. facility, located at the Feed Materials Production Center (FMPC) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on June 14, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, no suspect material was found. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

BULK SAMPLE RESULTS:

No bulk samples were taken as there were no suspect asbestos containing materials.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #68, Pilot Plant Warehouse, a 5,000 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on May 9 and 16, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
None	

Nonfriable Materials	Sample Location
Resilient floor tile (9"x9")	Northwest office
Floor tile mastic	Northwest office
Interior transite walls	Northwest office
Transite walls	Exterior

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
None	

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
None	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Fire-Rated/Insulated Door Core	Various Locations	Destructive Sampling
Roofing Materials	Roof	Per scope of work
Residual Materials	Exterior Gutters	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #68 is 2 (where a rank of 7 represents the most hazardous condition). Therefore, all ACM can be managed in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building # 69, Decontamination Building a 3,722 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on February 25, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
TSI	Throughout Facility

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roof material	Roof	Per scope of work
Metal jacket TSI	Throughout Building	Per client request

Suspect materials sampled which do not contain detectable levels of asbestos fibers include:

Suspect Materials	Material Location
TSI	Throughout Facility

ASSUMPTIONS:

Materials samples which are considered to contaminated due to the proximity to asbestos-containing materials include:

Suspect Materials	Material Location
No suspect materials	

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
No suspect materials		

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in GOOD condition with the exception of pipe run insulation located near the west wall safety shower. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #69 is 4 (where a rank of 7 represents the most hazardous condition). TSI falling into hazard a ranking of 4 should be repaired, enclosed, or removed. O&M is required for all other ACM per the operations and maintenance procedures described in the IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

REPORT CONCLUSIONS

GENERAL:

At the request of the Westinghouse Environmental Management Company (WEMCO): Building #71, General In-process Storage Warehouse, a 24,214 S.F. facility, located at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio was surveyed by Diagnostic Engineering Inc. (DEI) on August 29 and 30, 1991, for asbestos-containing materials (ACM). The survey included visual observation for ACM, sampling of suspect materials, and laboratory analysis through WEMCO facilities. Effort was made to survey all accessible suspect materials. Additional suspect but unsampled materials could be located between walls, in voids, in electrical wiring or in other inaccessible areas; caution should be exercised regarding these areas. Quantities were assessed for all suspect materials by means of mechanical measuring devices and visual observation.

The ACM can be defined into the following categories:

FRIABLE - Means any asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

NONFRIABLE - Means any asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

BULK SAMPLE RESULTS:

Materials discovered to contain asbestos fibers in percentages of greater than one percent (>1%) fall into the following categories:

Friable Materials	Sample Location
Pipe run insulation	Sampling room

Nonfriable Materials	Sample Location
None	

Suspect materials sampled which do not contain detectable levels of asbestos fibers include :

Suspect Materials	Material Location
Pipe fitting insulation	Sampling room

ASSUMPTIONS:

Materials sampled which are considered to be contaminated due to the proximity to asbestos-containing material include:

Suspect Materials	Material Location
Water line, Pipe fittting insulation	Sampling room

Identified below are other materials which may contain asbestos but which were not sampled as part of the scope of this project or because of inaccessibility, or which could not be representatively sampled. Such materials should be assumed to contain asbestos until they are confirmed to be asbestos-free.

Suspect Materials	Material Location	Reason Excluded
Roofing Materials	Roof	Per scope of work

CONDITION:

All material that has been tested positive for asbestos, or is assumed to be asbestos, is assessed to be in FAIR condition. A summary of the current condition, potential for disturbance, and quantities of ACM is shown graphically in the following pages.

RECOMMENDED RESPONSE ACTIONS:

The highest assessed hazard rank for ACM in Building #71 is 4 (where a rank of 7 represents the most hazardous condition). Repair the water line pipe run insulation in the sampling room. Then manage in place per the operations and maintenance procedures described in IH&S-IH-03 "Control of Work Involving Asbestos".

WARNING

Under certain conditions, asbestos is a cancer causing material. Its condition, handling and disposal are regulated by federal, state and local agencies. All asbestos abatement work must be performed in accordance with governing agency regulations. If ACM is disturbed or appears to have become damaged, the condition should be reported immediately to the Facility Owner, the AEDO and to Industrial Hygiene.

(B) INDIVIDUAL FACILITY RESPONSE ACTION TABLES BY HOMOGNEOUS AREA

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
10a Boiler Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
10a-010	Fabric / Rope	Replacement rope gasket material on stool in maintenance cage	7	Remove and Replace
10a-033	Gasketry	Gasket	7	Remove and Replace
10a-040	Gasketry	White woven gasket	7	Remove and Replace
10a-034	HVAC Flexible Connector	No samples taken, would jeopardize boiler integrity. Flex connectors on all 4 boilers	5	Repair and O & M
10a-011	Storage Tank / Exchanger Insulation	Tank insulation	3	O & M
10a-004	Pipe Run Insulation	(6" O.D.) Vertical steam line insulation	2	O & M
10a-026	Gasketry	On boiler stoker	2	O & M
10a-041	Pipe Run Insulation	(3" O.D.) Steam line going into heaters	2	O & M
10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	1	O & M
10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	1	O & M
10a-001	Storage Tank / Exchanger Insulation	(7' x 12') Blow down tank	1	O & M
10a-002	Storage Tank / Exchanger Insulation	(7' x 12') Plant air dryer tank	1	O & M
10a-005	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	1	O & M
10a-006	Pipe Run Insulation	(6" O.D.) Horizontal condensate line	1	O & M
10a-007	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow	1	O & M
10a-012	Boiler Insulation	Boiler tank insulation	1	O & M
10a-039	Storage Tank / Exchanger Insulation	Gray, wrapped boiler insulation	1	O & M
10a-013	Boiler Insulation	West side, 4 feet off ground level	1	O & M
10a-014C	Pipe Run Insulation	(10" O.D.) Vertical zeolite water line	1	O & M
10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	1	O & M
10a-015	Pipe Fitting Insulation	(10" O.D.) Zeolite water line elbow	1	O & M
10a-016	Pipe Run Insulation	(6" O.D.) Vertical steam line	1	O & M
10a-017	Pipe Fitting Insulation	(12" O.D.) Steam line tee on heat exchanger	1	O & M
10a-018A	Pipe Run Insulation	(6" O.D.) Vertical water line	1	O & M
10a-020	Resilient Floor Tile (9" X 9") and Mastic	Resilient floor tile (9" X 9") gray with white specks	1	O & M
10a-021	Resilient Floor Tile (9" X 9")	Resilient floor tile (9" X 9") green with white and black flecks	1	O & M
10a-028	Storage Tank / Exchanger Lagging	Dust collector	1	O & M
10a-029	Boiler Insulation	Boiler plate insulation	1	O & M
10a-030	Flue Insulation	Boiler flue insulation	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
10a Boiler Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
10a-031	Storage Tank / Exchanger Insulation	Southwest corner of tank	1	O & M
10a-032	Storage Tank / Exchanger Insulation	Condensate tank insulation	1	O & M
10a-035	Smoke stack insulation	Smoke stack insulation	1	O & M
10a-019	Pipe Fitting Insulation	(4" O.D.) Water line valve	1	O & M
10a-037	Transite Sheet Material	Transite wall no samples taken assumed positive	1	O & M
10a-042	Transite Sheet Material	Interior transite	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
11 Service Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
011-030	Pipe Fitting Insulation	Cold water line valve	7	Remove and Replace
011-056	Pipe Run Insulation	(4" O.D.)	7	Remove and Replace
011-054	Pipe Fitting Insulation	(3"OD) Steam line elbow	6	Repair and O & M
011-038	Storage Tank / Exchanger Insulation	Hot water tank #1 west end is torn	5	Repair and O & M
011-050	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	5	Repair and O & M
011-027	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	4	Repair and O & M
011-001	Resilient Floor Tile (9" X 9")	Grey Floor Tile (9"x9")	1	O & M
011-002	Floor Tile Mastic	Black mastic	1	O & M
011-003	Resilient Floor Tile (9" X 9")	Green / white stripes (9"x9')	1	O & M
011-004	Floor Tile Mastic	Black mastic	1	O & M
011-009	Resilient Floor Tile (9" X 9")	Black floor tile border (9"x9")	1	O & M
011-010	Floor Tile Mastic	Black mastic, taken with sample 3227	1	O & M
011-010	Floor Tile Mastic	Black mastic, taken with sample 3231	1	O & M
011-016	Pipe Run Insulation	(10" O.D.) Horizontal Steam line	1	O & M
011-017	Pipe Fitting Insulation	(10" O.D.) Steam elbow	1	O & M
011-023	Pipe Run Insulation	(24" O.D.) Steam line	1	O & M
011-024	Pipe Fitting Insulation	(10" O.D.)Steam line Tee	1	O & M
011-026	Pipe Run Insulation	(6" O.D.) Horizontal steam line	1	O & M
011-031	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
011-033	Pipe Run Insulation	(6" O.D.) Horizontal steam line north-south metal jacketed	1	O & M
011-034	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	1	O & M
011-036	Pipe Run Insulation	(12" O.D.) Steam line, vertical between tanks 3 & 2	1	O & M
011-041	Pipe Run Insulation Lagging	Vertical metal jackets	1	O & M
011-047	Pipe Run Insulation	(12" O.D.) Steam line horizontal	1	O & M
011-048	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	1	O & M
011-051	Pipe Fitting Insulation	(6" O.D.)Steam line elbow	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
12a Main Maintenance Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
012a-004	Pipe Fitting Insulation	(4" O.D.) By pipe shop	7	Remove and Replace
012a-048	Pipe Run Insulation	(8" O.D.) Steam line by heater at catwalk	7	Remove and Replace
012a-003	Pipe Run Insulation	(4" O.D.)	5	Repair and O & M
012a-019	Pipe Run Insulation	(4" O.D.) Abandoned line	5	Repair and O & M
012a-010	Resilient Floor Tile (9" X 9")	Green tile with white specks	3	O & M
012a-001	Pipe Run Insulation	Over (10" O.D.) By west exit	3	O & M
012a-049	Pipe Fitting Insulation	(5" O.D.) Steam elbow, by ladder at catwalk	2	O & M
012a-049	Pipe Fitting Insulation	(3" O.D.) Steam elbow, at catwalk	2	O & M
012a-007	Storage Tank / Exchanger Insulation	Condensate tank	1	O & M
012a-008	Pipe Fitting Insulation	(4"O.D.) Elbow,leading to tank	1	O & M
012a-011	Resilient Floor Tile (9" X 9")	Green / with white stripes	1	O & M
012a-012	Resilient Floor Tile (9" X 9")	Light green	1	O & M
012a-014	Resilient Floor Tile (9" X 9")	Weld shop,Green/white tile	1	O & M
012a-016	Duct Insulation Lagging	Lagging of fiberglass wrapped duct	1	O & M
012a-018	Pipe Run Insulation	(4" O.D.) East wall grey lagging,cold water line	1	O & M
012a-020	Resilient Floor Tile (9" X 9")	White with black streaks	1	O & M
012a-022	Pipe Run Insulation	(4" O.D.) Hot water line	1	O & M
012a-024	Resilient Floor Tile (9" X 9")	Green tile with black & white specks	1	O & M
012a-025	Resilient Floor Tile (9" X 9")	Dark green with black and white specks	1	O & M
012a-026	Resilient Floor Tile (9" X 9")	Green with white and black specks	1	O & M
012a-028	Resilient Floor Tile (9" X 9")	Green	1	O & M
012a-030	Pipe Run Insulation	(3" O.D.) Vertical by door 125+	1	O & M
012a-029	Resilient Floor Tile (9" X 9")	Dark green	1	O & M
012a-032B	Resilient Floor Tile (9" X 9")	Black tile with white specks	1	O & M
012a-033	Transite Sheet Material	Transite, No samples taken assumed to be positive.	1	O & M
012a-034	Transite Sheet Material	Transite, exterior west side of building	1	O & M
012a-035	Pipe Run Insulation	(4" O.D.) Steam line by column k-11	1	O & M
012a-035	Pipe Run Insulation	Steam line by column L-11	1	O & M
012a-036	Pipe Fitting Insulation	(4" O.D.)Steam, elbow by heater between Col. L 11-12	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
12a Main Maintenance Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
012a-037	Pipe Run Insulation	(4" O.D.) Condensate line by Col. L-11 north side	1	O & M
012a-038	Pipe Fitting Insulation	(2" O.D.) Condensate ,elbow by Col. L-11	1	O & M
012a-039	Pipe Run Insulation	(3" O.D.)Water line by Col. L-11	1	O & M
012a-040	Pipe Fitting Insulation	(3" O.D.) Water , elbow by Col. L-11	1	O & M
012a-041	Resilient Floor Tile (9" X 9")	Green floor tile W / white streaks, in office	1	O & M
012a-043	Transite Sheet Material	Transite wall covering at stores office (corragated)	1	O & M
012a-044	Pipe Run Insulation	(4" O.D.) Condensate line by exit door	1	O & M
012a-045	Pipe Fitting Insulation	(4" O.D.) Condensate elbow by exit door	1	O & M
012a-046	Pipe Run Insulation	(4" O.D.) Steam line , by west wall	1	O & M
012a-047	Pipe Fitting Insulation	(4" O.D.) Steam elbow by west wall	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
13a Pilot Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
13a-013	Storage Tank / Exchanger Lagging	Lagging off of tank D1	7	Remove and Replace
13a-015	Pipe Run Insulation	(3" O.D.) Condensate line	7	Remove and Replace
13a-016	Pipe Fitting Insulation	(3" O.D.) Condensate fitting	7	Remove and Replace
13a-020	Gasketry	Rope gasket	7	Remove and Replace
13a-002A	Pipe Run Insulation	(6" O.D.) Steam line insulation, by column Q1	7	Remove and Replace
13a-001	Pipe Fitting Insulation	(6" O.D.) Steam line tee fitting	5	Repair and O & M
13a-009	Pipe Run Insulation	No samples were taken, lines not accessible	5	Repair and O & M
13a-010	Pipe Fitting Insulation	No samples were taken, fittings not accessible	5	Repair and O & M
13a-011	Pipe Run Insulation	No samples were taken, lines not accessible	5	Repair and O & M
13a-012	Pipe Fitting Insulation	No samples were taken, fittings not accessible	5	Repair and O & M
13a-005	Pipe Run Insulation	(4" O.D.) Cooling water supply line on cooling water tank	4	Repair and O & M
13a-008	Pipe Fitting Insulation	No samples were taken, fittings not accessible	4	Repair and O & M
13a-019	Gasketry	Door gasket	4	Repair and O & M
13a-003B	Pipe Run Insulation	(4" O.D.) Cooling water return line	4	Repair and O & M
13a-023	Transite Sheet Material	No samples taken per scope of work assumed positive	4	Repair and O & M
13a-004	Pipe Fitting Insulation	(4" O.D.) Cooling water return fitting	1	O & M
13a-006	Pipe Fitting Insulation	(4" O.D.) Cooling water supply end fitting	1	O & M
13a-014	Transite Sheet Material	Transite wall	1	O & M
13a-017	Duct Insulation	12" exhaust duct	1	O & M
13a-018	Pipe Fitting Insulation	(12" O.D.) Exhaust pipe duct fitting	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
13b Pilot Plant Maintenance

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
13b-001	Pipe Run Insulation	(6" O.D.) Steam line at exit	1	O & M
13b-002	Pipe Fitting Insulation	(4" O.D.) Steam elbow, center	1	O & M
13b-004	Floor Tile Mastic	Black	1	O & M
13b-005	Transite Sheet Material	Interior transite	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
14 Administration Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
14-001	Pipe Run Insulation	(10" O.D.) Steam line South end of mechanical room 4	1	O & M
14-001	Pipe Run Insulation	(6" O.D.) Steam line mechanical room 4	1	O & M
14-001	Pipe Run Insulation	(3" O.D.) Steam line North end mechanical room 4	1	O & M
14-002	Pipe Fitting Insulation	(10" O.D.) Steam line fittings South end of mechanical room 4	1	O & M
14-003	Storage Tank / Exchanger Insulation	Condensate tank North end mechanical room	1	O & M
14-005A	Pipe Run Insulation	(6" O.D.) Condensate line mechanical room 4	1	O & M
14-005B	Pipe Run Insulation	(2" O.D.) Condensate line storage room 3	1	O & M
14-006	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting storage room 3	1	O & M
14-007	Pipe Run Insulation	(8" O.D.) Dead fire protection line South end mechanical room 4	1	O & M
14-008	Pipe Fitting Insulation	(4" O.D.) Potable water line fittings mechanical room 4 South end	1	O & M
14-010	Pipe Run Insulation	(6" O.D.) Fire sprinkler line South end of mechanical room 4	1	O & M
14-011	Pipe Fitting Insulation	(6" O.D.) Fire sprinkler fitting storage room 3 East end	1	O & M
14-012	Resilient Floor Tile (9" X 9")	Black West hall	1	O & M
14-012	Resilient Floor Tile (9" X 9")	White West hall	1	O & M
14-013	Floor Tile Mastic	Black in room 109	1	O & M
14-017	Acoustic Tile Mastic	Brown hallway outside room 152	1	O & M
14-019	Pipe Run Insulation	(3" O.D.) Steam line West wall vault room 1	1	O & M
14-019	Pipe Run Insulation	(6" O.D.) Steam line South wall vault room 1	1	O & M
14-020	Pipe Fitting Insulation	(3" O.D.) Steam line elbow South wall vault room 1	1	O & M
14-021	Pipe Run Insulation	(2" O.D.) Condensate line chalky brown South wall room 117	1	O & M
14-024	Pipe Run Insulation	(2" O.D.) Steam line South end computer room	1	O & M
14-025	Pipe Run Insulation	(8" O.D.) Abandoned fire sprinkler line by room 129 central hall	1	O & M
14-026	Pipe Run Insulation	(3" O.D.) Central hall near room 129	1	O & M
14-027	Pipe Run Insulation	(2" O.D.) Central hall by room 129	1	O & M
14-028	Pipe Run Insulation	(4" O.D.) Central hall by room 128	1	O & M
14-029	Pipe Fitting Insulation	(8" O.D.) Abandoned fire sprinkler line fittings by room 102	1	O & M
14-030	Pipe Fitting Insulation	(2" O.D.) Fittings room 102	1	O & M
14-031	Pipe Fitting Insulation	(4" O.D.) Fittings central hall by room 111	1	O & M
14-032	Pipe Fitting Insulation	(3" O.D.) Elbow central hall by room 117	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL ANAGEMENT PROJECT (FEMP)

State:
NALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
14 Administration Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
14-033	Pipe Run Insulation	(2" O.D.) East hall by room 147	1	O & M
14-034	Pipe Run Insulation	(3" O.D.) East hall by room 147	1	O & M
14-035	Pipe Run Insulation	(4" O.D.) East hall by room 148	1	O & M
14-036	Pipe Run Insulation	(6" O.D.) Abandoned fire sprinkler line East hall by room 147	1	O & M
14-037	Pipe Fitting Insulation	(2" O.D.) Elbow East hall by room 144	1	O & M
14-038	Pipe Fitting Insulation	(3" O.D.) Elbow East hall by room 144	1	O & M
14-039	Pipe Fitting Insulation	(4" O.D.) Valve East hall by room 148	1	O & M
14-040	Pipe Fitting Insulation	(6" O.D.) Abandoned fire sprinkler line elbow East hall by computer operations	1	O & M
14-041	Pipe Fitting Insulation	(4" O.D.) Steam line elbow room 136	1	O & M
14-042	Pipe Run Insulation	(6" O.D.) Steam line West wing by heating unit	1	O & M
14-043	Pipe Fitting Insulation	(4" O.D.) Steam line West wing by heating unit	1	O & M
14-044	Resilient Floor Tile (9" X 9")	Black West wing Room 210	1	O & M
14-044	Resilient Floor Tile (9" X 9")	White West wing Room 210	1	O & M
14-048	Duct Insulation	Hall outside room 210	1	O & M
14-050	Acoustic Tile Mastic	Black central hall drafting room	1	O & M
14-053	Pipe Run Insulation	(4" O.D.) South end mechanical room 4	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
15 Laboratories

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-108	Pipe Run Insulation	Pipe insulation run, north tunnel, west side	7	Remove and Replace
15-138	Pipe Run Insulation	(6" O.D.) Condensate line straights by west wall between rooms S-7 and S-8	7	Remove and Replace
15-041	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white and dark blue streaks, in southeast corner of room	5	Repair and O & M
15-062	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, on south side of hall outside of room N-24	5	Repair and O & M
15-109	Duct Insulation	HVAC duct insulation, air handler between S-8 and S-9, middle of duct	5	Repair and O & M
15-112	Pipe Fitting Insulation	(12" O.D.) Chilled water system valve-south mechanical, central.	5	Repair and O & M
15-112	Pipe Fitting Insulation	(6" O.D.) Chilled water system. Elbow in corrosion room by HVAC.	5	Repair and O & M
15-120	Pipe Fitting Insulation Lagging	AHU unit-Condensate fittings (canvas wrapped material) south mechanical	5	Repair and O & M
15-126	Pipe Fitting Insulation	(8" O.D.) Hot water return to heat exchanger, elbow	5	Repair and O & M
15-134	Pipe Fitting Insulation	(3" O.D.) Steam system elbow - South mechanical room, west wall of northern	5	Repair and O & M
15-134	Pipe Fitting Insulation	(6" O.D.) Steam system elbow in corrosion room by HVAC	5	Repair and O & M
15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run, south mechanical room, mid-point west wall	5	Repair and O & M
15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run in corrosion room running east to west	5	Repair and O & M
15-136	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow by west wall between rooms S-8 and S-7	5	Repair and O & M
15-137	Pipe Run Insulation	(10" O.D.) Condensate line straights, elbow by overhead material door	5	Repair and O & M
15-139	Pipe Run Insulation	(10" O.D.) Steam line straight by west wall by overhead material door	5	Repair and O & M
15-021	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, tan with red, brown and orange streaks, in southeast corner of	4	Repair and O & M
15-036	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, light brown with white and brown streaks, in southeast corner of room	4	Repair and O & M
15-039	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with beige streaks, in southwest corner of room C-15	4	Repair and O & M
15-045	Duct Insulation	Duct insulation taken in center wing hall outside lab C-43	4	Repair and O & M
15-051	Pipe Fitting Insulation	(4" O.D.) Water line fitting in room N-22, west wall	4	Repair and O & M
15-052	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, on north side of room N-40A by the door	4	Repair and O & M
15-058	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, on northwest side of room N-40	4	Repair and O & M
15-082	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, in hall outside room S-18	4	Repair and O & M
15-095	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, off white with black spec, in hall outside of room W-4	4	Repair and O & M
15-101	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with green streaks, in room W-28	4	Repair and O & M
15-111	Pipe Run Insulation	Pipe insulation run by column S-15 running north to south	4	Repair and O & M
15-068	Duct Insulation	Duct on west side of in HVAC room S-1	3	O & M
15-025	HVAC Flexible Connector	Duct in hall outside room E-7	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
15 Laboratories

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-064	Pipe Fitting Insulation	(4" O.D.) Steam line fitting by east wall in HVAC room S-1	2	O & M
15-065	Pipe Run Insulation	(4" O.D.) Steam line insulation by west wall in HVAC room S-1	2	O & M
15-066	Pipe Fitting Insulation	(3" O.D.) Condensate line fitting by northwest corner of HVAC room S-1	2	O & M
15-067	Pipe Run Insulation	(3" O.D.) Condensate line insulation by northwest wall in HVAC room S-1	2	O & M
15-072	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in north wall of HVAC room S-22	2	O & M
15-073	Pipe Run Insulation	(4" O.D.) Steam line insulation by main entrance to HVAC room S-22	2	O & M
15-076	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting by north wall in HVAC room S-22	2	O & M
15-077	Pipe Run Insulation	(4" O.D.) Condensate line insulation on floor. West side of unit by main entrance to	2	O & M
15-080A	Duct Insulation	HVAC duct insulation in room S-22 by northeast corner	2	O & M
15-114	Pipe Run Insulation	(4" O.D.) Cooling water supply and return, elevated line	2	O & M
15-116	Storage Tank / Exchanger Insulation	Heat exchanger tank insulation. South mechanical room, north central wall-west	2	O & M
15-118	Duct Insulation	Fan unit - Elevated duct core sample near north wall of south mechanical room	2	O & M
15-123	Pipe Fitting Insulation	(4" O.D.) A.C. condensate pump elbow. Off A.C. condenser pump-central part of south	2	O & M
15-127	Pipe Run Insulation	(2" O.D.) Cold water system - straight run. Room R-18 (elevated line, air cell)	2	O & M
15-128	Pipe Fitting Insulation	(3" O.D.) Elbow. Cold water system - Room R-16 (elevated line, mag)	2	O & M
15-129	Pipe Run Insulation	(2" O.D.) Hot water return system straight runs. Room R-18, (elevated line, mag)	2	O & M
15-130	Pipe Fitting Insulation	(2" O.D.) Hot water return system - Elbow, room R-16, (elevated line, mag)	2	O & M
15-131	Pipe Run Insulation	(3" O.D.) Hot water supply system - straight runs. Room R-18, (elevated line, mag)	2	O & M
15-132	Pipe Fitting Insulation	(3" O.D.) Hot water supply system - Elbow, room R-16, (elevated line, mag)	2	O & M
15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run. South mechanical room, black "stinkglass"	2	O & M
15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run in corrosion room running East to West -	2	O & M
15-063	Floor Tile Mastic	Mastic, south side of hall outside of room N-24	2	O & M
15-001	Pipe Fitting Insulation	(6" O.D.) Steam line fittings in room E-3 of southeast corner	1	O & M
15-002	Pipe Run Insulation	(4" O.D.) Room E-3 northwest corner	1	O & M
15-003	Pipe Fitting Insulation	(4" O.D.) Condensate line fittings in southeast corner of room E-3	1	O & M
15-007	Resilient Floor Tile (9" X 9")	(9" X 9") Green tile with white streaks in room E-5	1	O & M
15-008	Floor Tile Mastic	Black mastic in room E-5	1	O & M
15-009	Resilient Floor Tile (9" X 9")	(9" X 9") Tile in hall by door to south courtyard biege and grey	1	O & M
15-010	Floor Tile Mastic	Black mastic by door to south courtyard	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
15 Laboratories

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-011	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with gray streaks, outside room E-21	1	O & M
15-013	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with black and gray streaks, in hall outside of room E-25	1	O & M
15-014	Floor Tile Mastic	Black mastic sampled outside of room E-25	1	O & M
15-015	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, yellow, across from room E-27	1	O & M
15-016	Floor Tile Mastic	Black mastic across from room E-27	1	O & M
15-019	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown with brown streaks, in the southeast corner of room E-25	1	O & M
15-020	Floor Tile Mastic	Mastic sampled in the southeast corner of room E-25	1	O & M
15-022	Floor Tile Mastic	Mastic in southeast corner of room E-23	1	O & M
15-026	Pipe Run Insulation	(5" O.D.) West side by center hallway entrance	1	O & M
15-027	Pipe Run Insulation	(6" O.D.) West side by center hallway entrance	1	O & M
15-028	Pipe Run Insulation	(4" O.D.) Room C-41	1	O & M
15-029	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in northeast corner of room C-41	1	O & M
15-030	Pipe Run Insulation	(4" O.D.) Room C-41	1	O & M
15-031	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in northeast corner of room C-41	1	O & M
15-033	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting in room C-22, east wall above sinks	1	O & M
15-034	Floor Tile Mastic	Mastic in hallway to south courtyard across from rooms C-25 - C-29	1	O & M
15-038	Floor Tile Mastic	Mastic in southwest corner of room C-15	1	O & M
15-040	Floor Tile Mastic	Mastic in southwest corner of room C-15	1	O & M
15-044	Floor Tile Mastic	Mastic in the southwest corner of room C-10	1	O & M
15-046	Pipe Fitting Insulation	(4" O.D.) Steam line valve in southwest corner of room N-42A	1	O & M
15-047	Pipe Run Insulation	(4" O.D.) Line in room N-26, south wall	1	O & M
15-048	Pipe Run Insulation	(4" O.D.) Southwest corner of room N-42A	1	O & M
15-049	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in southwest corner of room N-26	1	O & M
15-053	Floor Tile Mastic	Mastic on north side of room N-40A by the door	1	O & M
15-054	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown w/ white and dark brown streaks, on the E.side of rm N-42A	1	O & M
15-055	Floor Tile Mastic	Mastic, black, on east side of room N-42A by the entrance door	1	O & M
15-057	Floor Tile Mastic	Mastic on north side of room N-40	1	O & M
15-060	Floor Tile Mastic	Mastic in the center of room N-40	1	O & M
15-069	Pipe Fitting Insulation	(3" O.D.) Water line fitting in HVAC room S-21 above HVAC unit	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
15 Laboratories

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
15-071	Pipe Run Insulation	(3" O.D.) Water line insulation in HVAC room S-21 above HVAC unit	1	O & M
15-074	Floor Tile Mastic	Black mastic in northwest corner of room S-9	1	O & M
15-075	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in northwest corner of room S-9	1	O & M
15-084	Pipe Fitting Insulation	(2" O.D.) Water line fitting above drinking fountain in east hall outside of room E-7	1	O & M
15-085	Pipe Run Insulation	(2" O.D.) Water line insulation in east hall outside room E-7	1	O & M
15-086A	Pipe Run Insulation	(4" O.D.) Steam line insulation in hall across from room W-32	1	O & M
15-087	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in room W-18 by exit door	1	O & M
15-088	Pipe Run Insulation	(4" O.D.) Condensate line insulation in hall across from W-32	1	O & M
15-089	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in hall across from W-32	1	O & M
15-090	Pipe Run Insulation	(3" O.D.) Potable water line insulation across from room S-42 in hall	1	O & M
15-091	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation fitting in hall across from room W-10	1	O & M
15-097	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, in center of room W-18	1	O & M
15-098	Floor Tile Mastic	Black mastic in room W-18	1	O & M
15-102	Floor Tile Mastic	Mastic in room W-28	1	O & M
15-103	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in room W-28	1	O & M
15-104	Floor Tile Mastic	Black mastic in room W-28	1	O & M
15-124	Duct Insulation	Fan/blower duct insulation by column R-18 in corrosion room	1	O & M
15-140	Pipe Fitting Insulation	(4" O.D.) Steam and condensate fitting in west central mechanical room leading into	1	O & M
15-141	HVAC Flexible Connector	Flexible connector on HVAC's. No samples taken, material assessed and	1	O & M
15-037	Floor Tile Mastic	Southeast corner of room C-26	1	O & M
15-100	Floor Tile Mastic	Black mastic on north side of room W-18	1	O & M
15-142	Pipe Run Insulation	(4" O.D.) steam line south wall near exit	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
16a Electrical Station

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
16a-001	Roof Flashing	Transite Flashing Material	1	O & M
16a-002	Roof Flashing	Transite Flashing Material, Assumed Positive	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
1a,b Preparation Plant, Storage

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
01-005	Pipe Run Insulation	(4" O.D.) Water line	5	Repair and O & M
01-006	Pipe Fitting Insulation	(4" O.D.) Water line	5	Repair and O & M
01-020	Duct Insulation	Heater duct insulation on column 6c & 7c	5	Repair and O & M
01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	2	O & M
01-001	Pipe Run Insulation	(4" O.D.) 150# Steam Line	2	O & M
01-002	Pipe Fitting Insulation	(6" O.D.) 150# Steam line fitting	2	O & M
01-003	Pipe Run Insulation	(4" O.D.) Condensate return line	2	O & M
01-004	Pipe Fitting Insulation	(4" O.D.) Condensate return line, Tee fitting	2	O & M
01-007	Storage Tank / Exchanger Insulation	Condensate holding tank insulation	2	O & M
01-008	Pipe Fitting Insulation	(3" O.D.) Water line fitting	2	O & M
01-010	Pipe Fitting Insulation	(4" O.D.) 150# Steam line fitting	2	O & M
01-016	Pipe Fitting Insulation	(8" O.D.) 150# Pound Steam line fitting to heater	2	O & M
01-017	Pipe Run Insulation	(4" O.D.) 150# Pound Steam Line next to Column 6C	2	O & M
01-018	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting	2	O & M
01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	2	O & M
01-021	Transite Sheet Material	Transite wall between columns 2F, E3	2	O & M
01-011	Pipe Fitting Insulation	(4" O.D.) Condensate line valve B	1	O & M
01-012	Pipe Run Insulation	(4" O.D.) 150# Steam line	1	O & M
01-013	Pipe Run Insulation	(4" O.D.) Condensate return line	1	O & M
01-014	Resilient Floor Tile (12" X 12")	(12" x 12") Resilient Floor Tile White and Brown in Office 01-47	1	O & M
01-015	Resilient Floor Tile (9" X 9")	(9" x 9") Resilient Floor Tile Green, White and Blue streaks	1	O & M
01-024	Transite Sheet Material	No samples taken	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
20a Valve/Control Bldg.

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
20a-005	Pipe Run Insulation	(10" O.D.) Green line, center section	4	Repair and O & M
20a-004	Transite Sheet Material	Interior transite panels in transformer, no samples taken	2	O & M
20a-001	Pipe Run Insulation	(6" O.D.) West wall	1	O & M
20a-002	Pipe Fitting Insulation	(8" O.D.) West wall	1	O & M
20a-003	Transite Sheet Material	East wall, south section Interior	1	O & M
20a-006	Pipe Fitting Insulation	(6" O.D.) Valve - east wall, center section	1	O & M
20a-007	Pipe Run Insulation	(3" O.D.) East wall, center section	1	O & M
20a-009	Pipe Fitting Insulation	(8" O.D.) Elbow, metal jacket, north wall, center	1	O & M
20a-011	Transite Sheet Material	Exterior Transite, no sample taken, assumed positive	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
20b Filter/Chemical

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
20b-001	Pipe Run Insulation	Over (24" O.D.)Vertical Line Metal Jacketed	1	O & M
20b-005	Pipe Fitting Insulation	(6" O.D.) Leading into heater	1	O & M
20b-009	Pipe Run Insulation	(8" O.D.) Filter influent line	1	O & M
20b-010	Pipe Run Insulation	(8" O.D.) Backwash discharge	1	O & M
20b-009	Pipe Run Insulation	(10" O.D.) Filter influent line	1	O & M
20b-012	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
20b-013	Transite Sheet Material	All interior walls are transite	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
20c Cooling Tower

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	2	O & M
020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
20e Pump House 1

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
20e-001	Pipe Run Insulation	(12" O.D.) Water Line	4	Repair and O & M
20e-002	Pipe Fitting Insulation	(12" O.D.) Elbow, water line	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
20g Well House 3

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
20g-01	Pipe Run Insulation	(12" O.D.) Water line	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
24b Railroad Engine Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
24b-002	Pipe Fitting Insulation	(5" O.D.)	4	Repair and O & M
24b-001	Pipe Run Insulation	(3" O.D.) Condensate; west wall, center	1	O & M
24b-003	Pipe Run Insulation	(4" O.D.) Steam; east wall, center	1	O & M
24b-004	Pipe Fitting Insulation	(2" O.D.) Steam elbow; west wall, north end	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
25a Sewage Treatment

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
025a-01	Pipe Fitting Insulation	(3" O.D.) 90 degree fitting	2	O & M
025a-02	Pipe Run Insulation	(3" O.D.) Vertical line	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
25c Sewage Lift Station

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
25c-01	Gasketry	(10"O.D.) Gasket pipe	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
28a Security Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
28a-009	Pipe Run Insulation	(4" O.D.) Line corner of womens bath room #110	4	Repair and O & M
28a-010	Pipe Run Insulation	(4" O.D.) Line in womens bath room #110	4	Repair and O & M
28a-011	Pipe Fitting Insulation	(4" O.D.) Elbow above hot water heater in womens rest room #110	4	Repair and O & M
28a-012	Pipe Fitting Insulation	(4" O.D.) Elbow in womens rest room #110	4	Repair and O & M
28a-004	Floor Tile Mastic	Green Tile in Room 107	1	O & M
28a-005	Floor Tile Mastic	White Tile in Room 107	1	O & M
28a-007	Pipe Run Insulation	(4" O.D.) Line insulation in room 101	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
28b Human Resources Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
28b-001	Pipe Run Insulation	(3" O.D.) Horizontal steam line, north wall	5	Repair and O & M
28b-005	Pipe Fitting Insulation	(4" O.D.) Elbow, south wall by double doors steam line	5	Repair and O & M
28b-014	Pipe Fitting Insulation	(3" O.D.) Condensate elbow	5	Repair and O & M
28b-002	Pipe Run Insulation Lagging	(2" O.D.) North wall steam line	4	Repair and O & M
28b-004	Pipe Run Insulation	PIR(6" O.D.) Vertical leading to duct	1	O & M
28b-006	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, by duct	1	O & M
28b-008	Duct Insulation	Duct along south wall by double doors	1	O & M
28b-011	Pipe Fitting Insulation	(3" O.D.) Steam elbow	1	O & M
28b-015	Pipe Fitting Insulation	Fittings above ceiling; not accessible	1	O & M
28b-016	Pipe Fitting Insulation	(4" O.D.) Steam elbow, line	1	O & M
28b-018	Pipe Fitting Insulation	(3" O.D.)Condensate elbow by heater next to toilet	1	O & M
28b-019	Duct Insulation	Air duct	1	O & M
28b-021	Resilient Floor Tile (9" X 9")	(9"x9") Green tile covered by brown tile	1	O & M
28b-022	Floor Tile Mastic	Black	1	O & M
28b-023	Pipe Fitting Insulation	(3" O.D.) Steam line, elbow in lounge	1	O & M
28b-024	Pipe Run Insulation Lagging	(4" O.D.) Steam line	1	O & M
28b-025	Resilient Floor Tile (12" X 12")	(12"x12") Blue/gray	1	O & M
28b-027	Pipe Fitting Insulation	Steam elbows above drop ceiling; not accessible	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
2a (2/3) Ore Refinery Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
02a-006	Storage Tank / Exchanger Insulation	Condensate in between tank F1-2 and F1-26	7	Remove and Replace
02a-019	Pipe Run Insulation	(4" O.D.) Horizontal steam line	7	Remove and Replace
02a-020	Pipe Fitting Insulation	(4" O.D.) Steam line fitting on west side of room	7	Remove and Replace
02a-025	Pipe Run Insulation	Vertical steam line in south outer building	7	Remove and Replace
02a-025	Pipe Run Insulation	(3" O.D.) Vertical steam run, west wall	7	Remove and Replace
02a-038	Insulation	Insulation in northeast corner building, transite	7	Remove and Replace
02a-039	Transite Sheet Material	Sample taken by column B-8	7	Remove and Replace
02a-051	Pipe Run Insulation	(6" O.D.) Vertical sump water line by column D-17	7	Remove and Replace
02a-052	Pipe Fitting Insulation	(6" O.D.) Process water elbow by column D-17	7	Remove and Replace
02a-075	Transite Sheet Material	Interior transite, middle of building; no samples taken, material assessed	7	Remove and Replace
02a-003	Pipe Fitting Insulation	(4" O.D.) Steam line elbow on unit E-2948	5	Repair and O & M
02a-007	Pipe Run Insulation	(4" O.D.) Vertical condensate line by tank, metal-jacketed	5	Repair and O & M
02a-009	Storage Tank / Exchanger Insulation	Condensate tank insulation	5	Repair and O & M
02a-028	Pipe Run Insulation	(3" O.D.) Water line, metal-jacketed	5	Repair and O & M
02a-037	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by D-17	5	Repair and O & M
02a-048	Pipe Fitting Insulation	(3" O.D.) Condensate elbow by column C-17	5	Repair and O & M
02a-053	Pipe Run Insulation	(32" O.D.) Vent pipe, D1-204, by W.M.C.O. sample A0223, metal-jacketed	5	Repair and O & M
02a-055	Storage Tank / Exchanger Insulation	Top of tank D1-208	5	Repair and O & M
02a-002	Pipe Run Insulation	(4" O.D.) Horizontal steam line in between tanks D1-7 and D1-8, metal -jacketed	4	Repair and O & M
02a-050	Pipe Fitting Insulation	(6" O.D.) Process water elbow by green gauge panel	4	Repair and O & M
02a-054	Pipe Fitting Insulation	(32" O.D.) Vent pipe elbow on tank D1-206	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(10" O.D.) Steam line elbow - A-12	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-10	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - A-11	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - C-11	4	Repair and O & M
02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-11	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - A-8	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-11	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-10	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date 2/28/92 3242

Revision Date:

Building # and Name
2a (2/3) Ore Refinery Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
02a-073	Transite Sheet Material	No sample taken, material assessed	4	Repair and O & M
02a-074	Transite Sheet Material	Interior transite west side of building; no samples taken, sampled elsewhere	4	Repair and O & M
02a-031A	Pipe Fitting Insulation	(4" O.D.) Steam line valve in south corner	4	Repair and O & M
02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - C-10	4	Repair and O & M
02a-004	Pipe Run Insulation	(2" O.D.) Horizontal black process water line leading to F1-2	2	O & M
02a-008	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by rollup door	2	O & M
02a-040	Transite Sheet Material	Most transite in good repair, few patches of broken and delaminated areas	2	O & M
02a-047	Pipe Run Insulation	(3" O.D.)	2	O & M
02a-072	Transite Sheet Material	West side of plant 2a	2	O & M
02a-010	Pipe Run Insulation	(2" O.D.) Horizontal steam line by D1-4 and D1-5	1	O & M
02a-011	Pipe Fitting Insulation	(1" O.D.) Steam line elbow off tank D1-1	1	O & M
02a-012	Transite Sheet Material	Inner wall by west exit	1	O & M
02a-024	Pipe Fitting Insulation	(4" O.D.) Water line elbow over slop sink	1	O & M
02a-026	Transite Sheet Material	Transite interior wall in south outer room	1	O & M
02a-027	Pipe Fitting Insulation	Steam line fitting by west wall	1	O & M
02a-030	Pipe Run Insulation	(4" O.D.) Vertical steam line by north window, metal-jacketed	1	O & M
02a-032	Pipe Run Insulation	(18" O.D.) Horizontal tank line between C-18 and C-19, metal-jacketed	1	O & M
02a-033	Pipe Fitting Insulation	(18" O.D.) Tank feed elbow between columns C-18 and C-19, covered in	1	O & M
02a-042	Pipe Fitting Insulation	(5" O.D.) Black steam line elbow by column A-5	1	O & M
02a-045	Pipe Run Insulation	(4" O.D.) Vertical steam line between A-15 and A-16, metal-jacketed	1	O & M
02a-046	Pipe Fitting Insulation	(6" O.D.) Steam elbow between columns A-16 and A-15	1	O & M
02a-049	Pipe Run Insulation	(6" O.D.) Vertical process water line by column C-15, metal-jacketed	1	O & M
02a-057	Duct Insulation	Insulation off HVAC system	1	O & M
02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column A-11	1	O & M
02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column C-11	1	O & M
02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-A-11	1	O & M
02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-C-11	1	O & M
02a-062	Pipe Run Insulation	(10" O.D.) Steam line-straight - A-12	1	O & M
02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-10	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
2a (2/3) Ore Refinery Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - A-11	1	O & M
02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-11	1	O & M
02a-062	Pipe Run Insulation	(3" O.D.) Steam line-straight - C-11	1	O & M
02a-063	Pipe Fitting Insulation	(6" O.D.) Process water elbow - A-12	1	O & M
02a-063	Pipe Fitting Insulation	(3" O.D.) Process water elbow - C-12	1	O & M
02a-063	Pipe Fitting Insulation	(10" O.D.) Process water elbow - A-12	1	O & M
02a-064	Pipe Run Insulation	(6" O.D.) Process water-straight - A-12	1	O & M
02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - C-12	1	O & M
02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - C-9	1	O & M
02a-064	Pipe Run Insulation	(3" O.D.) Process water-straight - A-12	1	O & M
02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - A-8	1	O & M
02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - C-10	1	O & M
02a-066	Pipe Run Insulation	(6" O.D.) Straight run, not sampled	1	O & M
02a-066	Pipe Run Insulation	(4" O.D.) Condensate return-straight - A-10	1	O & M
02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	1	O & M
02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	1	O & M
02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	1	O & M
02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	1	O & M
02a-069	Pipe Run Insulation	(36" O.D.) Line - 2 overflow vessels - D-11	1	O & M
02a-070	Storage Tank / Exchanger Insulation	Second carbonate make-up tank @ D-13 (D=10, H=6), 11800 gallon tank	1	O & M
02a-076	Transite sheet material	Interior transite, east side of building; no samples taken, material assessed	1	O & M
02a-036	Pipe Run Insulation	(3" O.D.) Horizontal condensate line over tank by column C-15	1	O & M
02a-041	Pipe Run Insulation	(8" O.D.) Steam line in south side of the building near column A-6, metal-jacketed	1	O & M
02a-077	Pipe Run Insulation	(4" O.D.) metal jacketed cold water line next to tag 0219 s. wall	1	O & M
02a-078	Pipe Run Insulation	(8" O.D.) metal jacketed north of control panel	1	O & M
02a-079	Pipe Run Insulation	(5" O.D.) metal jacketed	1	O & M
02a-080	Storage Tank / Exchanger Insulation	Tank f1-211	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
2b Lime Handling Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
2b-006	Pipe Run Insulation	(8" O.D.) Line	7	Remove and Replace
2b-008	Fabric / Rope	1" Rope TSI, west end	7	Remove and Replace
2b-014	Pipe Fitting Insulation	(6" O.D.) Steam, elbow at air handler, upper level	7	Remove and Replace
2b-005	Pipe Fitting Insulation	(4" O.D.) Steam line, elbow	4	Repair and O & M
2b-015	Transite Sheet Material	Transite, no samples taken	2	O & M
2b-003	Transite Sheet Material	Transite lab top, no samples taken	1	O & M
2b-007	Pipe Fitting Insulation	(8" O.D.) Elbow	1	O & M
2b-009	Transite Sheet Material	Interior transite wall	1	O & M
2b-010	Pipe Run Insulation	(4" O.D.) Line from refrigeration F1-617	1	O & M
2b-010b	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
2b-011	Pipe Fitting Insulation	(4" O.D.)	1	O & M
2b-013	Pipe Run Insulation	(4" O.D.) Condensate return	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92 3242

Revision Date:

Building # and Name
2c-Bulk Lime Handling

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
2c-01	Pipe Run Insulation	(3" O.D.) Black lagging with white insulation	2	O & M
2c-02	Transite Sheet Material	Exterior transite	1	O & M
2c-03	Transite Sheet Material	Transite walls	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
2d Metal Dissolver

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
2d-001	Pipe Fitting Insulation	(4" O.D.) Elbow Steam line	7	Remove and Replace
2d-007	Pipe Fitting Insulation	(4" O.D.) Elbow process water	7	Remove and Replace
2d-012	Transite Sheet Material	Entire south wall between Plant 2a & 2d	7	Remove and Replace
2d-002	Pipe Run Insulation	(4" O.D.) Steam line	4	Repair and O & M
2d-010	Transite Sheet Material	South interior transite wall	4	Repair and O & M
2d-011	Transite Sheet Material	Transite, No Samples Taken	2	O & M
2d-005	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
2d-006	Pipe Run Insulation	(4" O.D.) Process water	1	O & M
2d-009	Pipe Run Insulation	(4" O.D.) D1-10	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
2e NFS Storage Pump House

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
2e-005	Pipe Fitting Insulation	(4" O.D.) Elbow, Damaged, debris on floor, condensate line	7	Remove and Replace
2e-001	Pipe Run Insulation	(4" O.D.) Metal jacketed, condensate line	1	O & M
2e-002	Pipe Run Insulation	(6" O.D.) Metal jacketed, steam line	1	O & M
2e-003	Pipe Fitting Insulation	(4" O.D.) Elbow, black in color, steam line	1	O & M
2e-004	Pipe Fitting Insulation	(3" O.D.) Elbow, black in color, condensate line	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
30a Chemical Warehouse

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
30-005	Transite Sheet Material	Transite Wall	4	Repair and O & M
30-006	Transite Sheet Material	Exterior transite, No samples taken per scope of work	2	O & M
30-002	Pipe Fitting Insulation	(3" O.D.) Elbow leading to sink	1	O & M
30-003	Resilient Floor Tile (9" X 9")	North Corner Gray	1	O & M
30-004	Floor Tile Mastic	West End	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
31 Engine House Garage

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
31-001	Pipe Fitting Insulation	(2" O.D.) steam system	2	O & M
31-002	Pipe Run Insulation	(6" O.D.) steam system	2	O & M
31-004	Resilient Floor Tile (9" X 9")	Medium green w/ white/black splotches	2	O & M
31-003	HVAC Flexible Connector	Over 15' Multiplier	1	O & M
31-006	Resilient Floor Tile (12" X 12")	Brown w/ brown & white splotches	1	O & M
31-007	Floor Tile Mastic	Black & gummy	1	O & M
31-009	Pipe Run Insulation	(2" O.D.) water line	1	O & M
31-010	Pipe Fitting Insulation	(2" O.D.) cold water	1	O & M
31-011	Pipe Fitting Insulation	(2" O.D.) hot water	1	O & M
31-012	Pipe Run Insulation	(2" O.D.) hot water	1	O & M
31-013	Resilient Floor Tile (9" X 9")	Off white w/ grey splotches	1	O & M
31-014	Floor Tile Mastic	Black & gummy	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
32 Scale House

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
32-001	Pipe Fitting Insulation	(4" O.D.) Steam line fitting	4	Repair and O & M
32-003	Pipe Run Insulation	(4" O.D.) Steam line pipe run insulation	4	Repair and O & M
32-006	Pipe Run Insulation	(4" O.D.) Water line pipe run insulation, gray	4	Repair and O & M
32-007	Pipe Fitting Insulation	(3" O.D.) Water line elbow, gray	4	Repair and O & M
32-004	Storage Tank / Exchanger Insulation	Condensate tank insulation	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
#37 Pilot Plant Annex

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
37-02	Pipe Run Insulation	(4" O.D.) Steam line	5	Repair and O & M
37-01	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting by exit door	1	O & M
37-03	Pipe Run Insulation	(3" O.D.) Condensate line	1	O & M
37-04	Pipe Fitting Insulation	(3" O.D.) 90 degree condensate fitting	1	O & M
37-06	Pipe Fitting Insulation	(3" O.D.) 90 degree potable water fitting above entrance	1	O & M
37-08	Pipe Run Insulation	(3" O.D.) Cooling water line	1	O & M
37-09	Storage Tank / Exchanger Insulation	Molten salt tank	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
38 Propane Storage

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
38-01	Pipe Run Insulation	(5" O.D.) Steam, gray in color, near exit door	1	O & M
38-02	Pipe Fitting Insulation	(4" O.D.) Steam elbow, white re-wrapped	1	O & M
38-03	Pipe Run Insulation	(3" O.D.) Steam line, green in color, west wall	1	O & M
38-04	Pipe Fitting Insulation	(3" O.D.) Steam elbow, green, south corner	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
39a Incinerator

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
39a-006	Transite Sheet Material	No samples taken	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
3a Maintenance Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
03a-06	Pipe Fitting Insulation	(2" O.D.) by sink, south west corner	5	Repair and O & M
03a-04	Pipe Fitting Insulation	(3" O.D.) south west corner by sink	2	O & M
03a-12	Transite Sheet Material	Interior transite walls	2	O & M
03a-13	Transite Sheet Material	No samples taken Per scope of work. Assumed positive	2	O & M
03a-01	Pipe Fitting Insulation	(6" O.D.) elbow - west end	1	O & M
03a-02	Pipe Run Insulation	(4" O.D.) Steam, upper level catwalk	1	O & M
03a-03	Pipe Run Insulation	(3" O.D.)south west corner by sink	1	O & M
03a-05	Pipe Run Insulation	(1" O.D.) at water heater south west	1	O & M
03a-09	Resilient Floor Tile (9" X 9")	Office white	1	O & M
03a-10	Floor Tile Mastic	Office,north east corner	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
3b Ozone Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
03b-01	Pipe Run Insulation	(2" O.D.)	5	Repair and O & M
03b-02	Pipe Fitting Insulation	(2" O.D.) elbow, north west corner	5	Repair and O & M
03b-04	Transite Sheet Material	No samples taken per scope of work. Assumed positive	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
3c Control House

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
3c-12	Transite Sheet Material	No samples taken	2	O & M
3c-01	Resilient Floor Tile (9" X 9")	Green (9"x9")	1	O & M
3c-02	Floor Tile Mastic	Brown	1	O & M
3c-04	Pipe Run Insulation	(4" O.D.) Steam line with gray lagging	1	O & M
3c-05	Pipe Run Insulation	(4" O.D.) Cold water line, north wall	1	O & M
3c-06	Pipe Fitting Insulation	(3" O.D.) Cold water elbow, north wall	1	O & M
3c-07	Pipe Run Insulation	(3" O.D.) Condensate line, south wall	1	O & M
3c-08	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, south wall	1	O & M
3c-13A	Pipe Run Insulation	(6" O.D.) Steam line; white material	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
3d NAR Towers

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
3d-08	Pipe Run Insulation	(4" O.D.) Horizontal steam line, tar wrapped	6	Repair and O & M
3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, tar wrapped	6	Repair and O & M
3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, tar wrapped	6	Repair and O & M
3d-08	Pipe Run Insulation	(3" O.D.)Vertical steam line, tar wrapped	6	Repair and O & M
3d-01	Storage Tank / Exchanger Lagging	Black tar tank wrap	5	Repair and O & M
3d-02A	Pipe Run Insulation	(4" O.D.) Steam line	2	O & M
3d-04A	Pipe Run Insulation	(4" O.D.) Sump water insulation	2	O & M
3d-05	Pipe Fitting Insulation	(4" O.D.) Sump water line insulation elbow, by WEMCO sample # 0826	1	O & M
3d-06	Pipe Fitting Insulation	(3" O.D.) Steam line insulation elbow, near WEMCO sample # 0645	1	O & M
3d-07	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation valve	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
3e Hot Raffinate Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
3e-06	Pipe Fitting Insulation	(4" O.D.) Tank elbow, at south end	7	Remove and Replace
3e-09	Pipe Run Insulation	(8" O.D.) Steam line	7	Remove and Replace
3e-16	Debris samples from floor	Northwest corner	7	Remove and Replace
3e-26	Pipe Run Insulation	(6" O.D.) Condensate line, south wall	7	Remove and Replace
3e-27	Pipe Fitting Insulation	(6" O.D.) Condensate elbow at north wall	7	Remove and Replace
3e-33	Transite Sheet Material	Delaminated section north wall by overhead door	7	Remove and Replace
3e-10	Pipe Fitting Insulation	(6" O.D.) Steam elbow, by light	6	Repair and O & M
3e-07	Pipe Run Insulation	(4" O.D.) Tank line, at south end	5	Repair and O & M
3e-22	Pipe Run Insulation	(8" O.D.) Steam line at south wall	5	Repair and O & M
3e-28	Pipe Run Insulation	(8" O.D.) Abandoned steam line at south wall	5	Repair and O & M
3e-29	Pipe Fitting Insulation	(8" O.D.) Abandoned steam elbow at south wall	5	Repair and O & M
3e-18	Pipe Run Insulation	(8" O.D.) At half-level	4	Repair and O & M
3e-19	Pipe Fitting Insulation	(3" O.D.) Elbow leading from 8" O.D. line	2	O & M
3e-23	Pipe Fitting Insulation	(8" O.D.) Steam elbow	2	O & M
3e-32	Transite Sheet Material	No samples taken, Assumed positive	2	O & M
3e-01A	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
3e-02	Pipe Fitting Insulation	(6" O.D.) Steam elbow	1	O & M
3e-03B	Pipe Run Insulation	(4" O.D.) Condensate line	1	O & M
3e-04	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	1	O & M
3e-12	Pipe Fitting Insulation	(6" O.D.) Metal jacketed steam elbow at railing	1	O & M
3e-13	Pipe Run Insulation	(6" O.D.) Steam line by window, re-wettable canvas	1	O & M
3e-14	Pipe Fitting Insulation	(6" O.D.) Steam elbow, re-wettable canvas	1	O & M
3e-20	Pipe Fitting Insulation	(4" O.D.) Abandoned elbow	1	O & M
3e-21	Pipe Run Insulation	(4" O.D.) Abandoned line, at tank F1-309	1	O & M
3e-24A	Pipe Run Insulation	(10" O.D.) Abandoned pump line	1	O & M
3e-25	Pipe Fitting Insulation	(6" O.D.) Abandoned pump elbow	1	O & M
3e-31	Transite Sheet Material	Interior transite at exit	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
3f Harshaw Tower

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
3f-01	Storage Tank / Exchanger Lagging	Sample taken bottom of tank #1	7	Remove and Replace
3f-02	Storage Tank / Exchanger Insulation	Sample taken at bottom of tank #1	5	Repair and O & M
3f-03	Pipe Fitting Insulation	(6" O.D.)	5	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name

3g Refrigeration Shop

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
3g-004	Transite Sheet Material	No Samples Taken, assumed positive, exterior	2	O & M
3g-002	Transite Sheet Material	Northwest Corner interior wall	1	O & M
3g-003	Pipe Run Insulation	(6" O.D.) North Wall	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name

45 Rust Engineering Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
45-018	Pipe Run Insulation	(3" O.D.) Abandoned straight line	4	Repair and O & M
45-007	Pipe Fitting Insulation	(6" O.D.) Steam line valve at air handling unit	2	O & M
45-008	Pipe Run Insulation	(8" O.D.) Steam Line at Air Handling Unit	2	O & M
45-004	Transite Sheet Material	Interior Transite wall	1	O & M
45-010	Pipe Fitting Insulation	(8" O.D.) Steam line elbow at air handling unit, metal jacketed	1	O & M
45-011	Pipe Run Insulation	(8" O.D.) Steam line at air handling unit, metal jacketed	1	O & M
45-013	Pipe Fitting Insulation	(4" O.D.) Gray Pipe run insulation, abandoned West wall	1	O & M
45-017	Pipe Run Insulation	(2" O.D.) Cold water line straight	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
46 Heavy Equip. Garage

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
046-003	Resilient Floor Tile (9" X 9")	Green	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
4a Green Salt Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-040	Gasketry	Cloth gasket from reactor 6	7	Remove and Replace
4a-045	Duct Insulation	(24" O.D.) flue exhaust pipe at column 4B	7	Remove and Replace
4a-096	Storage Tank / Exchanger Insulation	HF recovery tank in the HF recovery room by the southwest corner	7	Remove and Replace
4a-102	Pipe Run Insulation	Pipe Run Insulation in containment, preventing accessibity	7	Remove and Replace
4a-006	Pipe Run Insulation	(6" O.D.) vertical treated water line, metal jacketed, by NE roll-up door	5	Repair and O & M
4a-006	Pipe Run Insulation	(3" O.D.) horizontal treated water line by column 6D	5	Repair and O & M
4a-017	Storage Tank / Exchanger Insulation	Tank insulation from the inside of tank 7	5	Repair and O & M
4a-022A	Gasketry	Woven gasketry wrapped around steam line	5	Repair and O & M
4a-023	Storage Tank / Exchanger Insulation	Tank insulation from tank by column 6C	5	Repair and O & M
4a-031	Pipe Fitting Insulation	(2" O.D.) emergency water line elbow by column 6D	5	Repair and O & M
4a-083	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 8	5	Repair and O & M
4a-086	Pipe Fitting Insulation	(2" O.D.) conduit line elbow on reactor 4 by column 3A	5	Repair and O & M
4a-100	Pipe Run Insulation	(4" O.D.) steam condensate line on the west side of the electrical room	5	Repair and O & M
4a-046	Duct Insulation	(18" O.D.) exhasust lines from reactor 12-A5	4	Repair and O & M
4a-047	Duct Insulation	Exhaust insulation from reactor 12-A5	4	Repair and O & M
4a-048	Pipe Run Insulation	(10" O.D.) Steam line by column 5B	4	Repair and O & M
4a-049	Pipe Fitting Insulation	(10" O.D.) Steam line elbow at 5B	4	Repair and O & M
4a-053	Pipe Run Insulation	(6" O.D.) Unknown line around the perimeter of the 6th floor. B-1	4	Repair and O & M
4a-068	Pipe Run Insulation	(6" O.D.) lines from tank between reactors 2 and 3	4	Repair and O & M
4a-072	Pipe Run Insulation	(3" O.D.) potable water line column 5F	4	Repair and O & M
4a-075	Duct Insulation Lagging	Air handling unit lagging by column 8D	4	Repair and O & M
4a-076	Duct Insulation	Blow fan insulation by column 7C	4	Repair and O & M
4a-079	Transite Sheet Material	Transite sheet material with inner insulation air cell around freight elevator at	4	Repair and O & M
4a-081	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow going into reactor 8	4	Repair and O & M
4a-084	Pipe Run Insulation	(3" O.D.) pipe line by column 2A	4	Repair and O & M
4a-095	Pipe Fitting Insulation	(4" O.D.) HF recovery line elbow in the HF recovery room by the southwest corner	4	Repair and O & M
4a-016	Pipe Run Insulation	(4" O.D.) steam line by tank 7	3	O & M
4a-028	Pipe Run Insulation	(6" O.D.) vertical steam line by column F-1	2	O & M
4a-080	Transite Sheet Material	Interior transite sheeting material by column 1E	2	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date: 2/28/92

Revision Date:

Building # and Name
4a Green Salt Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-090	Transite Sheet Material	Material not sampled per Scope-of-Work exterior Transite	2	O & M
4a-092	Pipe Run Insulation	(8" O.D.) steam line, metal jacketed, by reactor 1	2	O & M
4a-013	Pipe Run Insulation	(6" O.D.) vertical ammonia line by west side double doors	2	O & M
4a-001	Pipe Run Insulation	(4" O.D.) horizontal steam line, metal jacketed, by south stairwell	1	O & M
4a-002	Pipe Fitting Insulation	(3" O.D.) steam line valve on column 4E	1	O & M
4a-003A	Pipe Run Insulation	(4" O.D.) horizontal condensate line by column 9C by roll-up door	1	O & M
4a-004	Storage Tank / Exchanger Insulation	(6" x 2") condensate tank by column 8A, sample missing (5906 taken to replace it)	1	O & M
4a-005	Pipe Fitting Insulation	(3" O.D.) condenate line valve by column 3B	1	O & M
4a-007	Pipe Fitting Insulation	(8" O.D.) treated water line valve by NE roll-up door	1	O & M
4a-008	Pipe Run Insulation	(3" O.D.) horizontal potable water line by column 2D	1	O & M
4a-009	Pipe Fitting Insulation	(3" O.D.) potable water line elbow by column 2D	1	O & M
4a-010	Pipe Run Insulation	(3" O.D.) vertical cold water line by column 4B	1	O & M
4a-011	Pipe Fitting Insulation	(4" O.D.) cold water line elbow on column 4F	1	O & M
4a-015	Pipe Fitting Insulation	(2" O.D.) hydrogen line valve from tank 1	1	O & M
4a-018	Pipe Fitting Insulation	(6" O.D.) steam line elbow by tank 11	1	O & M
4a-019	Resilient Floor Tile (9" X 9")	Floor tile, green with black flecks in the office at the south end	1	O & M
4a-021	Pipe Run Insulation	(6" O.D.) vertical steam line by column 6C	1	O & M
4a-022	Pipe Fitting Insulation	(6" O.D.) steam line elbow by column 6C	1	O & M
4a-024	Pipe Run Insulation	(6" O.D.) verticle steam line, metal jacketed, by emergency shower	1	O & M
4a-025	Pipe Fitting Insulation	(8" O.D.) steam line elbow by center rescubber tank	1	O & M
4a-026	Pipe Run Insulation	(3" O.D.) horizontal cold water line by south wall	1	O & M
4a-027	Pipe Fitting Insulation	(3" O.D.) cold water line elbow by south wall	1	O & M
4a-029	Pipe Fitting Insulation	(8" O.D.) steam line valve by column E-1	1	O & M
4a-030A	Pipe Run Insulation	(3" O.D.) vertical emergency water line by column 2D	1	O & M
4a-035A	Pipe Run Insulation	(6" O.D.) vertical pipe system from reactor 6	1	O & M
4a-041	Pipe Run Insulation	(3" O.D.) vertical treated water line by column 7B	1	O & M
4a-042	Pipe Run Insulation	(6" O.D.) Steam line by column 6C	1	O & M
4a-043	Pipe Fitting Insulation	(6" O.D.) Steam line elbow by column 6C	1	O & M
4a-044	Pipe Run Insulation	(2" O.D.) vertical potable water line by column 6A	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
4a Green Salt Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-050	Pipe Run Insulation	(6" O.D.) Abandoned line, metal jacketed, around the perimeter of the 6th floor.	1	O & M
4a-051	Pipe Run Insulation	(6" O.D.) Abandoned line elbow around the perimeter of the 6th floor. B-1	1	O & M
4a-052	Pipe Fitting Insulation	(6" O.D.) Unknown line elbow around the perimeter of the 6th floor. F-1	1	O & M
4a-054	Fabric / Rope	Suspect miscellaneous rope at column E2	1	O & M
4a-055	Pipe Fitting Insulation	(6" O.D.) anhydrous line valve in the recovery room by column 1E	1	O & M
4a-056	Pipe Run Insulation	(6" O.D.) anhydrous line in the recovery room by column 1E	1	O & M
4a-058	Pipe Run Insulation	(36" O.D.) insulated vertical pipe riser by column 6F	1	O & M
4a-063	Pipe Run Insulation	(16" O.D.) straight run off rear of reactor 2	1	O & M
4a-064	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 2	1	O & M
4a-065	Pipe Run Insulation	(2" O.D.) insulated conduit lines going into reactor 2	1	O & M
4a-066	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow on lines going into reactor 3	1	O & M
4a-067	Gasketry	gasketry from abandoned tank at the rear of reactor 3	1	O & M
4a-069	Pipe Fitting Insulation	(2" O.D.) line valve from tank between reactos 2 and 3	1	O & M
4a-070	Pipe Run Insulation	(6" O.D.) steam line by column 1F	1	O & M
4a-070	Pipe Run Insulation	(2" O.D.) steam line by column 3F	1	O & M
4a-071	Pipe Fitting Insulation	(3" O.D.) steam line elbow at column 1F	1	O & M
4a-073	Pipe Run Insulation	(3" O.D.) steam line by column 8E on the south wall	1	O & M
4a-074	Pipe Fitting Insulation	(10" O.D.) steam line elbow by column 8D on the south wall	1	O & M
4a-077	Pipe Run Insulation	(4" O.D.) abandoned steam line by column 4B	1	O & M
4a-078	Pipe Fitting Insulation	(2" O.D.) abandoned steam line elbow by column 4B	1	O & M
4a-082	Pipe Run Insulation	(3" O.D.) unknow pipe line going into reactor 8 by column 3C	1	O & M
4a-085	Pipe Fitting Insulation	(3" O.D.) pipe line elbow by column 2A	1	O & M
4a-087	Pipe Run Insulation	(2" O.D.) line off of the conduit line going into reactor 7	1	O & M
4a-088	Pipe Run Insulation	(8" O.D.) exhaust line coming from reactor 8 by column 2B	1	O & M
4a-089	Pipe Fitting Insulation	(8" O.D.) exhaust line elbow coming from reactor 9 by column 3B	1	O & M
4a-091	Pipe Fitting Insulation	(6" O.D.) steam line elbow by reactor 1	1	O & M
4a-094	Pipe Run Insulation	(4" O.D.) HF recovery line in the HF recovery room	1	O & M
4a-097	Pipe Run Insulation	(2" O.D.) condensate line, metal jacketed, in the HF recovery room	1	O & M
4a-101	Transite Sheet Material	Transite sheeting material inside transformer banks, Not sampled due to	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
4a Green Salt Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
4a-103	Pipe Run Insulation	(8" O.D.) anhydrous hydrogen line by column 5B	1	O & M
4a-104	Pipe Fitting Insulation	(8" O.D.) unknow line elbow by column 5B, next to containment	1	O & M
4a-105	Pipe Fitting Insulation	(8" O.D.) unknown line elbow by column 5B, next to containment	1	O & M
4a-106	Pipe Run Insulation	(4" O.D.) steam line on the west wall by column 4A	1	O & M
4a-109	Storage Tank / Exchanger Insulation	Tank 4-6	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
4c Plant 4 Maint. Bldg.

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
04c-004	Transite Sheet Material	No samples taken	2	O & M
04c-005	Transite Sheet Material	Interior transite	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
5 Metals Production Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
05-024	Gasketry	Gasket on blower flange	7	Remove and Replace
05-027	Pipe Run Insulation	(8" O.D.) 150 pound steam line, between column 17F and 18F, metal jacketed	7	Remove and Replace
05-039	Pipe Run Insulation	(4" O.D.) 150 pound steam line, near column 10A, branch off of (8" O.D.) main	7	Remove and Replace
05-067	Pipe Run Insulation Lagging	(8" O.D.) Steam line lagging	7	Remove and Replace
05-089	Pipe Fitting Insulation	(6" O.D.) Steam line fitting, next to column 4F	7	Remove and Replace
05-003	Pipe Run Insulation	(8" O.D.) Condensate line, near column 28B	5	Repair and O & M
05-004	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow, near column 26E	5	Repair and O & M
05-063	HVAC Flexible Connector	(12" X 24" X 2") Woven	5	Repair and O & M
05-076	Pipe Run Insulation	(6" O.D.) Process water line next to column 6A	5	Repair and O & M
05-078	Pipe Run Insulation	(6" O.D.) Condensate line, next to 2B	5	Repair and O & M
05-104	Pipe Run Insulation	(6" O.D.) 150 pound steam line, near column 26E	4	Repair and O & M
05-001	Pipe Run Insulation	(6" O.D.) 150 pound steam, line near column 29C	4	Repair and O & M
05-006	Pipe Fitting Insulation	(4" O.D.) Potable water line tee, near column 26E	4	Repair and O & M
05-007	Pipe Fitting Insulation	(2" O.D.)	4	Repair and O & M
05-008	Pipe Run Insulation	(2" O.D.) Steam line, office 05-27	4	Repair and O & M
05-013	Acoustic Panel (2' X 4')	(2' X 4') Ceiling panel, hole and fissure	4	Repair and O & M
05-014	Transite Sheet Material	Transite walls from column 25 to column 29	4	Repair and O & M
05-037	Pipe Run Insulation	(8" O.D.) 150 pound steam line, near column 14	4	Repair and O & M
05-038	Pipe Fitting Insulation	(8" O.D.) 150 pound steam line elbow, near column 11F	4	Repair and O & M
05-040	Pipe Run Insulation	(6" O.D.) Condensate line, near column 10A	4	Repair and O & M
05-041	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow, near column 11B	4	Repair and O & M
05-044	Pipe Fitting Insulation	(6" O.D.) Potable water line elbow, near column 11F	4	Repair and O & M
05-046	Joint Compound	(4" O.D.) Transite pipe joint generator 11 and 12, near column 8D	4	Repair and O & M
05-047	Transite Pipe	(4" O.D.) Transite exhaust flue generator 11 and 12, near column 8D	4	Repair and O & M
05-048	Transite Sheet Material	1/4" Walls and ceiling	4	Repair and O & M
05-049	Transite Sheet Material	1/4" Transite corridor wall addition from 10A to 7A	4	Repair and O & M
05-051	Transite Pipe	(4" O.D.) Transite flue at remelt, near furnace column 6D	4	Repair and O & M
05-052	Gasketry	8" Gasket	4	Repair and O & M
05-056A	Heat Shield	Gloves at column 11F	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
5 Metals Production Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
05-056B	Heat Shield	Rope gasket, 1/4" X 1" flat ribbon, at column 11F	4	Repair and O & M
05-057	Pipe Run Insulation	(4" O.D.) Water line riser, at column 12G	4	Repair and O & M
05-057A	Transite Sheet Material	Transite on wall columns 13F and 10F	4	Repair and O & M
05-060	Transite Sheet Material	Transite walls, office 05-24, at column 9G	4	Repair and O & M
05-062	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	4	Repair and O & M
05-064	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, green	4	Repair and O & M
05-064	Floor Tile Mastic	Floor tile mastic, black	4	Repair and O & M
05-065	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 5G	4	Repair and O & M
05-069	Pipe Run Insulation	(3" O.D.) Steam line riser, near column 4E	4	Repair and O & M
05-070	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 2D	4	Repair and O & M
05-022	Transite Sheet Material	1/4" Transite wallboard	2	O & M
05-036	Transite Sheet Material	Corregated Transite wall	2	O & M
05-079	Transite Sheet Material	Corregated wall panel, next to elevator at column 1E	2	O & M
05-092	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting, between column 2F and 2D	2	O & M
05-093	Pipe Run Insulation	(3" O.D.) Condensate return line, by column 2D	2	O & M
05-094	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, on heater by column 26F	2	O & M
05-095	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, by column 28F	2	O & M
05-097	HVAC Flexible Connector	26 connectors cloth like material (24" X 24"x4")	2	O & M
05-010	Transite Sheet Material	Transite wall, office 05-27	1	O & M
05-011	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, white with gray streaks, office 05-27	1	O & M
05-015	Transite Sheet Material	No sample taken, unsafe to enter elevator shaft, Assumed positive	1	O & M
05-016	Pipe Run Insulation	(8" O.D.) 150 pound steam line, metal jacketed, near column 19E	1	O & M
05-018	Pipe Run Insulation	(4" O.D.) Branch line off of (6" O.D.) condensate return line, dead line	1	O & M
05-019	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, by caged equipment storage	1	O & M
05-020B	Pipe Run Insulation	(3" O.D.) Potable water line, near column 19E, metal jacketed	1	O & M
05-021	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 19E	1	O & M
05-029	Pipe Run Insulation	(4" O.D.) Potable water line, metal jacketed, next to 16F	1	O & M
05-032	Pipe Run Insulation	(6" O.D.) Condensate line	1	O & M
05-033	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
5 Metals Production Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
05-053	Pipe Run Insulation	(4" O.D.) Steam line, at column F	1	O & M
05-054	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 10G	1	O & M
05-055	Gasketry	Sheet gasket material at column 11F	1	O & M
05-059	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, brown and white, office 05-24	1	O & M
05-059	Floor Tile Mastic	Black floor tile mastic, office 05-24	1	O & M
05-071	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, at North end of men's rest room	1	O & M
05-072A	Pipe Run Insulation	(4" O.D.) Potable water line, next to column 2E	1	O & M
05-073	Pipe Fitting Insulation	(4" O.D.) Sump water line, South of column 5F	1	O & M
05-077	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, North of column 6A	1	O & M
05-080	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, next to column 26F	1	O & M
05-081	Pipe Run Insulation	(4" O.D.) Steam line, next to column 26F	1	O & M
05-082	Pipe Run Insulation	(6" O.D.) Condensate line, near column 24E	1	O & M
05-083	Pipe Fitting Insulation	(6" O.D.) Condensate line fitting, next to column 25F	1	O & M
05-084	Transite Sheet Material	Transite wall, South of elevator wall	1	O & M
05-085	Transite Sheet Material	Interior Transite	1	O & M
05-086	Pipe Fitting Insulation	(6" O.D.) Condensate return line fitting, next to column 18F	1	O & M
05-087	Pipe Run Insulation	(6" O.D.) Condensate line, next to column 15A	1	O & M
05-088	Pipe Run Insulation	(4" O.D.) Steam line, North of column 3D	1	O & M
05-090	Transite Sheet Material	Smooth Transite wall, by elevator	1	O & M
05-096	Transite Sheet Material	Smooth Transite walls on elevator at south end of plant	1	O & M
05-098	Transite Sheet Material	South side of plant 5, No samples taken Assumed positive	1	O & M
05-099	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, Northwest side of plant	1	O & M
05-030	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 16F, metal jacketed	1	O & M
05-055	Gasketry	Sheet gasket material at column 10G	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
53a Health, Safety Building

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
53-003	Other (Describe)	Tar on insulation fasteners,sample taken south side of Rm.#168	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
54a UF Reduction Fac. 1

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
54-040	Pipe Run Insulation	(4" O.D.) Dead line in refrigeration area, could not access	5	Repair and O & M
54-028	Pipe Run Insulation	(4" O.D.) Cooling water supply line over water pumps	2	O & M
54-031	Pipe Fitting Insulation	(5" O.D.) Cooling water return line elbow above condensate tank	2	O & M
54-032A	Pipe Run Insulation	(4" O.D.) Cooling water return line above water pumps	2	O & M
54-033	Pipe Run Insulation	(4" O.D.) Potable water line left of stairs	2	O & M
54-037	Pipe Run Insulation	(4" O.D.) Condensate line by condensate tank	2	O & M
54-041	Pipe Fitting Insulation	(4" O.D.) Dead line elbow in refrigeration area, could not access	2	O & M
54-021	Pipe Fitting Insulation	Over (10" O.D.) steam line fitting on main line in steam room entrance	2	O & M
54-003	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting near garage door	1	O & M
54-013	Resilient Floor Tile (12" X 12")	White with gray splotches in office on NW corner of building 54	1	O & M
54-013	Floor Tile Mastic	Black in office on NW corner of building 54	1	O & M
54-013	Resilient Floor Tile (12" X 12")	Computer room hallway	1	O & M
54-013	Floor Tile Mastic	Computer room hallway	1	O & M
54-013	Resilient Floor Tile (12" X 12")	Hallway of ladies restroom	1	O & M
54-013	Floor Tile Mastic	Hallway of ladies restroom	1	O & M
54-022	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	1	O & M
54-024	Transite Sheet Material	Interior walls north side of plant	1	O & M
54-026	Pipe Fitting Insulation	(5" O.D.) Cooling water supply line elbow above condensate tank	1	O & M
54-027	Pipe Run Insulation	(4" O.D.) Cooling water supply line off catwalk south side	1	O & M
54-034	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow by stairs	1	O & M
54-035	Pipe Run Insulation	(4" O.D.) Instrument air line in main steam room	1	O & M
54-036	Pipe Fitting Insulation	(4" O.D.) Instrument air line elbow	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name
55a Slag Recycling Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
55a-004	Pipe Run Insulation Lagging	(4" O.D.) South Wall	4	Repair and O & M
55a-001	Transite Sheet Material	No sampleTaken, electrical transformer panel	1	O & M
55a-002	Transite Sheet Material	By control room	1	O & M
55a-009	Transite Sheet Material	Exterior No Samples Taken, assumed to be positive	1	O & M
55a-005	Pipe Fitting Insulation	(4" O.D.) Elbow , south wall at catwalk	1	O & M
55a-006	Pipe Run Insulation	(4" O.D.) at South wall	1	O & M
55a-010	Transite Sheet Material	No samples taken	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name

6 Metals Fabrication Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-023B	Pipe Fitting Insulation	(2" to 4" O.D.) Condensate tank	7	Remove and Replace
06-031	Transite Sheet Material	Transite	7	Remove and Replace
06-065B	Pipe Fitting Insulation	(2" O.D.) Elbow near column C14	7	Remove and Replace
06-122	Pipe Run Insulation	Vertical run at tocco furnace	7	Remove and Replace
06-135	Pipe Fitting Insulation	Refer to sample 2314, pump pit	7	Remove and Replace
06-137	Gasketry	(12" O.D.) Loose used gasket in pump pit	7	Remove and Replace
06-163	Pipe Fitting Insulation	(6" O.D.) Refer to 2334, steam elbow	7	Remove and Replace
06-202	Pipe Fitting Insulation	(6" O.D.) Hot water elbow, west side of plant	7	Remove and Replace
06-076	Pipe Fitting Insulation	(8" O.D.) Steam elbow by restroom	6	Repair and O & M
06-078	Pipe Run Insulation	(8" O.D.) Steam line by restroom	6	Repair and O & M
06-045A	Pipe Run Insulation	(8" O.D.)	5	Repair and O & M
06-045B	Pipe Fitting Insulation	(8" O.D.) Steam elbow	5	Repair and O & M
06-061	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, north AHU catwalk	5	Repair and O & M
06-086	Pipe Fitting Insulation	(4" O.D.) Air line elbow	5	Repair and O & M
06-179	Pipe Fitting Insulation	(4" O.D.) Steam elbow, above chalkboard	5	Repair and O & M
06-194	Pipe Fitting Insulation	(2" O.D.) Condensate, elbow by pickling,white exposed material	5	Repair and O & M
06-194	Pipe Fitting Insulation	(2" O.D.) Condensate elbow, by entrance G-90, exposed material	5	Repair and O & M
06-198	Pipe Fitting Insulation	(3" O.D.) Waste water elbow, north end of tank	5	Repair and O & M
06-198	Pipe Fitting Insulation	Waste water fitting, east side	5	Repair and O & M
06-117	Pipe Fitting Insulation	(6" O.D.) Steam elbow	5	Repair and O & M
06-019B	Pipe Fitting Insulation	(8" O.D.) Steam; some metal clad	4	Repair and O & M
06-019B	Pipe Fitting Insulation	(2" to 4" O.D.) 2 of 5 are metal clad	4	Repair and O & M
06-029A	Pipe Run Insulation	(4" O.D.) Process water	4	Repair and O & M
06-047	Pipe Fitting Insulation	(8" O.D.) Steam tee at column C29 platform	4	Repair and O & M
06-051A	Pipe Fitting Insulation	Main steam line fitting at column C18	4	Repair and O & M
06-051B	Pipe Run Insulation	(10" O.D.) At column C18	4	Repair and O & M
06-055B	Pipe Fitting Insulation	(6" O.D.) Condensate elbow near column C23	4	Repair and O & M
06-077	Transite Sheet Material	Smooth interior wall	4	Repair and O & M
06-087B	Pipe Run Insulation	(2" O.D.) Steam line, metal clad	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
6 Metals Fabrication Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-118	Pipe Run Insulation	(6" O.D.) Abandoned line leading to tocco furnace	4	Repair and O & M
06-138	Resilient Floor Tile (9" X 9")	Black	4	Repair and O & M
06-138	Resilient Floor Tile (9" X 9")	White	4	Repair and O & M
06-139	Fabric / Rope	Valve packing rope, north corner of pump pit	4	Repair and O & M
06-151	Pipe Fitting Insulation	(2" O.D.) Water line	4	Repair and O & M
06-161	Pipe Fitting Insulation	(6" O.D.) Steam elbow	4	Repair and O & M
06-165	Pipe Run Insulation	(2" O.D.) Steam line bypass	4	Repair and O & M
06-171	Pipe Run Insulation	(10" O.D.) Steam line	4	Repair and O & M
06-173	Pipe Run Insulation	(4" O.D.) Water line, at east wall	4	Repair and O & M
06-175	Pipe Fitting Insulation	(4" O.D.) Water elbow, at east wall	4	Repair and O & M
06-207	Pipe Run Insulation	(5" O.D.) steam line by column B-3 Assumed per WEMCO	4	Repair and O & M
06-099	Pipe Run Insulation	(2" O.D.) Condensate line, metal clad	3	O & M
06-014	Storage Tank / Exchanger Insulation	Condensate tank	2	O & M
06-017B	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	2	O & M
06-044	Wallboard	Smooth cement wallboard, west wall	2	O & M
06-046	Resilient Floor Tile (9" X 9")	Green in quality control office	2	O & M
06-050	Resilient Floor Tile (12" X 12")	Break room	2	O & M
06-059	Pipe Fitting Insulation	(6" O.D.) Steam elbow, south AHU catwalk	2	O & M
06-068	Pipe Run Insulation	Water line	2	O & M
06-070	Pipe Fitting Insulation	Water fitting by restroom	2	O & M
06-072	Pipe Run Insulation	Water line outside restroom	2	O & M
06-095B	Pipe Run Insulation	(4" O.D.) Steam line, metal clad	2	O & M
06-190	Transite Sheet Material	North side of plant	2	O & M
06-017B	Pipe Fitting Insulation	(4" O.D.)Condensate elbow	2	O & M
06-209	Pipe Fitting Insulation	(6" O.D.) Steam elbows assumed positive per WEMCO	2	O & M
06-007	Pipe Run Insulation	(6" O.D.)Steam line, on catwalk	1	O & M
06-016	Pipe Run Insulation Lagging	(8" O.D.) Treated water line	1	O & M
06-020	Pipe Fitting Insulation	(8" O.D.)	1	O & M
06-022	Pipe Run Insulation	(3" O.D.) Potable water	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
6 Metals Fabrication Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-024	Pipe Fitting Insulation	(3" O.D.) Potable water elbow, over restroom	1	O & M
06-026	Pipe Fitting Insulation	(3" O.D.) Water elbow, above work station	1	O & M
06-028	Pipe Run Insulation	(10" O.D.) Metal clad steam line	1	O & M
06-029B	Pipe Fitting Insulation	(4" O.D.) Process water fitting	1	O & M
06-030	Pipe Fitting Insulation	(10" O.D.) Steam elbow	1	O & M
06-032	Pipe Run Insulation	(4" O.D.)Condensate, metal clad	1	O & M
06-036	Pipe Fitting Insulation	Condensate fittings	1	O & M
06-040	Pipe Run Insulation Lagging	(8" O.D.) Metal clad steam, interior lagging	1	O & M
06-041	Transite Sheet Material	Transite wall patch	1	O & M
06-042	Pipe Fitting Insulation	(8" O.D.) Steam elbow	1	O & M
06-052	Floor Tile Mastic	Break room, Black	1	O & M
06-053	Pipe Fitting Insulation	(4" O.D.) Steam elbow	1	O & M
06-056	Pipe Fitting Insulation	(4" O.D.) Water valve	1	O & M
06-058	Resilient Floor Tile (12" X 12")	Brown, in rad tech office	1	O & M
06-060	Pipe Fitting Insulation	(4" O.D.) Steam elbow	1	O & M
06-062	Pipe Run Insulation	(4" O.D.) 150 pound steam	1	O & M
06-064	Pipe Fitting Insulation	Potable water elbow	1	O & M
06-071	Storage Tank / Exchanger Insulation	500 gallon urea tank at column D29	1	O & M
06-080	Pipe Run Insulation	Steam line above restroom	1	O & M
06-082	Pipe Fitting Insulation	Steam valve above restroom	1	O & M
06-089	Transite Sheet Material	Interior transite panels, smooth green	1	O & M
06-091	Gasketry	Vacuum line woven band, 4" x 8'	1	O & M
06-098	Pipe Fitting Insulation	Hot water elbow at column B7	1	O & M
06-106	Pipe Run Insulation Lagging	(8" O.D.) Steam line running north-south	1	O & M
06-108A	Pipe Run Insulation	(6" O.D.) Vertical hot water line, by southwest roll-up door	1	O & M
06-109	Transite Sheet Material	North office walls	1	O & M
06-110	Pipe Fitting Insulation	(6" O.D.) Hot water fitting, southwest corner	1	O & M
06-110	Pipe Fitting Insulation	(3" O.D.) Hot water elbow	1	O & M
06-112	Storage Tank / Exchanger Insulation	Hot water condensate tank, south end, west of catwalk	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
6 Metals Fabrication Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-114B	Pipe Run Insulation	(10" O.D.) Horizontal steam line, north of pickling area	1	O & M
06-114C	Pipe Run Insulation	(6" O.D.) Steam line, above enriched materials storage	1	O & M
06-116	Pipe Fitting Insulation	(6" O.D.) Steam elbow, southwest corner	1	O & M
06-123	Pipe Run Insulation	(8" O.D.) Elevated steam line	1	O & M
06-124	Pipe Run Insulation	(4" O.D.) Steam line, above office	1	O & M
06-125	Pipe Fitting Insulation	(4" O.D.) Steam tee	1	O & M
06-126	Pipe Fitting Insulation	Steam fitting above office	1	O & M
06-127	Pipe Fitting Insulation	(6" O.D.) Roof drain elbow	1	O & M
06-128A	Resilient Floor Tile (9" X 9")	Green with white streaks, in office	1	O & M
06-134	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate/steam elbow lagging	1	O & M
06-136	Transite Sheet Material	Cement board by central exit door	1	O & M
06-142	Pipe Run Insulation	(3" O.D.) Condensate line	1	O & M
06-143	Resilient Floor Tile (9" X 9")	Green	1	O & M
06-148	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate valve lagging	1	O & M
06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit	1	O & M
06-158	Pipe Run Insulation	Line to XFMR switch gear, south end near boiler	1	O & M
06-160	Storage Tank / Exchanger Insulation	XFMR tank by boiler, 4'L x 1'D	1	O & M
06-162	Pipe Run Insulation	(4" O.D.) Steam line	1	O & M
06-164	Pipe Fitting Insulation Lagging	(4" O.D.) Steam elbow lagging, above waste water tank	1	O & M
06-166	Resilient Floor Tile (12" X 12")	Brown	1	O & M
06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting, southeast corner	1	O & M
06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting	1	O & M
06-170	Resilient Floor Tile (9" X 9")	Green	1	O & M
06-177	Pipe Fitting Insulation	(10" O.D.) Refer to 2318, steam fitting, east side	1	O & M
06-178	Pipe Run Insulation	(6" O.D.) Steam line	1	O & M
06-185	Transite Sheet Material	Cement board	1	O & M
06-187	Pipe Run Insulation	Air line, north side	1	O & M
06-189	Fire Retardant Clothing	Silver pants within cabinet	1	O & M
06-191	Storage Tank / Exchanger Insulation	Nitric acid tank by pickling	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
6 Metals Fabrication Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	1	O & M
06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	1	O & M
06-193	Pipe Run Insulation	(4"O.D.) Condensate, north side by empty tank	1	O & M
06-193	Pipe Run Insulation	(2"O.D.) Condensate line, west side, cloth clad	1	O & M
06-196	Pipe Run Insulation	(4" O.D.) Vertical waste water, metal clad, on east side of plant	1	O & M
06-196	Pipe Run Insulation	(4" O.D.) Waste water line, east side of tank	1	O & M
06-004	Pipe Run Insulation	(10" O.D.) Roof drain line, north end at men's restroom	1	O & M
06-039A	Gasketry	Assembly 06-8044-Con, northwest corner	1	O & M
06-040	Pipe Run Insulation	(8" O.D.) Metal clad steam, at column C6	1	O & M
06-002	Pipe Fitting Insulation	(2" O.D.)Dead water fitting, by column C6	1	O & M
06-003	Pipe Fitting Insulation	(10" O.D.) Roof drain fitting; by north wall at men's restroom	1	O & M
06-004	Pipe Run Insulation	(10" O.D.)Roof drain line, by north wall at men's restroom	1	O & M
06-018A	Pipe Run Insulation	(8" O.D.)Treated water line over column	1	O & M
06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit, resample of 5147	1	O & M
06-206	Pipe Run Insulation	(5" O.D.) Steam line insulation grey in color assumed per WEMCO	1	O & M
06-208	Pipe Fitting Insulation	(5" O.D.) steam fittings Assumed per WEMCO	1	O & M
06-210	Pipe Fitting Insulation	(4" O.D.) Steam elbows assumed Positive per WEMCO	1	O & M
06-211	Pipe Run Insulation	(4" O.D.) east side wall next to door hard line	1	O & M
06-213	Transite Sheet Material	No samples taken	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
61 Quonset Number 2

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
61-01	Duct Insulation	taken from abandoned blower unit in SE corner	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
62 Quonset Number 3

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
62-01	Transite Sheet Material	1/2" transite sheeting, stored material	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
66 Drum Recond. Bldg.

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
66-06	Storage Tank / Exchanger Lagging	Sample taken on North end of tank	7	Remove and Replace
66-01	Pipe Run Insulation	Water line	1	O & M
66-02	Pipe Fitting Insulation	Water fittings	1	O & M
66-03	Transite Sheet Material	Interior transite	1	O & M
66-08	Pipe Run Insulation	(3" O.D.) Steam line leading to heater	1	O & M
66-09	Pipe Fitting Insulation	(3" O.D.) Steam fitting by heater	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
68 Pilot Plant Warehouse

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
68-004	Transite Sheet Material	Transite; no samples taken	2	O & M
68-001	Resilient Floor Tile (9" X 9")	Resilient Floor Tile (9" X 9") Light gray with white streaks	1	O & M
68-002	Floor Tile Mastic	Black, with 9" x 9" tile	1	O & M
68-003	Transite Sheet Material	Interior transite; no samples taken	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date: 3242

Building # and Name
69 Decontamination Bldg.

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	4	Repair and O & M
069-003	Pipe Run Insulation	(4" O.D.) metal jacket	4	Repair and O & M
069-004	Pipe Fitting Insulation	(4" O.D.) water line valve cloth jacket North wall	4	Repair and O & M
069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	1	O & M
069-002	Pipe Fitting Insulation	(8" 0.D.) steam line elbow, metal jacket N.E. heating unit	1	O & M
069-005	Pipe Run Insulation	(9" O.D.) contaminated rinse line metal jacket south side of building	1	O & M
069-001	Pipe Run Insulation Lagging	(6"O.D.) Rewrap	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
71 General In-Process Storage

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
71-002	Pipe Run Insulation	(3" O.D.)Water line by south wall	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
8a Recovery Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
8a-021	Pipe Run Insulation	(3" O.D.) Water line off of hot water heater	7	Remove and Replace
8a-043	Pipe Run Insulation	(20" O.D.) Process line	7	Remove and Replace
8a-010	Pipe Fitting Insulation	(6" O.D.) 90 degree condensate fitting by column A2	5	Repair and O & M
8a-011	Pipe Run Insulation	(6" O.D.) Condensate line above pumps	5	Repair and O & M
8a-019	Pipe Fitting Insulation	(4" O.D.) 90 degree water fitting by east end, column D8	5	Repair and O & M
8a-014	Pipe Run Insulation	(3" O.D.) Potable water line	4	Repair and O & M
8a-002	Pipe Run Insulation	(12" O.D.) Steam line, metal jacketed by column D9	2	O & M
8a-004	Pipe Run Insulation	(3" O.D.) Potable water line, metal jacketed by Column 7B	2	O & M
8a-005	Pipe Fitting Insulation	(6" O.D.) Process water line fitting by column D9	2	O & M
8a-006C	Pipe Run Insulation	(4" O.D.) Process water line by column 5a	2	O & M
8a-015	Pipe Run Insulation	(4" O.D.) Steam line by gauge door at column C1	2	O & M
8a-016	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting on catwalk by column C1	2	O & M
8a-017	Pipe Run Insulation	(3" O.D.) Condensate line on catwalk, south side of heater	2	O & M
8a-018	Pipe Fitting Insulation	(4" O.D.) 90 degree fitting on catwalk, south side of heater	2	O & M
8a-020	Pipe Run Insulation	(4" O.D.) Process water line by column D8	2	O & M
8a-032	Transite Sheet Material	Interior transite by roll-up door	2	O & M
8a-001	Pipe Fitting Insulation	(12" O.D.) Steam line fitting by column D9	1	O & M
8a-003	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting next to men's restroom	1	O & M
8a-008	Pipe Fitting Insulation	(6" O.D.) Cooling water line fitting by column 2A	1	O & M
8a-022	Transite Sheet Material	Corrugated, by walk-thru door, column A5	1	O & M
8a-023	Transite Sheet Material	East end wall on men's bathroom	1	O & M
8a-024	Resilient Floor Tile (9" X 9")	(9" x9") Green with white streaks in supervisor's office	1	O & M
8a-025	Transite Sheet Material	West side of building	1	O & M
8a-035	Pipe Fitting Insulation	(3" O.D.) Metal jacketed Not sampled per WEMCO	1	O & M
8a-036	Pipe Run Insulation	(4" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M
8a-037	Pipe Fitting Insulation	(4" O.D.) Metal jacketed not sampled per WEMCO	1	O & M
8a-038	Pipe Run Insulation	(3" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M
8a-039	Pipe Fitting Insulation	(5" O.D.) Metal jacketed not sampled per WEMCO	1	O & M
8a-040	Pipe Run Insulation	(5" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
8a Recovery Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
8a-041	Pipe Fitting Insulation	(6" O.D.) Metal jacketed not sampled per WEMCO	1	O & M
8a-042	Pipe Run Insulation	(6" O.D.) Metal jacketed; not sampled per WEMCO	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
8b Maintenance

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
8b-001	Pipe Run Insulation	(4" O.D.) Steam Line Located on North Side of Wall	1	O & M
8b-002	Pipe Fitting Insulation	(4" O.D.) Elbow North Side of Wall East Corner	1	O & M
8b-004	Floor Tile Mastic	Floor Tile Mastic Black	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
9 Special Products Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
09-003B	Pipe Run Insulation	(3" O.D.) Steam line, above roll up door	7	Remove and Replace
09-022B	Transite Sheet Material	Transite ceiling	7	Remove and Replace
09-040	Pipe Run Insulation	(4" O.D.) Hot water lines leading to heaters	7	Remove and Replace
09-059	Pipe Fitting Insulation	(6" O.D.) Nitric acid line elbow	7	Remove and Replace
09-011A	Pipe Run Insulation	(10" O.D.) High pressure steam line, recently wrapped	5	Repair and O & M
09-057	Pipe Fitting Insulation	(10" O.D.) Abandoned line valve	5	Repair and O & M
09-025	Pipe Run Insulation	(2" O.D.) Vertical hot water line leading into heater	3	O & M
09-048B	Transite Sheet Material	Smooth transite wall by north roll up door	3	O & M
09-049B	Transite Sheet Material	Corrigated interior transite wall, north end	3	O & M
09-050	Transite Sheet Material	Transite wall, no sample taken	3	O & M
09-051	Transite Sheet Material	Transite wall, West side	3	O & M
09-001A	Pipe Run Insulation	(6" O.D.) Condensate line, on heating unit	2	O & M
09-002A	Pipe Fitting Insulation	(6"O.D.)Condensate line elbow	2	O & M
09-001B	Pipe Run Insulation	(3" O.D.) Steam line, vertical	1	O & M
09-006	Pipe Run Insulation	(4" O.D.) Hot water line, to acid dip tank, metal jacketed	1	O & M
09-007	Pipe Run Insulation	(6" O.D.) Steam line on catwalk	1	O & M
09-008	Pipe Fitting Insulation	(6" O.D.) Steam line fitting	1	O & M
09-010	Pipe Fitting Insulation	(10" O.D.) High pressure steam line elbow	1	O & M
09-011B	Pipe Run Insulation	(6" O.D.) High pressure steam line, vertical run, by valve	1	O & M
09-013	Pipe Run Insulation	(8" O.D.) Condensate line leading off of tank	1	O & M
09-019	Storage Tank / Exchanger Insulation	Condensate tank	1	O & M
09-020A	Pipe Run Insulation	(2" O.D.) Vertical cold water line leading from small tank	1	O & M
09-021	Pipe Fitting Insulation	(2" O.D.) Cold water line fitting along south wall	1	O & M
09-022A	Pipe Fitting Insulation	(2" O.D.) Hot water line fitting leading to heater, recently repaired	1	O & M
09-023	(9" X 9") Floor Tile and Mastic	Mastic	1	O & M
09-034	Resilient Floor Tile (9" X 9") & Mastic	(9" X 9") Floor tile, green with black and white specks	1	O & M
09-041	Pipe Fitting Insulation	(3" O.D.) Hot water line elbow on heater	1	O & M
09-042	Transite Sheet Material	West interior transite wall by vertical pipe	1	O & M
09-061	Pipe Run Insulation	(2" O.D.) Horizontal cold water line, northeast corner	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
9 Special Products Plant

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
09-044	Pipe Fitting Insulation	(4" O.D.) Cold water line elbow above urinal	1	O & M
09-045	Pipe Run Insulation	(12" O.D.) Vertical hot water line leading to valve	1	O & M
09-046	Pipe Fitting Insulation	(8" O.D.) Hot water line elbow leading into HVAC	1	O & M
09-047	(9" x 9") Resilient Floor Tile & Mastic	Black mastic	1	O & M
09-048A	Transite Sheet Material	Transite wall painted light beige	1	O & M
09-017	Pipe Run Insulation	(6" O.D.) Chilled water line, by valve	1	O & M
09-018	Pipe Fitting Insulation	(6" O.D.) Chilled water line fitting 5 feet off the ground by south door	1	O & M
09-052	Pipe Run Insulation	(24" O.D.) Sump water line, metal jacketed	1	O & M
09-054	Pipe Run Insulation	(6" O.D.) Waste water line, metal jacketed	1	O & M
09-058	Pipe Run Insulation	(6" O.D.) Vetical abandoned line, metal jacketed	1	O & M
09-062	Gasketry	Stored material	1	O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
Plant #7

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
07-001	Pipe Run Insulation	(4" O.D.) Steam line insulation	7	Remove and Replace
07-004	Pipe Run Insulation	(4" O.D.) Steam line insulation	7	Remove and Replace
07-005	Pipe Fitting Insulation	(3" O.D.) Ammonia line fitting insulation	7	Remove and Replace
07-006	Pipe Run Insulation	(4" O.D.) Ammonia line insulation	7	Remove and Replace
07-008	Pipe Run Insulation	(4" O.D.) Condensate line insulation	7	Remove and Replace
07-020	Pipe Run Insulation	(10" O.D.) Steam line insulation	7	Remove and Replace
07-024	Pipe Run Insulation	(6" O.D.) Service water line insulation	7	Remove and Replace
07-030	Pipe Run Insulation	(4" O.D.) Steam line insulation	7	Remove and Replace
07-031	Pipe Run Insulation	(4" O.D.) Condensate line insulation	7	Remove and Replace
07-044	Resilient Floor Tile (9" X 9")	(9" X 9") Resilient floor tile, red	7	Remove and Replace
07-044	Floor Tile Mastic	Floor tile mastic, black	7	Remove and Replace
07-049	Pipe Run Insulation	(4" O.D.) Condensate line insulation	7	Remove and Replace
07-009	Pipe Run Insulation	(5" O.D.) Service water line insulation	5	Repair and O & M
07-011	Pipe Run Insulation	(10" O.D.) Steam line insulation	5	Repair and O & M
07-014	Pipe Run Insulation	(6" O.D.) Service water line insulation	5	Repair and O & M
07-016	Pipe Run Insulation	(4" O.D.) Potable water line insulation	5	Repair and O & M
07-018	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	5	Repair and O & M
07-022	Pipe Run Insulation	(4" O.D.) Condensate line insulation	5	Repair and O & M
07-023	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	5	Repair and O & M
07-035	Pipe Run Insulation	(6" O.D.) Steam line insulation	5	Repair and O & M
07-047	Pipe Run Insulation	(4" O.D.) Steam line insulation	5	Repair and O & M
07-050	Pipe Fitting Insulation	(4" O.D.) Service water line fitting insulation	5	Repair and O & M
07-007	Storage Tank / Exchanger Insulation	Light gas surge tank insulation	4	Repair and O & M
07-012	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	4	Repair and O & M
07-013	Pipe Run Insulation	(4" O.D.) Condensate line insulation	4	Repair and O & M
07-017	Pipe Run Insulation	(4" O.D.) Service water line insulation	4	Repair and O & M
07-019	Duct Insulation	Duct insulation	4	Repair and O & M
07-026	Duct Insulation	Duct insulation	4	Repair and O & M
07-032	Pipe Run Insulation	(4" O.D.) Service water line insulation	4	Repair and O & M

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS RESPONSE ACTION TABLE BY HOMOGENEOUS AREA

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
Plant #7

Homogeneous Area Number	Material	Comments	WEMCO Hazard Rank	Recommended Response Action
07-037	Pipe Run Insulation	(4" O.D.) Condensate line insulation	4	Repair and O & M
07-042	Pipe Run Insulation	(3" O.D.) Potable water line insulation	4	Repair and O & M
07-046	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	4	Repair and O & M
07-048	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	4	Repair and O & M
07-051	Pipe Run Insulation	(4" O.D.) Service water line insulation	4	Repair and O & M
07-002	Pipe Fitting Insulation	(4" O.D.) Steam line tee valve insulation	1	O & M
07-010	Pipe Fitting Insulation	(6" O.D.) LS steam line fitting insulation	1	O & M
07-015	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting insulation	1	O & M
07-021	Pipe Fitting Insulation	(6" O.D.) Steam line fitting insulation	1	O & M
07-025	Pipe Run Insulation	(4" O.D.) Potable water line insulation	1	O & M
07-027	Pipe Fitting Insulation	(6" O.D.) Service water line tee fitting insulation	1	O & M
07-028	Transite Sheet Material	Transite wall	1	O & M
07-029	Pipe Fitting Insulation	(3" O.D.) Steam line fitting insulation	1	O & M
07-033	Pipe Run Insulation	Potable water line pipe could not be sampled due to drums in the way,	1	O & M
07-034	Pipe Fitting Insulation	(4" O.D.) Steam line fitting insulation	1	O & M
07-036	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting insulation	1	O & M
07-038	Pipe Fitting Insulation	(6" O.D.) Service water line tee valve insulation	1	O & M
07-039	Pipe Run Insulation	(4" O.D.) Service water line insulation	1	O & M
07-040	Pipe Fitting Insulation	(4" O.D.) Service water line tee fitting insulation	1	O & M
07-041	Pipe Run Insulation	(4" O.D.) Service water line insulation	1	O & M
07-043	Pipe Fitting Insulation	(4" O.D.) Potable water line fitting insulation	1	O & M
07-045	Gasketry	Rope Gasket	1	O & M
07-052	Transite Sheet Material	Transite siding	1	O & M
07-53	Firebrick	Stored Firebrick, white in color inside room 7-19	1	O & M
07-56	Pipe Run Insulation	(5" O.D.) Live steam line	1	O & M
07-57	Pipe Run Insulation	(4" O.D.) Clean condensate line	1	O & M
07-58	Transite Sheet Material	Interior transite smooth sampled from broken section	1	O & M

3242

(C) FACILITY COST ESTIMATES TABLES FOR RESPONSE ACTION

3242

DEFINITIONS OF ASBESTOS CONTAINING BUILDING MATERIALS COST ESTIMATES TABLES

Sample No.	Numerical order of samples taken.
Location/Function	The area and/or equipment from which the sample is taken.
Floor/Level	Bsmt, Mezz, Penths, Roof, 1, 2, 3, LL, UL represent basement, mezzanine, penthouse, roof, first floor/level, second floor/level, third floor/level, lower level, upper level, etc., respectively.
Material/Description	Spray-applied fireproofing/ceiling materials, pipe or equipment insulation/lagging, ceiling panels/tiles, resilient floor tile/sheeting, plaster, "Transite" panels, etc.
Homogeneous Area Number	A number assigned to an area of ACBM that is uniform in color and texture.
Hazard Rank	The classification of material into seven (7) different WEMCO hazard rank categories based on the WEMCO decision tree.
Removal Priority	The priorities of Response Actions based upon the Hazard Rank.
Estimated Quantity	Amounts of types of material.
Unit	Units of measure : SF is used for square feet, SY for square yards, CI for cubic inches, LF for linear feet, and EA for individual parts
Cost	Includes demolition, abatement, decontamination, and materials replacement (if applicable); does not include relocation expense, architectural and engineering fees, nor abatement administration and monitoring. Cost escalation historically exceeds 8% per annum.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
10a Boiler Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.1505	10a-010	Fabric / Rope	Replacement rope gasket material on stool in	10	L.F.		30.00	40.00		70.00
1	5.617	10a-033	Gasketry	Gasket	100	L.F.		200.00	500.00		700.00
1	5.621	10a-040	Gasketry	White woven gasket	4	L.F.		8.00	20.00		28.00
3	7.4713	10a-034	HVAC Flexible Connector	No samples taken, would jeopardize boiler integrity. Flex	4	EA.	200.00			0.02	200.02
5	8.995	10a-011	Storage Tank / Exchanger Insulation	Tank insulation	100	S.F.				0.50	0.50
6	6.9654	10a-004	Pipe Run Insulation	(6" O.D.) Vertical steam line insulation	550	L.F.				2.75	2.75
6	8.4841	10a-026	Gasketry	On boiler stoker	12	EA.				0.06	0.06
6	7.6416	10a-041	Pipe Run Insulation	(3" O.D.) Steam line going into heaters	23	L.F.				0.12	0.12
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	L.F.				1.00	1.00
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	L.F.				1.00	1.00
7	8.3208	10a-001	Storage Tank / Exchanger Insulation	(7' x 12') Blow down tank	377	S.F.				1.89	1.89
7	8.1435	10a-002	Storage Tank / Exchanger Insulation	(7' x 12') Plant air dryer tank	377	S.F.				1.89	1.89
7	8.8257	10a-005	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	110	EA.				0.55	0.55
7	9.6692	10a-006	Pipe Run Insulation	(6" O.D.) Horizontal condensate line	180	L.F.				0.90	0.90
7	9.3326	10a-007	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow	30	EA.				0.15	0.15
7	8.991	10a-012	Boiler Insulation	Boiler tank insulation, 8 each	7200	S.F.				36.00	36.00
7	8.991	10a-039	Storage Tank / Exchanger Insulation	Gray, wrapped boiler insulation	100	S.F.				0.50	0.50
7	8.995	10a-013	Boiler Insulation	West side, 4 feet off ground level	800	S.F.				4.00	4.00
7	9.1623	10a-014C	Pipe Run Insulation	(10" O.D.) Vertical zeolite water line	500	L.F.				2.50	2.50
7	9.1623	10a-014B	Pipe Run Insulation	(20" O.D.) Horizontal zeolite water line	200	L.F.				1.00	1.00
7	8.996	10a-015	Pipe Fitting Insulation	(10" O.D.) Zeolite water line elbow	57	EA.				0.29	0.29
7	8.996	10a-016	Pipe Run Insulation	(6" O.D.) Vertical steam line	4000	L.F.				20.00	20.00
7	6.6328	10a-017	Pipe Fitting Insulation	(12" O.D.) Steam line tee on heat exchanger	370	EA.				1.85	1.85
7	6.6278	10a-018A	Pipe Run Insulation	(6" O.D.) Vertical water line	1400	L.F.				7.00	7.00
7	9.6672	10a-020	Resilient Floor Tile (9" X 9") & Mastic	Resilient floor tile (9" X 9") gray with white specks	300	S.F.				1.50	1.50
7	9.8355	10a-021	Resilient Floor Tile (9" X 9")	Resilient floor tile (9" X 9") green with white and black	150	S.F.				0.75	0.75
7	8.8237	10a-028	Storage Tank / Exchanger Lagging	Dust collector, 8 each	1200	S.F.				6.00	6.00
7	7.1387	10a-029	Boiler Insulation	Boiler plate insulation	270	S.F.				1.35	1.35
7	7.4723	10a-030	Flue Insulation	Boiler flue insulation	4	L.F.				0.02	0.02

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

3242

Building # and Name
10a Boiler Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.8267	10a-031	Storage Tank / Exchanger Insulation	Southwest corner of tank	30	S.F.				0.15	0.15
7	8.6574	10a-032	Storage Tank / Exchanger Insulation	Condensate tank insulation	135	S.F.				0.68	0.68
7	7.301	10a-035	SmokeStack Insulation	Smoke stack insulation	2400	S.F.				12.00	12.00
7	6.8001	10a-019	Pipe Fitting Insulation	(4" O.D.) Water line valve	270	EA.				1.35	1.35
7	6.9644	10a-037	Transite Sheet Material	Transite wall no samples taken assumed positive	52,583	S.F.				262.92	262.92
7	7.4723	10a-042	Transite Sheet Material	Interior transite	2010	S.F.				10.05	10.05
TOTALS:					76256		200.00	238.00	560.00	380.71	1,378.71

Total Removal Cost **$630,592.00**

(a) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name
11 Service Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.6378	011-030	Pipe Fitting Insulation	Cold water line valve	1	EA.		10.00	3.00		13.00
1	9.3266	011-056	Pipe Run Insulation	(4" O.D.)	10	LF.		220.00	130.00		350.00
2	6.2952	011-054	Pipe Fitting Insulation	(3"OD) Steam line elbow	3	EA.	4.50			0.02	4.52
3	6.4625	011-038	Storage Tank / Exchanger Insulation	Hot water tank #1 west end is torn	85	S.F.	127.50			0.43	127.93
3	5.9596	011-050	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	44	EA.	66.00			0.22	66.22
4	9.1603	011-027	Pipe Fitting Insulation	(6" O.D.) Steam line elbow	17	EA.	25.50			0.09	25.59
7	8.3148	011-001	Resilient Floor Tile (9" X 9")	Grey Floor Tile (9"x9")	11000	S.F.				55.00	55.00
7	8.1465	011-002	Floor Tile Mastic	Black mastic	11000	S.F.				55.00	55.00
7	7.8069	011-003	Resilient Floor Tile (9" X 9")	Green / white stripes (9"x9')	25000	S.F.				125.00	125.00
7	8.8207	011-004	Floor Tile Mastic	Black mastic	25,000	S.F.				125.00	125.00
7	8.6564	011-009	Resilient Floor Tile (9" X 9")	Black floor tile border (9"x9")	20	S.F.				0.10	0.10
7	10.0058	011-010	Floor Tile Mastic	Black mastic, taken with sample 3227	20	S.F.				0.10	0.10
7	10.0058	011-010	Floor Tile Mastic	Black mastic, taken with sample 3231	1400	S.F.				7.00	7.00
7	9.3306	011-016	Pipe Run Insulation	(10" O.D.) Horizontal Steam line	60	LF.				0.30	0.30
7	9.1623	011-017	Pipe Fitting Insulation	(10" O.D.) Steam elbow	12	EA.				0.06	0.06
7	8.4831	011-023	Pipe Run Insulation	(24" O.D.) Steam line	75	LF.				0.38	0.38
7	9.3276	011-024	Pipe Fitting Insulation	(10" O.D.)Steam line Tee	18	EA.				0.09	0.09
7	9.1603	011-026	Pipe Run Insulation	(6" O.D.) Horizontal steam line	70	LF.				0.35	0.35
7	9.3286	011-031	Pipe Run Insulation	(6" O.D.) Steam line	500	LF.				2.50	2.50
7	7.302	011-033	Pipe Run Insulation	(6" O.D.) Horizontal steam line north-south metal jacketed	450	LF.				2.25	2.25
7	7.9772	011-034	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	18	EA.				0.09	0.09
7	9.3316	011-036	Pipe Run Insulation	(12" O.D.) Steam line, vertical between tanks 3 & 2	150	LF.				0.75	0.75
7	8.8257	011-041	Pipe Run Insulation Lagging	Vertical metal jackets	20	LF.				0.10	0.10
7	8.6574	011-047	Pipe Run Insulation	(12" O.D.) Steam line horizontal	610	LF.				3.05	3.05
7	7.8099	011-048	Pipe Fitting Insulation	(12" O.D.) Steam line elbow	51	EA.				0.26	0.26
7	9.3286	011-051	Pipe Fitting Insulation	(6" O.D.)Steam line elbow	2	EA.				0.01	0.01
TOTALS:					75636		223.50	230.00	133.00	378.13	964.63

Total Removal Cost $275,335.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
12a Main Maintenance Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.6268	012a-004	Pipe Fitting Insulation	(4" O.D.) By pipe shop	5	EA.		135.00	145.00		280.00
1	7.4763	012a-048	Pipe Run Insulation	(8" O.D.) Steam line by heater at catwalk	80	LF.		2000.00	1520.00		3520.00
3	8.4861	012a-003	Pipe Run Insulation	(4" O.D.)	137	LF.	205.50			0.69	206.19
3	7.4753	012a-019	Pipe Run Insulation	(4" O.D.) Abandoned line	50	LF.	75.00			0.25	75.25
5	8.8217	012a-010	Resilient Floor Tile (9" X 9")	Green tile with white specks	90	S.F.				0.45	0.45
5	6.9624	012a-001	Pipe Run Insulation	Over (10" O.D.) By west exit	670	LF.				3.35	3.35
6	9.5009	012a-049	Pipe Fitting Insulation	(5" O.D.) Steam elbow, by ladder at catwalk	20	EA.				0.10	0.10
6	9.5009	012a-049	Pipe Fitting Insulation	(3" O.D.) Steam elbow, at catwalk	20	EA.				0.10	0.10
7	9.1633	012a-007	Storage Tank / Exchanger Insulation	Condensate tank	35	S.F.				0.18	0.18
7	9.1613	012a-008	Pipe Fitting Insulation	(4"O.D.) Elbow,leading to tank	1	EA.				0.01	0.01
7	8.6554	012a-011	Resilient Floor Tile (9" X 9")	Green / with white stripes	325	S.F.				1.63	1.63
7	9.6682	012a-012	Resilient Floor Tile (9" X 9")	Light green	32	S.F.				0.16	0.16
7	9.6672	012a-014	Resilient Floor Tile (9" X 9")	Weld shop,Green/white tile	160	S.F.				0.80	0.80
7	8.3148	012a-016	Duct Insulation Lagging	Lagging of fiberglass wrapped duct	150	S.F.				0.75	0.75
7	9.5009	012a-018	Pipe Run Insulation	(4" O.D.) East wall grey lagging,cold water line	150	LF.				0.75	0.75
7	8.991	012a-020	Resilient Floor Tile (9" X 9")	White with black streaks	126	S.F.				0.63	0.63
7	7.9802	012a-022	Pipe Run Insulation	(4" O.D.) Hot water line	150	LF.				0.75	0.75
7	8.6534	012a-024	Resilient Floor Tile (9" X 9")	Green tile with black & white specks	800	S.F.				4.00	4.00
7	8.4851	012a-025	Resilient Floor Tile (9" X 9")	Dark green with black and white specks	200	S.F.				1.00	1.00
7	8.3128	012a-026	Resilient Floor Tile (9" X 9")	Green with white and black specks	3700	S.F.				18.50	18.50
7	8.8207	012a-028	Resilient Floor Tile (9" X 9")	Green	600	S.F.				3.00	3.00
7	6.6298	012a-030	Pipe Run Insulation	(3" O.D.) Vertical by door 125+	20	LF.				0.10	0.10
7	9.4979	012a-029	Resilient Floor Tile (9" X 9")	Dark green	25	S.F.				0.13	0.13
7	8.3168	012a-032B	Resilient Floor Tile (9" X 9")	Black tile with white specks	96	S.F.				0.48	0.48
7	4.9398	012a-033	Transite Sheet Material	Transite, No samples taken assumed to be positive.	67,000	S.F.				335.00	335.00
7	7.1337	012a-034	Transite Sheet Material	Transite, exterior west side of building	12,000	S.F.				60.00	60.00
7	10.3414	012a-035	Pipe Run Insulation	(4" O.D.) Steam line by column k-11	100	LF.				0.50	0.50
7	10.3414	012a-035	Pipe Run Insulation	Steam line by column L-11	100	LF.				0.50	0.50
7	9.6682	012a-036	Pipe Fitting Insulation	(4" O.D.)Steam, elbow by heater between Col. L 11-12	18	EA.				0.09	0.09

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name
12a Main Maintenance Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	10.3414	012a-037	Pipe Run Insulation	(4" O.D.) Condensate line by Col. L-11 north side	32	L.F.				0.16	0.16
7	10.0048	012a-038	Pipe Fitting Insulation	(2" O.D.) Condensate ,elbow by Col. L-11	20	E.A.				0.10	0.10
7	10.3414	012a-039	Pipe Run Insulation	(3" O.D.)Water line by Col. L-1	67	L.F.				0.34	0.34
7	10.3414	012a-040	Pipe Fitting Insulation	(3" O.D.) Water , elbow by Col. L-11	6	E.A.				0.03	0.03
7	10.1731	012a-041	Resilient Floor Tile (9" X 9")	Green floor tile W / white streaks, in office	280	S.F.				1.40	1.40
7	8.992	012a-043	Transite Sheet Material	Transite wall covering at stores office (corragated)	940	S.F.				4.70	4.70
7	10.1741	012a-044	Pipe Run Insulation	(4" O.D.) Condensate line by exit door	13	L.F.				0.07	0.07
7	10.1741	012a-045	Pipe Fitting Insulation	(4" O.D.) Condensate elbow by exit door	2	EA.				0.01	0.01
7	10.1741	012a-046	Pipe Run Insulation	(4" O.D.) Steam line , by west wall	60	L.F.				0.30	0.30
7	10.1741	012a-047	Pipe Fitting Insulation	(4" O.D.) Steam elbow by west wall	10	EA.				0.05	0.05
TOTALS:					88290		280.50	2,135.00	1,665.00	441.03	4,521.53

Total Removal Cost $391,888.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
13a Pilot Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.4881	13a-013	Storage Tank / Exchanger Lagging	Lagging off of tank D1	125	S.F.		2500.00	1250.00		3750.00
1	7.1377	13a-015	Pipe Run Insulation	(3" O.D.) Condensate line	12	LF.		264.00	156.00		420.00
1	7.1377	13a-016	Pipe Fitting Insulation	(3" O.D.) Condensate fitting	2	EA.		54.00	58.00		112.00
1	8.6564	13a-020	Gasketry	Rope gasket	16	LF.		32.00	80.00		112.00
1	8.1495	13a-002A	Pipe Run Insulation	(6" O.D.) Steam line insulation, by column Q1	1595	LF.		35090.00	20735.00		55825.00
3	7.9802	13a-001	Pipe Fitting Insulation	(6" O.D.) Steam line tee fitting	100	EA.	150.00			0.50	150.50
3	9.3306	13a-009	Pipe Run Insulation	No samples were taken, lines not accessible	380	LF.	570.00			1.90	571.90
3	10.0048	13a-010	Pipe Fitting Insulation	No samples were taken, fittings not accessible	11	EA.	16.50			0.06	16.56
3	9.1613	13a-011	Pipe Run Insulation	No samples were taken, lines not accessible	385	LF.	577.50			1.93	579.43
3	10.0048	13a-012	Pipe Fitting Insulation	No samples were taken, fittings not accessible	18	EA.	27.00			0.09	27.09
4	9.6682	13a-005	Pipe Run Insulation	(4" O.D.) Cooling water supply line on cooling water tank	585	LF.	877.50			2.93	880.43
4	10.0048	13a-008	Pipe Fitting Insulation	No samples were taken, fittings not accessible	8	EA.	12.00			0.04	12.04
4	8.994	13a-019	Gasketry	Door gasket	16	LF.	24.00			0.08	24.08
4	9.3306	13a-003B	Pipe Run Insulation	(4" O.D.) Cooling water return line	6	LF.	9.00			0.03	9.03
4	7.6396	13a-023	Transite Sheet Material	No samples taken per scope of work assumed positive	18,000	S.F.	12600.00			90.00	12690.00
7	9.8375	13a-004	Pipe Fitting Insulation	(4" O.D.) Cooling water return fitting	21	EA.				0.11	0.11
7	9.6682	13a-006	Pipe Fitting Insulation	(4" O.D.) Cooling water supply end fitting	15	EA.				0.08	0.08
7	8.6554	13a-014	Transite Sheet Material	Transite wall	7050	S.F.				35.25	35.25
7	9.3316	13a-017	Duct Insulation	12" exhaust duct	30	S.F.				0.15	0.15
7	10.1741	13a-018	Pipe Fitting Insulation	(12" O.D.) Exhaust pipe duct fitting	5	EA.				0.03	0.03
TOTALS:					28380		14,863.50	37,940.00	22,279.00	133.15	75,215.65

Total Removal Cost $172,920.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
13b Pilot Plant Maintenance

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.992	13b-001	Pipe Run Insulation	(6" O.D.) Steam line at exit	140	LF.				0.70	0.70
7	8.3188	13b-002	Pipe Fitting Insulation	(4" O.D.) Steam elbow, center	17	EA.				0.09	0.09
7	10.0028	13b-004	Floor Tile Mastic	Black	210	S.F.				1.05	1.05
7	8.6554	13b-005	Transite Sheet Material	Interior transite	600	S.F.				3.00	3.00
TOTALS:					967					4.84	4.84

Total Removal Cost $6,359.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
14 Administration Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1643	14-001	Pipe Run Insulation	(10" O.D.) Steam line South end of mechanical room 4	70	LF.				0.35	0.35
7	9.1643	14-001	Pipe Run Insulation	(6" O.D.) Steam line mechanical room 4	20	LF.				0.10	0.10
7	9.1643	14-001	Pipe Run Insulation	(3" O.D.) Steam line North end mechanical room 4	40	LF.				0.20	0.20
7	9.5009	14-002	Pipe Fitting Insulation	(10" O.D.) Steam line fittings South end of mechanical room	25	EA.				0.13	0.13
7	9.1643	14-003	Storage Tank / Exchanger Insulation	Condensate tank North end mechanical room	13	S.F.				0.07	0.07
7	9.3326	14-005A	Pipe Run Insulation	(6" O.D.) Condensate line mechanical room 4	20	LF.				0.10	0.10
7	9.3326	14-005B	Pipe Run Insulation	(2" O.D.) Condensate line storage room 3	20	LF.				0.10	0.10
7	9.5009	14-006	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting storage room 3	30	EA.				0.15	0.15
7	9.3326	14-007	Pipe Run Insulation	(8" O.D.) Dead fire protection line South end mechanical	2	LF.				0.01	0.01
7	9.8375	14-008	Pipe Fitting Insulation	(4" O.D.) Potable water line fittings mechanical room 4	6	EA.				0.03	0.03
7	9.5009	14-010	Pipe Run Insulation	(6" O.D.) Fire sprinkler line South end of mechanical room	25	LF.				0.13	0.13
7	9.8375	14-011	Pipe Fitting Insulation	(6" O.D.) Fire sprinkler fitting storage room 3 East end	1	EA.				0.01	0.01
7	8.4831	14-012	Resilient Floor Tile (9" X 9")	Black West hall	9098	S.F.				45.49	45.49
7	8.4831	14-012	Resilient Floor Tile (9" X 9")	White West hall	9098	S.F.				45.49	45.49
7	7.9762	14-013	Floor Tile Mastic	Black in room 109	18195	S.F.				90.98	90.98
7	8.8207	14-017	Acoustic Tile Mastic	Brown hallway outside room 152	15800	S.F.				79.00	79.00
7	9.8375	14-019	Pipe Run Insulation	(3" O.D.) Steam line West wall vault room 1	20	LF.				0.10	0.10
7	9.8375	14-019	Pipe Run Insulation	(6" O.D.) Steam line South wal vault room 1	75	LF.				0.38	0.38
7	9.8375	14-020	Pipe Fitting Insulation	(3" O.D.) Steam line elbow South wall vault room 1	30	EA.				0.15	0.15
7	9.6682	14-021	Pipe Run Insulation	(2" O.D.) Condensate line chalky brown South wall room	200	LF.				1.00	1.00
7	9.3316	14-024	Pipe Run Insulation	(2" O.D.) Steam line South end computer room	670	LF.				3.35	3.35
7	9.4989	14-025	Pipe Run Insulation	(8" O.D.) Abandoned fire sprinkler line by room 129	195	LF.				0.98	0.98
7	9.1623	14-026	Pipe Run Insulation	(3" O.D.) Central hall near room 129	195	LF.				0.98	0.98
7	9.4989	14-027	Pipe Run Insulation	(2" O.D.) Central hall by room 129	195	LF.				0.98	0.98
7	9.8355	14-028	Pipe Run Insulation	(4" O.D.) Central hall by room 128	195	LF.				0.98	0.98
7	9.1623	14-029	Pipe Fitting Insulation	(8" O.D.) Abandoned fire sprinkler line fittings by room	5	EA.				0.03	0.03
7	9.4989	14-030	Pipe Fitting Insulation	(2" O.D.) Fittings room 102	5	EA.				0.03	0.03
7	9.4989	14-031	Pipe Fitting Insulation	(4" O.D.) Fittings central hall by room 111	5	EA.				0.03	0.03
7	9.4989	14-032	Pipe Fitting Insulation	(3" O.D.) Elbow central hall by room 117	5	EA.				0.03	0.03

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

ity, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
14 Administration Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	14-033	Pipe Run Insulation	(2" O.D.) East hall by room 147	120	LF.				0.60	0.60
7	9.4989	14-034	Pipe Run Insulation	(3" O.D.) East hall by room 147	120	LF.				0.60	0.60
7	9.4989	14-035	Pipe Run Insulation	(4" O.D.) East hall by room 148	120	LF.				0.60	0.60
7	9.1623	14-036	Pipe Run Insulation	(6" O.D.) Abandoned fire sprinkler line East hall by room	70	LF.				0.35	0.35
7	8.8257	14-037	Pipe Fitting Insulation	(2" O.D.) Elbow East hall by room 144	5	EA.				0.03	0.03
7	9.1623	14-038	Pipe Fitting Insulation	(3" O.D.) Elbow East hall by room 144	5	EA.				0.03	0.03
7	9.1623	14-039	Pipe Fitting Insulation	(4" O.D.) Valve East hall by room 148	1	EA.				0.01	0.01
7	8.8257	14-040	Pipe Fitting Insulation	(6" O.D.) Abandoned fire sprinkler line elbow East hall	2	EA.				0.01	0.01
7	9.1623	14-041	Pipe Fitting Insulation	(4" O.D.) Steam line elbow room 136	100	EA.				0.50	0.50
7	8.995	14-042	Pipe Run Insulation	(6" O.D.) Steam line West wing by heating unit	110	LF.				0.55	0.55
7	8.995	14-043	Pipe Fitting Insulation	(4" O.D.) Steam line West wing by heating unit	75	EA.				0.38	0.38
7	8.991	14-044	Resilient Floor Tile (9" X 9")	Black West wing Room 210	8900	S.F.				44.50	44.50
7	8.991	14-044	Resilient Floor Tile (9" X 9")	White West wing Room 210	8900	S.F.				44.50	44.50
7	9.3276	14-048	Duct Insulation	Hall outside room 210	70	S.F.				0.35	0.35
7	8.991	14-050	Acoustic Tile Mastic	Black central hall drafting room	17800	S.F.				89.00	89.00
7	9.8375	14-053	Pipe Run Insulation	(4" O.D.) South end mechanical room 4	32	LF.				0.16	0.16
TOTALS:					90688					453.44	453.44

Total Removal Cost $312,333.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name
15 Laboratories

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	6.9674	15-108	Pipe Run Insulation	Pipe insulation run, north tunnel, west side	26	L.F.		572.00	338.00		910.00
1	6.1229	15-138	Pipe Run Insulation	(6" O.D.) Condensate line straights by west wall between	107	L.F.		2354.00	1391.00		3745.00
3	8.4851	15-041	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white and dark blue streaks, in	3399	S.F.	2379.30			17.00	2396.30
3	7.6386	15-062	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, on south side of hall	1840	S.F.	1288.00			9.20	1297.20
3	4.2636	15-109	Duct Insulation	HVAC duct insulation, air handler between S-8 and S-9,	120	S.F.	180.00			0.60	180.60
3	7.306	15-112	Pipe Fitting Insulation	(12" O.D.) Chilled water system valve-south mechanical,	12	EA.	18.00			0.06	18.06
3	7.306	15-112	Pipe Fitting Insulation	(6" O.D.) Chilled water system. Elbow in corrosion room by	2	EA.	3.00			0.01	3.01
3	8.8227	15-120	Pipe Fitting Insulation Lagging	AHU unit-Condensate fittings (canvas wrapped material)	10	S.F.	15.00			0.05	15.05
3	7.6426	15-126	Pipe Fitting Insulation	(8" O.D.) Hot water return to heat exchanger, elbow	8	EA.	12.00			0.04	12.04
3	8.3188	15-134	Pipe Fitting Insulation	(3" O.D.) Steam system elbow South mechanical room, west	106	EA.	159.00			0.53	159.53
3	8.3188	15-134	Pipe Fitting Insulation	(6" O.D.) Steam system elbow in corrosion room by HVAC	12	EA.	18.00			0.06	18.06
3	8.4861	15-135	Pipe Run Insulation	(6" O.D.) Steam system-straigh run, south mechanical room,	315	L.F.	472.50			1.58	474.08
3	8.4861	15-135	Pipe Run Insulation	(6" O.D.) Steam system-straight run in	112	L.F.	168.00			0.56	168.56
3	6.6308	15-136	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow by west wall between	15	EA.	22.50			0.08	22.58
3	7.305	15-137	Pipe Run Insulation	(10" O.D.) Condensate line straights, elbow by overhead	151	L.F.	226.50			0.76	227.26
3	7.305	15-139	Pipe Run Insulation	(10" O.D.) Steam line straight by west wall by overhead	102	L.F.	153.00			0.51	153.51
4	8.3128	15-021	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, tan with red, brown and orange streaks, in	300	S.F.	210.00			1.50	211.50
4	8.8207	15-036	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, light brown with white and brown streaks, in	192	S.F.	134.40			0.96	135.36
4	8.4851	15-039	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with beige streaks, in southwest	1055	S.F.	738.50			5.28	743.78
4	8.3158	15-045	Duct Insulation	Duct insulation taken in center wing hall outside lab C-43	536	S.F.	804.00			2.68	806.68
4	8.8257	15-051	Pipe Fitting Insulation	(4" O.D.) Water line fitting in room N-22, west wall	83	EA.	124.50			0.42	124.92
4	8.99	15-052	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, on north side of room	4095	S.F.	2866.50			20.48	2886.98
4	9.1593	15-058	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, on northwest	135	S.F.	94.50			0.68	95.18
4	7.6356	15-082	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with black streaks, in hall outside room	1840	S.F.	1288.00			9.20	1297.20
4	8.1435	15-095	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, off white with black spec, in hall outside of	2508	S.F.	1755.60			12.54	1768.14
4	8.1435	15-101	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with green streaks, in room W-28	2285	S.F.	1599.50			11.43	1610.93
4	9.6692	15-111	Pipe Run Insulation	Pipe insulation run by column S-15 running north to south	3	L.F.	4.50			0.02	4.52
5	8.991	15-068	Duct Insulation	Duct on west side of in HVAC room S-1	236	S.F.				1.18	1.18
6	8.1445	15-025	HVAC Flexible Connector	Duct in hall outside room E-7, 850 S.F.	1	EA.				0.01	0.01

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

Facility:
FERNALD ENVIRONMENTAL 'ANAGEMENT PROJECT (FEMP)

State:
NALD, OHIO

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
15 Laboratories

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.993	15-064	Pipe Fitting Insulation	(4" O.D.) Steam line fitting by east wall in HVAC room S-1	45	EA.				0.23	0.23
6	8.993	15-065	Pipe Run Insulation	(4" O.D.) Steam line insulation by west wall in HVAC room S-	83	LF.				0.42	0.42
6	8.993	15-066	Pipe Fitting Insulation	(3" O.D.) Condensate line fitting by northwest corner of	6	EA.				0.03	0.03
6	8.993	15-067	Pipe Run Insulation	(3" O.D.) Condensate line insulation by northwest wall in	12	LF.				0.06	0.06
6	8.993	15-072	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in north wall of HVAC room S-22	300	EA.				1.50	1.50
6	9.3296	15-073	Pipe Run Insulation	(4" O.D.) Steam line insulation by main entrance to HVAC	1465	LF.				7.33	7.33
6	9.3296	15-076	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting by north wall in HVAC	17	EA.				0.09	0.09
6	8.993	15-077	Pipe Run Insulation	(4" O.D.) Condensate line insulation on floor. West side	22	LF.				0.11	0.11
6	8.8217	15-080A	Duct Insulation	HVAC duct insulation in room S-22 by northeast corner	3000	S.F.				15.00	15.00
6	8.8237	15-114	Pipe Run Insulation	(4" O.D.) Cooling water supply and return, elevated line	57	LF.				0.29	0.29
6	9.1603	15-116	Storage Tank / Exchanger Insulation	Heat exchanger tank insulation. South mechanical	56	S.F.				0.28	0.28
6	8.1495	15-118	Duct Insulation	Fan unit - Elevated duct core sample near north wall of	160	S.F.				0.80	0.80
6	9.1603	15-123	Pipe Fitting Insulation	(4" O.D.) A.C. condensate pump elbow. Off A.C.	5	EA.				0.03	0.03
[illegible]	8.4851	15-127	Pipe Run Insulation	(2" O.D.) Cold water system - straight run. Room R-18	70	LF.				0.35	0.35
6	8.1485	15-128	Pipe Fitting Insulation	(3" O.D.) Elbow. Cold water system - Room R-16 (elevated	10	EA.				0.05	0.05
6	8.1485	15-129	Pipe Run Insulation	(2" O.D.) Hot water return system straight runs. Room	70	LF.				0.35	0.35
6	8.4851	15-130	Pipe Fitting Insulation	(2" O.D.) Hot water return system - Elbow, room R-16,	10	EA.				0.05	0.05
6	8.4851	15-131	Pipe Run Insulation	(3" O.D.) Hot water supply system - straight runs. Room	70	LF.				0.35	0.35
6	8.4851	15-132	Pipe Fitting Insulation	(3" O.D.) Hot water supply system - Elbow, room R-16,	10	EA.				0.05	0.05
6	8.992	15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run. South	40	LF.				0.20	0.20
6	8.992	15-133	Pipe Run Insulation	(6" O.D.) Chilled water system-straight run in	17	LF.				0.09	0.09
6	7.302	15-063	Floor Tile Mastic	Mastic, south side of hall outside of room N-24	1840	S.F.				9.20	9.20
7	7.9772	15-001	Pipe Fitting Insulation	(6" O.D.) Steam line fittings in room E-3 of southeast corner	149	EA.				0.75	0.75
7	7.9772	15-002	Pipe Run Insulation	(4" O.D.) Room E-3 northwest corner	645	LF.				3.23	3.23
7	7.9772	15-003	Pipe Fitting Insulation	(4" O.D.) Condensate line fittings in southeast corner of	31	EA.				0.16	0.16
7	8.1435	15-007	Resilient Floor Tile (9" X 9")	(9" X 9") Green tile with white streaks in room E-5	1760	S.F.				8.80	8.80
7	8.4801	15-008	Floor Tile Mastic	Black mastic in room E-5	1760	S.F.				8.80	8.80
7	8.4801	15-009	Resilient Floor Tile (9" X 9")	(9" X 9") Tile in hall by door to south courtyard biege and	1600	S.F.				8.00	8.00
7	8.4801	15-010	Floor Tile Mastic	Black mastic by door to south courtyard	1600	S.F.				8.00	8.00

[illegible] Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
[illegible] first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

ity, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
15 Laboratories

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.6494	15-011	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, beige with gray streaks, outside room E-21	150	S.F.				0.75	0.75
7	8.8187	15-013	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, white with black and gray streaks, in hall	300	S.F.				1.50	1.50
7	8.1435	15-014	Floor Tile Mastic	Black mastic sampled outside of room E-25	300	S.F.				1.50	1.50
7	8.8187	15-015	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, yellow, across from room E-27	18	S.F.				0.09	0.09
7	8.8187	15-016	Floor Tile Mastic	Black mastic across from room E-27	18	S.F.				0.09	0.09
7	8.6494	15-019	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown with brown streaks, in the southeast	336	S.F.				1.68	1.68
7	8.3128	15-020	Floor Tile Mastic	Mastic sampled in the southeast corner of room E-25	336	S.F.				1.68	1.68
7	8.3128	15-022	Floor Tile Mastic	Mastic in southeast corner of room E-23	300	S.F.				1.50	1.50
7	7.9792	15-026	Pipe Run Insulation	(5" O.D.) West side by center hallway entrance	16	LF.				0.08	0.08
7	8.3158	15-027	Pipe Run Insulation	(6" O.D.) West side by center hallway entrance	16	LF.				0.08	0.08
7	8.4851	15-028	Pipe Run Insulation	(4" O.D.) Room C-41	234	LF.				1.17	1.17
7	8.991	15-029	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in northeast corner of room C-41	94	EA.				0.47	0.47
7	8.4851	15-030	Pipe Run Insulation	(4" O.D.) Room C-41	104	LF.				0.52	0.52
7	8.8237	15-031	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in northeast corner of	29	EA.				0.15	0.15
7	8.8217	15-033	Pipe Fitting Insulation	(3" O.D.) Potable water line fitting in room C-22, east wall	76	EA.				0.38	0.38
7	8.8187	15-034	Floor Tile Mastic	Mastic in hallway to south courtyard across from rooms	95	S.F.				0.48	0.48
7	8.4851	15-038	Floor Tile Mastic	Mastic in southwest corner of room C-15	1055	S.F.				5.28	5.28
7	8.4851	15-040	Floor Tile Mastic	Mastic in southwest corner of room C-15	3399	S.F.				17.00	17.00
7	8.4801	15-044	Floor Tile Mastic	Mastic in the southwest corner of room C-10	2112	S.F.				10.56	10.56
7	8.6544	15-046	Pipe Fitting Insulation	(4" O.D.) Steam line valve in southwest corner of room	177	EA.				0.89	0.89
7	7.8099	15-047	Pipe Run Insulation	(4" O.D.) Line in room N-26, south wall	226	LF.				1.13	1.13
7	7.9772	15-048	Pipe Run Insulation	(4" O.D.) Southwest corner of room N-42A	670	LF.				3.35	3.35
7	8.3158	15-049	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in southwest corner of	92	EA.				0.46	0.46
7	8.99	15-053	Floor Tile Mastic	Mastic on north side of room N-40A by the door	4095	S.F.				20.48	20.48
7	8.1435	15-054	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, brown w/ white and dark brown streaks, on the	1000	S.F.				5.00	5.00
7	8.1435	15-055	Floor Tile Mastic	Mastic, black, on east side of room N-42A by the entrance	1000	S.F.				5.00	5.00
7	9.4959	15-057	Floor Tile Mastic	Mastic on north side of room N-40	135	S.F.				0.68	0.68
7	9.1593	15-060	Floor Tile Mastic	Mastic in the center of room N-40	135	S.F.				0.68	0.68
7	8.6524	15-069	Pipe Fitting Insulation	(3" O.D.) Water line fitting in HVAC room S-21 above HVAC	29	EA.				0.15	0.15

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name
15 Laboratories

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.989	15-071	Pipe Run Insulation	(3" O.D.) Water line insulation in HVAC room S-21 above	405	LF.				2.03	2.03
7	8.1415	15-074	Floor Tile Mastic	Black mastic in northwest corner of room S-9	10640	S.F.				53.20	53.20
7	7.6356	15-075	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in northwest corner of	10640	S.F.				53.20	53.20
7	8.3158	15-084	Pipe Fitting Insulation	(2" O.D.) Water line fitting above drinking fountain in east	12	EA.				0.06	0.06
7	8.989	15-085	Pipe Run Insulation	(2" O.D.) Water line insulation in east hall outside room E-7	98	LF.				0.49	0.49
7	8.6504	15-086A	Pipe Run Insulation	(4" O.D.) Steam line insulation in hall across from room W-32	140	LF.				0.70	0.70
7	8.3158	15-087	Pipe Fitting Insulation	(4" O.D.) Steam line fitting in room W-18 by exit door	46	EA.				0.23	0.23
7	8.6524	15-088	Pipe Run Insulation	(4" O.D.) Condensate line insulation in hall across from	110	LF.				0.55	0.55
7	8.989	15-089	Pipe Fitting Insulation	(4" O.D.) Condensate line fitting in hall across from W-32	13	EA.				0.07	0.07
7	8.989	15-090	Pipe Run Insulation	(3" O.D.) Potable water line insulation across from room	176	LF.				0.88	0.88
7	8.3158	15-091	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation fitting in hall across	86	EA.				0.43	0.43
7	8.3128	15-097	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, dark green with white streaks, in center of room	620	S.F.				3.10	3.10
7	7.9762	15-098	Floor Tile Mastic	Black mastic in room W-18	680	S.F.				3.40	3.40
7	8.1435	15-102	Floor Tile Mastic	Mastic in room W-28	2285	S.F.				11.43	11.43
7	8.3128	15-103	Resilient Floor Tile (9" X 9")	(9" X 9") Tile, green with white streaks, in room W-28	620	S.F.				3.10	3.10
7	8.3128	15-104	Floor Tile Mastic	Black mastic in room W-28	620	S.F.				3.10	3.10
7	7.9782	15-124	Duct Insulation	Fan/blower duct insulation by column R-18 in corrosion room	360	S.F.				1.80	1.80
7	8.4861	15-140	Pipe Fitting Insulation	(4" O.D.) Steam and condensate fitting in west	25	EA.				0.13	0.13
7	7.4683	15-141	HVAC Flexible Connector	Flexible connector on HVAC's. No samples taken, material	10	EA.				200.00	200.00
7	8.989	15-037	Floor Tile Mastic	Southeast corner of room C-26	192	S.F.				0.96	0.96
7	8.3128	15-100	Floor Tile Mastic	Black mastic on north side of room W-18	200	S.F.				1.00	1.00
7	9.4959	15-142	Pipe Run Insulation	(4" O.D.) steam line south wall near exit	90	LF.				0.45	0.45
TOTALS:					79131		14,734.80	2,926.00	1,729.00	594.94	19,984.74

Total Removal Cost $382,923.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
16a Electrical Station

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.1465	16a-001	Roof Flashing	Transite Flashing Material	40	S.F.				0.20	0.20
7	7.6406	16a-002	Roof Flashing	Transite Flashing Material, Assumed Positive	250	S.F.				1.25	1.25
TOTALS:					290					1.45	1.45

Total Removal Cost $4,350.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter # applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

3242

Revision Date:

Building # and Name
1a,b Preparation Plant, Storage

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	6.7991	01-005	Pipe Run Insulation	(4" O.D.) Water line	256	LF.	384.00			1.28	385.28
3	7.8089	01-006	Pipe Fitting Insulation	(4" O.D.) Water line	25	EA.	37.50			0.13	37.63
3	9.4989	01-020	Duct Insulation	Heater duct insulation on column 6c & 7c	880	S.F.	1320.00			4.40	1324.40
6	9.4989	01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.21	0.21
6	8.6544	01-001	Pipe Run Insulation	(4" O.D.) 150# Steam Line	785	LF.				3.93	3.93
6	8.8237	01-002	Pipe Fitting Insulation	(6" O.D.) 150# Steam line fitting	49	EA.				0.25	0.25
6	8.6524	01-003	Pipe Run Insulation	(4" O.D.) Condensate return line	545	LF.				2.73	2.73
6	8.4851	01-004	Pipe Fitting Insulation	(4" O.D.) Condensate return line, Tee fitting	27	EA.				0.14	0.14
6	8.8207	01-007	Storage Tank / Exchanger Insulation	Condensate holding tank insulation	66	S.F.				0.00	0.00
6	7.4723	01-008	Pipe Fitting Insulation	(3" O.D.) Water line fitting	15	EA.				0.08	0.08
6	8.4851	01-010	Pipe Fitting Insulation	(4" O.D.) 150# Steam line fitting	13	EA.				0.07	0.07
6	9.3316	01-016	Pipe Fitting Insulation	(8" O.D.) 150# Pound Steam line fitting to heater	8	EA.				0.04	0.04
6	9.4989	01-017	Pipe Run Insulation	(4" O.D.) 150# Pound Steam Line next to Column 6C	30	LF.				0.00	0.00
6	9.1623	01-018	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting	22	EA.				0.00	0.00
6	9.4989	01-019	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.00	0.00
6	7.6416	01-021	Transite Sheet Material	Transite wall between columns 2F, E3	55260	S.F.				276.30	276.30
7	8.4851	01-011	Pipe Fitting Insulation	(4" O.D.) Condensate line valve B	6	EA.				0.03	0.03
7	8.8197	01-012	Pipe Run Insulation	(4" O.D.) 150# Steam line	116	LF.				0.58	0.58
7	8.989	01-013	Pipe Run Insulation	(4" O.D.) Condensate return line	41	LF.				0.21	0.21
7	10.1731	01-014	Resilient Floor Tile (12" X 12")	(12" x 12") Resilient Floor Tile White and Brown in Office	58	S.F.				0.29	0.29
7	9.4959	01-015	Resilient Floor Tile (9" X 9")	(9" x 9") Resilient Floor Tile Green, White and Blue streaks	800	S.F.				4.00	4.00
7	7.6426	01-024	Transite Sheet Material	No samples taken	768,700	S.F.				3843.50	3843.50
TOTALS:					827784		1,741.50			4,138.13	5,879.63

Total Removal Cost $3,344,181.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

ity, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
20a Valve/Control Bldg.

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.3326	20a-005	Pipe Run Insulation	(10" O.D.) Green line, center section	40	LF.	60.00			0.20	60.20
6	9.8375	20a-004	Transite Sheet Material	Interior transite panels in transformer, no samples taken	250	S.F.				1.25	1.25
7	8.996	20a-001	Pipe Run Insulation	(6" O.D.) West wall	95	LF.				0.48	0.48
7	8.996	20a-002	Pipe Fitting Insulation	(8" O.D.) West wall	10	EA.				0.05	0.05
7	9.6692	20a-003	Transite Sheet Material	East wall, south section Interio	2330	S.F.				11.65	11.65
7	9.3326	20a-006	Pipe Fitting Insulation	(6" O.D.) Valve - east wall, center section	6	EA.				0.03	0.03
7	9.6692	20a-007	Pipe Run Insulation	(3" O.D.) East wall, center section	8	LF.				0.04	0.04
7	9.5009	20a-009	Pipe Fitting Insulation	(8" O.D.) Elbow, metal jacket, north wall, center	9	EA.				0.05	0.05
7	7.303	20a-011	Transite Sheet Material	Exterior Transite, no sample taken, assumed positive	12,960	S.F.				64.80	64.80
TOTALS:					15708		60.00			78.54	138.54

Total Removal Cost $66,196.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
20b Filter/Chemical

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.994	20b-001	Pipe Run Insulation	Over (24" O.D.)Vertical Line Metal Jacketed	15	L.F.				0.08	0.08
7	8.6594	20b-005	Pipe Fitting Insulation	(6" O.D.) Leading into heater	14	EA.				0.07	0.07
7	9.1603	20b-009	Pipe Run Insulation	(8" O.D.) Filter Influent line	275	L.F.				1.38	1.38
7	9.1603	20b-010	Pipe Run Insulation	(8" O.D.) Backwash discharge	120	L.F.				0.60	0.60
7	9.1603	20b-009	Pipe Run Insulation	(8" O.D.) Filter Influent line	100	L.F.				0.50	0.50
7	8.6514	20b-012	Pipe Run Insulation	(6" O.D.) Steam line	80	L.F.				0.40	0.40
7	7.4723	20b-013	Transite Sheet Material	All interior walls are transite	1000	S.F.				5.00	5.00
TOTALS:					1604					8.02	8.02

Total Removal Cost $18,888.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
20c Cooling Tower

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	7.9772	020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	10232	S.F.				51.16	51.16
6	7.9772	020c-001	Transite Sheet Material	Transite material on cooling tower, 4'x8' sheets	10232	S.F.				51.16	51.16
TOTALS:					20464					102.32	102.32

Total Removal Cost $81,856.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name: 20e Pump House 1

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.994	20e-001	Pipe Run Insulation	(12" O.D.) Water Line	13	LF.	19.50			0.07	19.57
7	9.4999	20e-002	Pipe Fitting Insulation	(12" O.D.) Elbow, water line	3	EA.				0.02	0.02
TOTALS:					16		19.50			0.08	19.58

Total Removal Cost $501.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name: 20g Well House 3

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	9.6682	20g-01	Pipe Run Insulation	(12" O.D.) Water line	14	LF.				0.07	0.07
TOTALS:					14					0.07	0.07

Total Removal Cost $420.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
24b Railroad Engine Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.3326	24b-002	Pipe Fitting Insulation	(5" O.D.)	7	EA.	10.50			0.04	10.54
7	8.996	24b-001	Pipe Run Insulation	(3" O.D.) Condensate; west wall, center	25	LF.				0.13	0.13
7	9.5009	24b-003	Pipe Run Insulation	(4" O.D.) Steam; east wall, center	95	LF.				0.48	0.48
7	9.3326	24b-004	Pipe Fitting Insulation	(2" O.D.) Steam elbow; west wall, north end	20	EA.				0.10	0.10
TOTALS:					147		10.50			0.74	11.24

Total Removal Cost $3,369.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
25a Sewage Treatment

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.995	025a-01	Pipe Fitting Insulation	(3" O.D.) 90 degree fitting	35	EA.				0.18	0.18
6	8.995	025a-02	Pipe Run Insulation	(3" O.D.) Vertical line	88	LF.				0.44	0.44
TOTALS:					123					0.62	0.62

Total Removal Cost $2,881.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
25c Sewage Lift Station

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.5009	25c-01	Gasketry	(10"O.D.) Gasket pipe	5	L.F.	7.50			0.03	7.53
TOTALS:					5		7.50			0.03	7.53

Total Removal Cost $10.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
28b Human Resources Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	7.304	28b-001	Pipe Run Insulation	(3" O.D.) Horizontal steam line north wall	25	L.F.	37.50			0.13	37.63
3	6.8001	28b-005	Pipe Fitting Insulation	(4" O.D.) Elbow, south wall by double doors	46	EA.	69.00			0.23	69.23
3	7.6416	28b-014	Pipe Fitting Insulation	(3" O.D.) Condensate elbow	2	EA.	3.00			0.01	3.01
4	8.1475	28b-002	Pipe Run Insulation Lagging	(2" O.D.) North wall steam line	46	S.F.	69.00			0.23	69.23
7	9.1613	28b-004	Pipe Run Insulation	PIR(6" O.D.) Vertical leading to duct	9	L.F.				0.05	0.05
7	8.4881	28b-006	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, by duct	15	EA.				0.08	0.08
7	8.8247	28b-008	Duct Insulation	Duct along south wall by double doors	700	S.F.				3.50	3.50
7	8.6544	28b-011	Pipe Fitting Insulation	(3" O.D.) Steam elbow	7	EA.				0.04	0.04
7	10.1731	28b-015	Pipe Fitting Insulation	Fittings above ceiling; not accessible	2	EA.				0.01	0.01
7	8.4851	28b-016	Pipe Fitting Insulation	(4" O.D.) Steam elbow, line	14	EA.				0.07	0.07
7	8.992	28b-018	Pipe Fitting Insulation	(3" O.D.)Condensate elbow by heater next to toilet	15	EA.				0.08	0.08
7	8.1475	28b-019	Duct Insulation	Air duct	120	S.F.				0.60	0.60
7	10.5117	28b-021	Resilient Floor Tile (9" X 9")	(9"x9") Green tile covered by brown tile	5700	S.F.				28.50	28.50
7	9.6662	28b-022	Floor Tile Mastic	Black	5700	S.F.				28.50	28.50
7	8.6544	28b-023	Pipe Fitting Insulation	(3" O.D.) Steam line, elbow in lounge	11	EA.				0.06	0.06
7	8.991	28b-024	Pipe Run Insulation Lagging	(4" O.D.) Steam line	12	L.F.				0.06	0.06
7	8.4851	28b-025	Resilient Floor Tile (12" X 12")	(12"x12") Blue/gray	1184	S.F.				5.92	5.92
7	8.4841	28b-027	Pipe Fitting Insulation	Steam elbows above drop ceiling; not accessible	7	EA.				0.04	0.04
TOTALS:					13615		178.50			68.08	246.58

Total Removal Cost $45,117.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

Building # and Name
2a (2/3) Ore Refinery Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	5.7853	02a-006	Storage Tank / Exchanger Insulation	Condensate in between tank F1-2 and F1-26	130	S.F.		2600.00	1300.00		3900.00
1	4.9448	02a-019	Pipe Run Insulation	(4" O.D.) Horizontal steam line	46	LF.		1012.00	598.00		1610.00
1	6.2932	02a-020	Pipe Fitting Insulation	(4" O.D.) Steam line fitting on west side of room	1	EA.		27.00	29.00		56.00
1	6.4635	02a-025	Pipe Run Insulation	Vertical steam line in south outer building	5	LF.		110.00	65.00		175.00
1	6.4635	02a-025	Pipe Run Insulation	(3" O.D.) Vertical steam run, west wall	15	LF.		330.00	195.00		525.00
1	5.7863	02a-038	Insulation	Insulation in northeast corner building, transite	100	S.F.		200.00	1000.00		1200.00
1	3.4241	02a-039	Transite Sheet Material	Sample taken by column B-8	5000	S.F.		20000.00	45000.00		65000.00
1	6.2972	02a-051	Pipe Run Insulation	(6" O.D.) Vertical sump water line by column D-17	55	LF.		1210.00	715.00		1925.00
1	6.9694	02a-052	Pipe Fitting Insulation	(6" O.D.) Process water elbow by column D-17	4	EA.		108.00	116.00		224.00
1	7.4713	02a-075	Transite Sheet Material	Interior transite, middle of building; no samples taken,	18,000	S.F.		72000.00	162000.00		234000.00
3	7.1407	02a-003	Pipe Fitting Insulation	(4" O.D.) Steam line elbow on unit E-2948	20	EA.	30.00			0.10	30.10
3	6.6318	02a-007	Pipe Run Insulation	(4" O.D.) Vertical condensate line by tank, metal-jacketed	555	LF.	832.50			2.78	835.28
3	6.4625	02a-009	Storage Tank / Exchanger Insulation	Condensate tank insulation	110	S.F.	165.00			0.55	165.55
3	5.9566	02a-028	Pipe Run Insulation	(3" O.D.) Water line, metal-jacketed	21	LF.	31.50			0.11	31.61
3	8.1535	02a-037	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by D-17	33	EA.	49.50			0.17	49.67
3	7.6426	02a-048	Pipe Fitting Insulation	(3" O.D.) Condensate elbow by column C-17	56	EA.	84.00			0.28	84.28
3	8.4841	02a-053	Pipe Run Insulation	(32" O.D.) Vent pipe, D1-204, by W.M.C.O. sample A0223,	130	LF.	195.00			0.65	195.65
3	7.1377	02a-055	Storage Tank / Exchanger Insulation	Top of tank D1-208	162	S.F.	243.00			0.81	243.81
4	6.9704	02a-002	Pipe Run Insulation	(4" O.D.) Horizontal steam line in between tanks D1-7 and	150	LF.	225.00			0.75	225.75
4	8.995	02a-050	Pipe Fitting Insulation	(6" O.D.) Process water elbow by green gauge panel	22	EA.	33.00			0.11	33.11
4	8.992	02a-054	Pipe Fitting Insulation	(32" O.D.) Vent pipe elbow on tank D1-206	13	EA.	19.50			0.07	19.57
4	8.4891	02a-061	Pipe Fitting Insulation	(10" O.D.) Steam line elbow - A-12	10	EA.	15.00			0.05	15.05
4	8.4891	02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-10	10	EA.	15.00			0.05	15.05
4	8.4891	02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - A-11	40	EA.	60.00			0.20	60.20
4	8.4891	02a-061	Pipe Fitting Insulation	(4" O.D.) Steam line elbow - C-11	20	EA.	30.00			0.10	30.10
4	8.4891	02a-061	Pipe Fitting Insulation	(3" O.D.) Steam line elbow - C-11	20	EA.	30.00			0.10	30.10
4	9.4999	02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - A-8	3	EA.	4.50			0.02	4.52
4	9.4999	02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-11	20	EA.	30.00			0.10	30.10
4	9.4999	02a-065	Pipe Fitting Insulation	(4" O.D.) Condensate return-elbow - A-10	20	EA.	30.00			0.10	30.10

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
2a (2/3) Ore Refinery Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.3168	02a-073	Transite Sheet Material	No sample taken, material assessed	25,000	S.F.	17500.00			125.00	17625.00
4	8.4871	02a-074	Transite Sheet Material	Interior transite west side of building; no samples taken,	20,000	S.F.	14000.00			100.00	14100.00
4	8.6544	02a-031A	Pipe Fitting Insulation	(4" O.D.) Steam line valve in south corner	21	EA.	31.50			0.11	31.61
4	9.4999	02a-065	Pipe Fitting Insulation	(3" O.D.) Condensate return-elbow - C-10	20	EA.	30.00			0.10	30.10
6	6.4645	02a-004	Pipe Run Insulation	(2" O.D.) Horizontal black process water line leading to	173	L.F.				0.87	0.87
6	7.1407	02a-008	Pipe Fitting Insulation	(3" O.D.) Condensate line elbow by rollup door	52	EA.				0.26	0.26
6	6.2922	02a-040	Transite Sheet Material	Most transite in good repair, few patches of broken and	78,000	S.F.				390.00	390.00
6	7.9812	02a-047	Pipe Run Insulation	(3" O.D.)	59	L.F.				0.30	0.30
6	6.4615	02a-072	Transite Sheet Material	West side of plant 2a	38000	S.F.				190.00	190.00
7	7.9802	02a-010	Pipe Run Insulation	(2" O.D.) Horizontal steam line by D1-4 and D1-5	145	L.F.				0.73	0.73
7	8.6564	02a-011	Pipe Fitting Insulation	(1" O.D.) Steam line elbow off tank D1-1	19	EA.				0.10	0.10
7	7.8109	02a-012	Transite Sheet Material	Inner wall by west exit	1950	S.F.				9.75	9.75
7	8.4901	02a-024	Pipe Fitting Insulation	(4" O.D.) Water line elbow over slop sink	31	EA.				0.16	0.16
7	9.3316	02a-026	Transite Sheet Material	Transite interior wall in south outer room	150	S.F.				0.75	0.75
7	9.8375	02a-027	Pipe Fitting Insulation	Steam line fitting by west wall	1	EA.				0.01	0.01
7	7.4783	02a-030	Pipe Run Insulation	(4" O.D.) Vertical steam line by north window, metal-jacketed	505	L.F.				2.53	2.53
7	9.1593	02a-032	Pipe Run Insulation	(18" O.D.) Horizontal tank line between C-18 and C-19,	152	L.F.				0.76	0.76
7	8.3168	02a-033	Pipe Fitting Insulation	(18" O.D.) Tank feed elbow between columns C-18 and	6	EA.				0.03	0.03
7	8.4871	02a-042	Pipe Fitting Insulation	(5" O.D.) Black steam line elbow by column A-5	90	EA.				0.45	0.45
7	8.6554	02a-045	Pipe Run Insulation	(4" O.D.) Vertical steam line between A-15 and A-16,	808	L.F.				4.04	4.04
7	8.6574	02a-046	Pipe Fitting Insulation	(6" O.D.) Steam elbow between columns A-16 and	86	EA.				0.43	0.43
7	9.1603	02a-049	Pipe Run Insulation	(6" O.D.) Vertical process wate line by column C-15,	195	L.F.				0.98	0.98
7	9.4999	02a-057	Duct Insulation	Insulation off HVAC system	250	S.F.				1.25	1.25
7	9.1633	02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column A-11	6	EA.				0.03	0.03
7	9.1633	02a-059	Pipe Fitting Insulation	(16" O.D.) Main steam line elbow near column C-11	6	EA.				0.03	0.03
7	9.1633	02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-A-11	30	L.F.				0.15	0.15
7	9.1633	02a-060	Pipe Run Insulation	(16" O.D.) Main steam line-straight-C-11	30	L.F.				0.15	0.15
7	9.1623	02a-062	Pipe Run Insulation	(10" O.D.) Steam line-straight - A-12	100	L.F.				0.50	0.50
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-10	100	L.F.				0.50	0.50

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92

3242

Revision Date:

Building # and Name
2a (2/3) Ore Refinery Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - A-11	160	LF.				0.80	0.80
7	9.1623	02a-062	Pipe Run Insulation	(4" O.D.) Steam line-straight - C-11	200	LF.				1.00	1.00
7	9.1623	02a-062	Pipe Run Insulation	(3" O.D.) Steam line-straight - C-11	50	LF.				0.25	0.25
7	9.3316	02a-063	Pipe Fitting Insulation	(6" O.D.) Process water elbow A-12	5	EA.				0.03	0.03
7	9.3316	02a-063	Pipe Fitting Insulation	(3" O.D.) Process water elbow C-12	15	EA.				0.08	0.08
7	9.3316	02a-063	Pipe Fitting Insulation	(10" O.D.) Process water elbow - A-12	10	EA.				0.05	0.05
7	9.3316	02a-064	Pipe Run Insulation	(6" O.D.) Process water-straigh - A-12	30	LF.				0.15	0.15
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straigh - C-12	30	LF.				0.15	0.15
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straigh - C-9	20	LF.				0.10	0.10
7	9.3316	02a-064	Pipe Run Insulation	(3" O.D.) Process water-straigh - A-12	30	LF.				0.15	0.15
7	8.995	02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - A-8	30	LF.				0.15	0.15
7	8.995	02a-066	Pipe Run Insulation	(3" O.D.) Condensate return-straight - C-10	20	LF.				0.10	0.10
7	8.995	02a-066	Pipe Run Insulation	(6" O.D.) Straight run, not sampled	150	LF.				0.75	0.75
7	8.995	02a-066	Pipe Run Insulation	(4" O.D.) Condensate return-straight - A-10	50	LF.				0.25	0.25
7	8.995	02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	75	LF.				0.38	0.38
7	8.995	02a-067	Pipe Run Insulation	(3" O.D.) Deionized water-straight - C-11	80	LF.				0.40	0.40
7	9.6682	02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	10	EA.				0.05	0.05
7	9.6682	02a-068	Pipe Fitting Insulation	(3" O.D.) Deionized water-elbow - C-11	20	EA.				0.10	0.10
7	9.1633	02a-069	Pipe Run Insulation	(36" O.D.) Line - 2 overflow vessels - D-11	40	LF.				0.20	0.20
7	8.99	02a-070	Storage Tank / Exchanger Insulation	Second carbonate make-up tank @ D-13 (D=10, H=6),	1800	S.F.				9.00	9.00
7	8.8257	02a-076	Transite sheet material	Interior transite, east side of building; no samples taken,	18,000	S.F.				90.00	90.00
7	6.6318	02a-036	Pipe Run Insulation	(3" O.D.) Horizontal condensate line over tank by	321	LF.				1.61	1.61
7	6.8001	02a-041	Pipe Run Insulation	(8" O.D.) Steam line in south side of the building near	650	LF.				3.25	3.25
7	9.4999	02a-077	Pipe Run Insulation	(4" O.D.) metal jacketed cold water line next to tag 0219 s.	80	LF.				0.40	0.40
7	9.4999	02a-078	Pipe Run Insulation	(8" O.D.) metal jacketed north of control panel	150	LF.				0.75	0.75
7	8.1475	02a-079	Pipe Run Insulation	(5" O.D.) metal jacketed	200	LF.				1.00	1.00
7	9.1573	02a-080	Storage Tank / Exchanger Insulation	Tank I1-211	300	S.F.				1.50	1.50
TOTALS:					213292		33,684.00	97,597.00	211,018.00	949.63	343,248.63

Total Removal Cost $1,015,670.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
2b Lime Handling Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.8257	2b-006	Pipe Run Insulation	(8" O.D.) Line	25	L.F.		625.00	475.00		1100.00
1	8.6574	2b-008	Fabric / Rope	1" Rope TSI, west end	6	L.F.		18.00	24.00		42.00
1	9.3326	2b-014	Pipe Fitting Insulation	(6" O.D.) Steam, elbow at air handler, upper level	3	EA.		81.00	87.00		168.00
4	9.1633	2b-005	Pipe Fitting Insulation	(4" O.D.) Steam line, elbow	33	EA.	49.50			0.17	49.67
6	7.9792	2b-015	Transite Sheet Material	Transite, no samples taken	4,900	S.F.				24.50	24.50
7	10.1741	2b-003	Transite Sheet Material	Transite lab top, no samples taken	38	S.F.				0.19	0.19
7	9.6692	2b-007	Pipe Fitting Insulation	(8" O.D.) Elbow	9	EA.				0.05	0.05
7	9.3326	2b-009	Transite Sheet Material	Interior transite wall	2400	S.F.				12.00	12.00
7	9.6692	2b-010	Pipe Run Insulation	(4" O.D.) Line from refrigeratior F1-617	6	L.F.				0.03	0.03
7	9.3326	2b-010b	Pipe Run Insulation	(6" O.D.) Steam line	10	L.F.				0.05	0.05
7	9.6692	2b-011	Pipe Fitting Insulation	(4" O.D.)	1	EA.				0.01	0.01
7	9.6692	2b-013	Pipe Run Insulation	(4" O.D.) Condensate return	10	L.F.				0.05	0.05
TOTALS:					7441		49.50	724.00	586.00	37.04	1,396.54

Total Removal Cost $31,854.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
2c-Bulk Lime Handling

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	7.305	2c-01	Pipe Run Insulation	(3" O.D.) Black lagging with white insulation	60	L.F.				0.30	0.30
7	7.6436	2c-02	Transite Sheet Material	Exterior transite	1,392	S.F.				6.96	6.96
7	7.9812	2c-03	Transite Sheet Material	Transite walls	700	S.F.				3.50	3.50
TOTALS:					2152					10.76	10.76

Total Removal Cost $9,688.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
2d Metal Dissolver

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	9.1643	2d-001	Pipe Fitting Insulation	(4" O.D.) Elbow Steam line	6	EA.		162.00	174.00		336.00
1	8.995	2d-007	Pipe Fitting Insulation	(4" O.D.) Elbow process water	2	EA.		54.00	58.00		112.00
1	4.2686	2d-012	Transite Sheet Material	Entire south wall between Plant 2a & 2d	1,520	S.F.		6080.00	13680.00		19760.00
4	8.996	2d-002	Pipe Run Insulation	(4" O.D.) Steam line	10	LF.	15.00			0.05	15.05
4	8.4891	2d-010	Transite Sheet Material	South interior transite wall	3440	S.F.	2408.00			17.20	2425.20
6	7.9832	2d-011	Transite Sheet Material	Transite, No Samples Taken	8,680	S.F.				43.40	43.40
7	9.3316	2d-005	Pipe Run Insulation	(6" O.D.) Steam line	40	LF.				0.20	0.20
7	9.4999	2d-006	Pipe Run Insulation	(4" O.D.) Process water	6	LF.				0.03	0.03
7	8.996	2d-009	Pipe Run Insulation	(4" O.D.) D1-10	8	LF.				0.04	0.04
TOTALS:					13712		2,423.00	6,296.00	13,912.00	60.92	22,691.92

Total Removal Cost **$56,184.00**

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
2e NFS Storage Pump House

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.1495	2e-005	Pipe Fitting Insulation	(4" O.D.) Elbow, Damaged, debris on floor, condensate	1	EA.		27.00	29.00		56.00
7	8.8257	2e-001	Pipe Run Insulation	(4" O.D.) Metal jacketed, condensate line	75	LF.				0.38	0.38
7	9.1623	2e-002	Pipe Run Insulation	(6" O.D.) Metal jacketed, steam line	130	LF.				0.65	0.65
7	9.1623	2e-003	Pipe Fitting Insulation	(4" O.D.) Elbow, black in color, steam line	36	EA.				0.18	0.18
7	9.3306	2e-004	Pipe Fitting Insulation	(3" O.D.) Elbow, black in color, condensate line	16	EA.				0.08	0.08
TOTALS:					258			27.00	29.00	1.29	57.29

Total Removal Cost $5,941.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
30a Chemical Warehouse

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.8247	30-005	Transite Sheet Material	Transite Wall	400	S.F.	280.00			2.00	282.00
6	6.9654	30-006	Transite Sheet Material	Exterior transite, No samples taken per scope of work	62,500	S.F.				312.50	312.50
7	8.4901	30-002	Pipe Fitting Insulation	(3" O.D.) Elbow leading to sink	8	EA.				0.04	0.04
7	9.6672	30-003	Resilient Floor Tile (9" X 9")	North Corner Gray	90	S.F.				0.45	0.45
7	10.3424	30-004	Floor Tile Mastic	West End	90	S.F.				0.45	0.45
TOTALS:					63088		280.00			315.44	595.44

Total Removal Cost $252,356.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
31 Engine House Garage

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	7.6446	31-001	Pipe Fitting Insulation	(2" O.D.) steam system	37	EA.				0.19	0.19
6	7.6446	31-002	Pipe Run Insulation	(6" O.D.) steam system	540	L.F.				2.70	2.70
6	8.991	31-004	Resilient Floor Tile (9" X 9")	Medium green w/ white/black splotches	700	S.F.				3.50	3.50
7	10.0048	31-003	HVAC Flexible Connector	Over 15' Multiplier	2	EA.				0.01	0.01
7	9.8355	31-006	Resilient Floor Tile (12" X 12")	Brown w/ brown & white splotches	400	S.F.				2.00	2.00
7	10.0038	31-007	Floor Tile Mastic	Black & gummy	400	S.F.				2.00	2.00
7	8.6554	31-009	Pipe Run Insulation	(2" O.D.) water line	212	L.F.				1.06	1.06
7	8.6554	31-010	Pipe Fitting Insulation	(2" O.D.) cold water	12	EA.				0.06	0.06
7	8.1495	31-011	Pipe Fitting Insulation	(2" O.D.) hot water	5	EA.				0.03	0.03
7	8.6564	31-012	Pipe Run Insulation	(2" O.D.) hot water	285	L.F.				1.43	1.43
7	9.3286	31-013	Resilient Floor Tile (9" X 9")	Off white w/ grey splotches	100	S.F.				0.50	0.50
7	10.0038	31-014	Floor Tile Mastic	Black & gummy	100	S.F.				0.50	0.50
TOTALS:					2793					13.97	13.97

Total Removal Cost $30,572.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
32 Scale House

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.1603	32-001	Pipe Fitting Insulation	(4" O.D.) Steam line fitting	3	EA.	4.50			0.02	4.52
4	9.3296	32-003	Pipe Run Insulation	(4" O.D.) Steam line pipe run insulation	12	L.F.	18.00			0.06	18.06
4	9.3296	32-006	Pipe Run Insulation	(4" O.D.) Water line pipe run insulation, gray	95	L.F.	142.50			0.48	142.98
4	9.8355	32-007	Pipe Fitting Insulation	(3" O.D.) Water line elbow, gray	7	EA.	10.50			0.04	10.54
7	9.8345	32-004	Storage Tank / Exchanger Insulation	Condensate tank insulation	12	S.F.				0.06	0.06
TOTALS:					129		175.50			0.65	176.15

Total Removal Cost $2,864.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
#37 Pilot Plant Annex

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	8.8257	37-02	Pipe Run Insulation	(4" O.D.) Steam line	660	LF.	990.00			3.30	993.30
7	9.1623	37-01	Pipe Fitting Insulation	(4" O.D.) 90 degree steam fitting by exit door	70	EA.				0.35	0.35
7	9.4989	37-03	Pipe Run Insulation	(3" O.D.) Condensate line	8	LF.				0.04	0.04
7	9.8355	37-04	Pipe Fitting Insulation	(3" O.D.) 90 degree condensate fitting	3	EA.				0.02	0.02
7	9.1623	37-06	Pipe Fitting Insulation	(3" O.D.) 90 degree potable water fitting above entrance	4	EA.				0.02	0.02
7	9.8355	37-08	Pipe Run Insulation	(3" O.D.) Cooling water line	50	LF.				0.25	0.25
7	9.3296	37-09	Storage Tank / Exchanger Insulation	Molten salt tank	75	S.F.				0.38	0.38
TOTALS:					870		990.00			4.35	994.35

Total Removal Cost **$19,375.00**

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
38 Propane Storage

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.3306	38-01	Pipe Run Insulation	(5" O.D.) Steam, gray in color, near exit door	160	LF.				0.80	0.80
7	8.994	38-02	Pipe Fitting Insulation	(4" O.D.) Steam elbow, white re-wrapped	37	EA.				0.19	0.19
7	9.3306	38-03	Pipe Run Insulation	(3" O.D.) Steam line, green in color, west wall	85	LF.				0.43	0.43
7	9.1623	38-04	Pipe Fitting Insulation	(3" O.D.) Steam elbow, green, south corner	20	EA.				0.10	0.10
TOTALS:					302					1.51	1.51

Total Removal Cost $6,929.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
39a Incinerator

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.8355	39a-006	Transite Sheet Material	No samples taken	2200	S.F.				11.00	11.00
TOTALS:					2200					11.00	11.00

Total Removal Cost $8,800.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
3a Maintenance Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	8.3188	03a-06	Pipe Fitting Insulation	(2" O.D.) by sink, south west corner	5	EA.	7.50			0.03	7.53
6	8.992	03a-04	Pipe Fitting Insulation	(3" O.D.) south west corner by sink	7	EA.				0.04	0.04
6	8.6534	03a-12	Transite Sheet Material	Interior transite walls	960	S.F.				4.80	4.80
6	8.6514	03a-13	Transite Sheet Material	No samples taken Per scope of work. Assumed	17,360	S.F.				86.80	86.80
7	8.4861	03a-01	Pipe Fitting Insulation	(6" O.D.) elbow - west end	23	EA.				0.12	0.12
7	8.6554	03a-02	Pipe Run Insulation	(4" O.D.) Steam, upper level catwalk	180	LF.				0.90	0.90
7	9.3286	03a-03	Pipe Run Insulation	(3" O.D.)south west corner by sink	40	LF.				0.20	0.20
7	8.6554	03a-05	Pipe Run Insulation	(1" O.D.) at water heater south west	4	LF.				0.02	0.02
7	8.992	03a-09	Resilient Floor Tile (9" X 9")	Office white	63	S.F.				0.32	0.32
7	8.99	03a-10	Floor Tile Mastic	Office,north east corner	281	S.F.				1.41	1.41
TOTALS:					18923		7.50			94.62	102.12

Total Removal Cost $79,967.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
3b Ozone Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	8.1495	03b-01	Pipe Run Insulation	(2" O.D.)	50	L.F.	75.00			0.25	75.25
3	8.4881	03b-02	Pipe Fitting Insulation	(2" O.D.) elbow, north west corner	8	EA.	12.00			0.04	12.04
6	8.992	03b-04	Transite Sheet Material	No samples taken per scope of work. Assumed positive	3,525	S.F.				17.63	17.63
TOTALS:					3583		87.00			17.92	104.92

Total Removal Cost **$15,416.00**

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
3c Control House

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	6.9664	3c-12	Transite Sheet Material	No samples taken	7,610	S.F.				38.05	38.05
7	8.4841	3c-01	Resilient Floor Tile (9" X 9")	Green (9"x9")	2000	S.F.				10.00	10.00
7	8.3148	3c-02	Floor Tile Mastic	Brown	2000	S.F.				10.00	10.00
7	8.992	3c-04	Pipe Run Insulation	(4" O.D.) Steam line with gray lagging	130	L.F.				0.65	0.65
7	9.3286	3c-05	Pipe Run Insulation	(4" O.D.) Cold water line, north wall	80	L.F.				0.40	0.40
7	8.8247	3c-06	Pipe Fitting Insulation	(3" O.D.) Cold water elbow, north wall	21	EA.				0.11	0.11
7	8.4861	3c-07	Pipe Run Insulation	(3" O.D.) Condensate line, south wall	8	L.F.				0.04	0.04
7	8.4861	3c-08	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, south wall	3	EA.				0.02	0.02
7	8.992	3c-13A	Pipe Run Insulation	(6" O.D.) Steam line; white material	12	L.F.				0.06	0.06
TOTALS:					11864					59.32	59.32

Total Removal Cost $48,148.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

Building # and Name
3d NAR Towers

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
2	7.1347	3d-08	Pipe Run Insulation	(4" O.D.) Horizontal steam line, tar wrapped	30	L.F.	45.00			0.15	45.15
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, ta wrapped	12	L.F.	18.00			0.06	18.06
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.) Vertical steam line, ta wrapped	24	L.F.	36.00			0.12	36.12
2	7.1347	3d-08	Pipe Run Insulation	(3" O.D.)Vertical steam line, tar wrapped	12	L.F.	18.00			0.06	18.06
3	6.1219	3d-01	Storage Tank / Exchanger Lagging	Black tar tank wrap	1812	S.F.	2718.00			9.06	2727.06
6	5.7873	3d-02A	Pipe Run Insulation	(4" O.D.) Steam line	250	L.F.				1.25	1.25
6	7.4733	3d-04A	Pipe Run Insulation	(4" O.D.) Sump water insulation	450	L.F.				2.25	2.25
7	7.1327	3d-05	Pipe Fitting Insulation	(4" O.D.) Sump water line insulation elbow, by WEMCO	104	EA.				0.52	0.52
7	7.9792	3d-06	Pipe Fitting Insulation	(3" O.D.) Steam line insulation elbow, near WEMCO sample #	27	EA.				0.14	0.14
7	8.8257	3d-07	Pipe Fitting Insulation	(4" O.D.) Potable water line insulation valve	27	EA.				0.14	0.14
TOTALS:					2748		2,835.00			13.74	2,848.74

Total Removal Cost $57,622.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
3e Hot Raffinate Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.994	3e-06	Pipe Fitting Insulation	(4" O.D.) Tank elbow, at south end	20	EA.		540.00	580.00		1120.00
1	8.6554	3e-09	Pipe Run Insulation	(8" O.D.) Steam line	210	LF.		5250.00	3990.00		9240.00
1	6.6348	3e-16	Debris samples from floor	Northwest corner	1	EA		25.00	0.00		25.00
1	8.3188	3e-26	Pipe Run Insulation	(6" O.D.) Condensate line, south wall	80	LF.		1760.00	1040.00		2800.00
1	8.6584	3e-27	Pipe Fitting Insulation	(6" O.D.) Condensate elbow at north wall	28	EA.		756.00	812.00		1568.00
1	3.4211	3e-33	Transite Sheet Material	Delaminated section north wall by overhead door	2,376	S.F.		9504.00	21384.00		30888.00
2	8.8267	3e-10	Pipe Fitting Insulation	(6" O.D.) Steam elbow, by light	25	EA.	37.50			0.13	37.63
3	8.8247	3e-07	Pipe Run Insulation	(4" O.D.) Tank line, at south end	60	LF.	90.00			0.30	90.30
3	8.996	3e-22	Pipe Run Insulation	(8" O.D.) Steam line at south wall	50	LF.	75.00			0.25	75.25
3	9.6692	3e-28	Pipe Run Insulation	(8" O.D.) Abandoned steam line at south wall	70	LF.	105.00			0.35	105.35
3	9.3326	3e-29	Pipe Fitting Insulation	(8" O.D.) Abandoned steam elbow at south wall	4	EA.	6.00			0.02	6.02
4	9.6692	3e-18	Pipe Run Insulation	(8" O.D.) At half-level	30	LF.	45.00			0.15	45.15
6	9.6692	3e-19	Pipe Fitting Insulation	(3" O.D.) Elbow leading from 8" O.D. line	7	EA.				0.04	0.04
6	9.3326	3e-23	Pipe Fitting Insulation	(8" O.D.) Steam elbow	9	EA.				0.05	0.05
6	7.9792	3e-32	Transite Sheet Material	No samples taken, Assumed positive	17,850	S.F.				89.25	89.25
7	9.3326	3e-01A	Pipe Run Insulation	(6" O.D.) Steam line	50	LF.				0.25	0.25
7	9.3326	3e-02	Pipe Fitting Insulation	(6" O.D.) Steam elbow	8	EA.				0.04	0.04
7	9.3326	3e-03B	Pipe Run Insulation	(4" O.D.) Condensate line	65	LF.				0.33	0.33
7	9.3326	3e-04	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	8	EA.				0.04	0.04
7	8.996	3e-12	Pipe Fitting Insulation	(6" O.D.) Metal jacketed steam elbow at railing	2	EA.				0.01	0.01
7	8.996	3e-13	Pipe Run Insulation	(6" O.D.) Steam line by window, re-wettable canvas	93	LF.				0.47	0.47
7	9.3326	3e-14	Pipe Fitting Insulation	(6" O.D.) Steam elbow, re-wettable canvas	5	EA.				0.03	0.03
7	9.6692	3e-20	Pipe Fitting Insulation	(4" O.D.) Abandoned elbow	3	EA.				0.02	0.02
7	9.3326	3e-21	Pipe Run Insulation	(4" O.D.) Abandoned line, at tank F1-309	50	LF.				0.25	0.25
7	8.996	3e-24A	Pipe Run Insulation	(10" O.D.) Abandoned pump line	20	LF.				0.10	0.10
7	8.996	3e-25	Pipe Fitting Insulation	(6" O.D.) Abandoned pump elbow	7	EA.				0.04	0.04
7	8.6584	3e-31	Transite Sheet Material	Interior transite at exit	12,560	S.F.				62.80	62.80
TOTALS:					33691		358.50	17,835.00	27,806.00	154.88	46,154.38

Total Removal Cost $152,892.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
3f Harshaw Tower

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	7.9802	3f-01	Storage Tank / Exchanger Lagging	Sample taken bottom of tank #1	616	S.F.		12320.00	6160.00		18480.00
3	8.4861	3f-02	Storage Tank / Exchanger Insulation	Sample taken at bottom of tank #1	616	S.F.	924.00			3.08	927.08
3	8.4871	3f-03	Pipe Fitting Insulation	(6" O.D.)	72	EA.	108.00			0.36	108.36
TOTALS:					1304		1,032.00	12,320.00	6,160.00	3.44	19,515.44

Total Removal Cost $26,584.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
3g Refrigeration Shop

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	7.9782	3g-004	Transite Sheet Material	No Samples Taken, assumed positive, exterior	2,360	S.F.				11.80	11.80
7	8.8247	3g-002	Transite Sheet Material	Northwest Corner Interior wall	1390	S.F.				6.95	6.95
7	9.3326	3g-003	Pipe Run Insulation	(6" O.D.) North Wall	24	LF.				0.12	0.12
TOTALS:					3774					18.87	18.87

Total Removal Cost **$15,528.00**

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
45 Rust Engineering Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.1633	45-018	Pipe Run Insulation	(3" O.D.) Abandoned straight line	30	LF.	45.00			0.15	45.15
6	8.6574	45-007	Pipe Fitting Insulation	(6" O.D.) Steam line valve at air handling unit	35	EA.				0.18	0.18
6	8.6574	45-008	Pipe Run Insulation	(8" O.D.) Steam Line at Air Handling Unit	40	LF.				0.20	0.20
7	8.3188	45-004	Transite Sheet Material	Interior Transite wall	1070	S.F.				5.35	5.35
7	8.8257	45-010	Pipe Fitting Insulation	(8" O.D.) Steam line elbow at air handling unit, metal	6	EA.				0.03	0.03
7	8.8257	45-011	Pipe Run Insulation	(8" O.D.) Steam line at air handling unit, metal jacketed	40	LF.				0.20	0.20
7	9.1623	45-013	Pipe Fitting Insulation	(4" O.D.) Gray Pipe run insulation, abandoned West	3	EA.				0.02	0.02
7	8.993	45-017	Pipe Run Insulation	(2" O.D.) Cold water line straight	6	LF.				0.03	0.03
TOTALS:					1230		45.00			6.15	51.15

Total Removal Cost $8,290.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name: 46 Heavy Equip. Garage

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.8365	046-003	Resilient Floor Tile (9" X 9")	Green	200	S.F.				1.00	1.00
TOTALS:					200					1.00	1.00

Total Removal Cost $800.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
4a Green Salt Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	7.307	4a-040	Gasketry	Cloth gasket from reactor 6	2	EA.		4.00	10.00		14.00
1	7.9802	4a-045	Duct Insulation	(24" O.D.) flue exhaust pipe at column 4B	4	S.F.		8.00	40.00		48.00
1	7.6436	4a-096	Storage Tank / Exchanger Insulation	HF recovery tank in the HF recovery room by the	20	S.F.		400.00	200.00		600.00
1	7.304	4a-102	Pipe Run Insulation	Pipe Run Insulation in containment, preventing	720	L.F.		2880.00	6480.00		9360.00
3	9.5019	4a-006	Pipe Run Insulation	(6" O.D.) vertical treated water line, metal jacketed, by NE	75	L.F.	112.50			0.38	112.88
3	9.5019	4a-006	Pipe Run Insulation	(3" O.D.) horizontal treated water line by column 6D	30	L.F.	45.00			0.15	45.15
3	6.4605	4a-017	Storage Tank / Exchanger Insulation	Tank Insulation from the inside of tank 7	1100	S.F.	1650.00			5.50	1655.50
3	8.3208	4a-022A	Gasketry	Woven gasketry wrapped around steam line	10	L.F.	15.00			0.05	15.05
3	7.9842	4a-023	Storage Tank / Exchanger Insulation	Tank insulation from tank by column 6C	200	S.F.	300.00			1.00	301.00
3	8.4891	4a-031	Pipe Fitting Insulation	(2" O.D.) emergency water line elbow by column 6D	18	EA.	27.00			0.09	27.09
3	8.4891	4a-083	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 8	500	S.F.	750.00			2.50	752.50
3	8.4871	4a-086	Pipe Fitting Insulation	(2" O.D.) conduit line elbow on reactor 4 by column 3A	12	EA.	18.00			0.06	18.06
3	7.9812	4a-100	Pipe Run Insulation	(4" O.D.) steam condensate line on the west side of the	60	L.F.	90.00			0.30	90.30
4	9.4999	4a-046	Duct Insulation	(18" O.D.) exhausut lines from reactor 12-A5	40	S.F.	60.00			0.20	60.20
4	9.4999	4a-047	Duct Insulation	Exhaust insulation from reactor 12-A5	50	S.F.	75.00			0.25	75.25
4	9.1623	4a-048	Pipe Run Insulation	(10" O.D.) Steam line by column 5B	150	L.F.	225.00			0.75	225.75
4	8.8267	4a-049	Pipe Fitting Insulation	(10" O.D.) Steam line elbow at 5B	25	EA.	37.50			0.13	37.63
4	9.1633	4a-053	Pipe Run Insulation	(6" O.D.) Unknown line around the perimeter of the 6th floor.	150	L.F.	225.00			0.75	225.75
4	8.994	4a-068	Pipe Run Insulation	(6" O.D.) lines from tank between reactors 2 and 3	30	L.F.	45.00			0.15	45.15
4	8.8247	4a-072	Pipe Run Insulation	(3" O.D.) potable water line column 5F	40	L.F.	60.00			0.20	60.20
4	8.1525	4a-075	Duct Insulation Lagging	Air handling unit lagging by column 8D	500	S.F.	750.00			2.50	752.50
4	8.4881	4a-076	Duct Insulation	Blow fan insulation by column 7C	100	S.F.	150.00			0.50	150.50
4	9.4999	4a-079	Transite Sheet Material	Transite sheet material with inner insulation air cell around	600	S.F.	420.00			3.00	423.00
4	9.4999	4a-081	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow going into reactor 8	50	EA.	75.00			0.25	75.25
4	9.1633	4a-084	Pipe Run Insulation	(3" O.D.) pipe line by column 2A	40	L.F.	60.00			0.20	60.20
4	9.6692	4a-095	Pipe Fitting Insulation	(4" O.D.) HF recovery line elbow in the HF recovery room	4	EA.	6.00			0.02	6.02
5	10.1751	4a-016	Pipe Run Insulation	(4" O.D.) steam line by tank 7	54	L.F.				0.27	0.27
6	9.3326	4a-028	Pipe Run Insulation	(6" O.D.) vertical steam line by column F-1	330	L.F.				1.65	1.65
6	9.3296	4a-080	Transite Sheet Material	Interior transite sheeting material by column 1E	46500	S.F.				232.50	232.50

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
4a Green Salt Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.1485	4a-090	Transite Sheet Material	Material not sampled per Scope-of-Work exterior	80090	S.F.				400.45	400.45
6	9.1633	4a-092	Pipe Run Insulation	(8" O.D.) steam line, metal jacketed, by reactor 1	1120	L.F.				5.60	5.60
6	8.6574	4a-013	Pipe Run Insulation	(6" O.D.) vertical ammonia line by west side double doors	85	L.F.				0.43	0.43
7	8.996	4a-001	Pipe Run Insulation	(4" O.D.) horizontal steam line, metal jacketed, by south	500	L.F.				2.50	2.50
7	9.6692	4a-002	Pipe Fitting Insulation	(3" O.D.) steam line valve on column 4E	40	EA.				0.20	0.20
7	9.1643	4a-003A	Pipe Run Insulation	(4" O.D.) horizontal condensate line by column 9C by roll-up	300	L.F.				1.50	1.50
7	9.6682	4a-004	Storage Tank / Exchanger Insulation	(6" x 2") condensate tank by column 8A, sample missing	600	S.F.				3.00	3.00
7	9.8375	4a-005	Pipe Fitting Insulation	(3" O.D.) condenate line valve by column 3B	31	EA.				0.16	0.16
7	9.6692	4a-007	Pipe Fitting Insulation	(8" O.D.) treated water line valve by NE roll-up door	7	EA.				0.04	0.04
7	9.6692	4a-008	Pipe Run Insulation	(3" O.D.) horizontal potable water line by column 2D	130	L.F.				0.65	0.65
7	9.6672	4a-009	Pipe Fitting Insulation	(3" O.D.) potable water line elbow by column 2D	9	EA.				0.05	0.05
7	9.8375	4a-010	Pipe Run Insulation	(3" O.D.) vertical cold water line by column 4B	10	L.F.				0.05	0.05
7	10.0048	4a-011	Pipe Fitting Insulation	(4" O.D.) cold water line elbow on column 4F	6	EA.				0.03	0.03
7	9.5009	4a-015	Pipe Fitting Insulation	(2" O.D.) hydrogen line valve from tank 1	27	EA.				0.14	0.14
7	10.1741	4a-018	Pipe Fitting Insulation	(6" O.D.) steam line elbow by tank 11	2	EA.				0.01	0.01
7	9.4979	4a-019	Resilient Floor Tile (9" X 9")	Floor tile, green with black flecks in the office at the south	500	S.F.				2.50	2.50
7	9.1623	4a-021	Pipe Run Insulation	(6" O.D.) vertical steam line by column 6C	55	L.F.				0.28	0.28
7	9.6692	4a-022	Pipe Fitting Insulation	(6" O.D.) steam line elbow by column 6C	10	EA.				0.05	0.05
7	8.8277	4a-024	Pipe Run Insulation	(6" O.D.) verticle steam line, metal jacketed, by emergency	100	L.F.				0.50	0.50
7	8.4911	4a-025	Pipe Fitting Insulation	(8" O.D.) steam line elbow by center rescubber tank	23	EA.				0.12	0.12
7	9.1633	4a-026	Pipe Run Insulation	(3" O.D.) horizontal cold water line by south wall	41	L.F.				0.21	0.21
7	9.6692	4a-027	Pipe Fitting Insulation	(3" O.D.) cold water line elbow by south wall	8	EA.				0.04	0.04
7	8.8267	4a-029	Pipe Fitting Insulation	(8" O.D.) steam line valve by column E-1	23	EA.				0.12	0.12
7	9.6692	4a-030A	Pipe Run Insulation	(3" O.D.) vertical emergency water line by column 2D	66	L.F.				0.33	0.33
7	9.4999	4a-035A	Pipe Run Insulation	(6" O.D.) vertical pipe system from reactor 6	35	L.F.				0.18	0.18
7	9.4999	4a-041	Pipe Run Insulation	(3" O.D.) vertical treated water line by column 7B	20	L.F.				0.10	0.10
7	9.8385	4a-042	Pipe Run Insulation	(6" O.D.) Steam line by column 6C	150	L.F.				0.75	0.75
7	9.6702	4a-043	Pipe Fitting Insulation	(6" O.D.) Steam line elbow by column 6C	25	EA.				0.13	0.13
7	9.3326	4a-044	Pipe Run Insulation	(2" O.D.) vertical potable water line by column 6A	50	L.F.				0.25	0.25

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
4a Green Salt Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.6692	4a-050	Pipe Run Insulation	(6" O.D.) Abandoned line, metal jacketed, around the	20	LF.				0.10	0.10
7	9.6692	4a-051	Pipe Run Insulation	(6" O.D.) Abandoned line elbow around the perimeter of	11	LF.				0.06	0.06
7	9.8365	4a-052	Pipe Fitting Insulation	(6" O.D.) Unknown line elbow around the perimeter of the 6th	5	EA.				0.03	0.03
7	9.6672	4a-054	Fabric / Rope	Suspect miscellaneous rope at column E2	6	LF.				0.03	0.03
7	9.4999	4a-055	Pipe Fitting Insulation	(6" O.D.) anhydrous line valve in the recovery room by	10	EA.				0.05	0.05
7	9.4999	4a-056	Pipe Run Insulation	(6" O.D.) anhydrous line in the recovery room by column 1E	40	LF.				0.20	0.20
7	9.4999	4a-058	Pipe Run Insulation	(36" O.D.) insulated vertical pipe riser by column 6F	20	LF.				0.10	0.10
7	9.6682	4a-063	Pipe Run Insulation	(16" O.D.) straight run off rear of reactor 2	10	LF.				0.05	0.05
7	9.1633	4a-064	Storage Tank / Exchanger Insulation	Tank insulation at the rear of reactor 2	216	S.F.				1.08	1.08
7	9.4999	4a-065	Pipe Run Insulation	(2" O.D.) insulated conduit lines going into reactor 2	75	LF.				0.38	0.38
7	9.8365	4a-066	Pipe Fitting Insulation	(2" O.D.) insulated conduit elbow on lines going into	35	EA.				0.18	0.18
7	9.4999	4a-067	Gasketry	gasketry from abandoned tank at the rear of reactor 3	80	LF.				0.40	0.40
7	9.6682	4a-069	Pipe Fitting Insulation	(2" O.D.) line valve from tank between reactos 2 and 3	15	EA.				0.08	0.08
7	8.995	4a-070	Pipe Run Insulation	(6" O.D.) steam line by column 1F	95	LF.				0.48	0.48
7	8.995	4a-070	Pipe Run Insulation	(2" O.D.) steam line by column 3F	20	LF.				0.10	0.10
7	9.6682	4a-071	Pipe Fitting Insulation	(3" O.D.) steam line elbow at column 1F	36	EA.				0.18	0.18
7	9.8365	4a-073	Pipe Run Insulation	(3" O.D.) steam line by column 8E on the south wall	40	LF.				0.20	0.20
7	9.8365	4a-074	Pipe Fitting Insulation	(10" O.D.) steam line elbow by column 8D on the south wall	60	EA.				0.30	0.30
7	9.6682	4a-077	Pipe Run Insulation	(4" O.D.) abandoned steam line by column 4B	30	LF.				0.15	0.15
7	9.6682	4a-078	Pipe Fitting Insulation	(2" O.D.) abandoned steam line elbow by column 4B	6	EA.				0.03	0.03
7	9.4999	4a-082	Pipe Run Insulation	(3" O.D.) unknow pipe line going into reactor 8 by column	100	LF.				0.50	0.50
7	9.6682	4a-085	Pipe Fitting Insulation	(3" O.D.) pipe line elbow by column 2A	6	EA.				0.03	0.03
7	9.3316	4a-087	Pipe Run Insulation	(2" O.D.) line off of the conduit line going into reactor 7	24	LF.				0.12	0.12
7	9.3316	4a-088	Pipe Run Insulation	(8" O.D.) exhaust line coming from reactor 8 by column 2B	50	LF.				0.25	0.25
7	9.6682	4a-089	Pipe Fitting Insulation	(8" O.D.) exhaust line elbow coming from reactor 9 by	30	EA.				0.15	0.15
7	9.1633	4a-091	Pipe Fitting Insulation	(6" O.D.) steam line elbow by reactor 1	66	EA.				0.33	0.33
7	10.0058	4a-094	Pipe Run Insulation	(4" O.D.) HF recovery line in the HF recovery room	20	LF.				0.10	0.10
7	10.0058	4a-097	Pipe Run Insulation	(2" O.D.) condensate line, metal jacketed, in the HF	23	LF.				0.12	0.12
7	10.8483	4a-101	Transite Sheet Material	Transite sheeting material inside transformer banks, Not	150	S.F.				0.75	0.75

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
4a Green Salt Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4999	4a-103	Pipe Run Insulation	(8" O.D.) anhydrous hydrogen line by column 5B	40	L.F.				0.20	0.20
7	8.995	4a-104	Pipe Fitting Insulation	(8" O.D.) unknow line elbow by column 5B, next to	12	EA.				0.06	0.06
7	9.3316	4a-105	Pipe Fitting Insulation	(8" O.D.) unknown line elbow by column 5B, next to	1	EA.				0.01	0.01
7	9.4999	4a-106	Pipe Run Insulation	(4" O.D.) steam line on the wes wall by column 4A	100	L.F.				0.50	0.50
7	8.8237	4a-109	Storage Tank / Exchanger Insulation	Tank 4-6, 3 each	360	S.F.				1.80	1.80
TOTALS:					137289		5,196.00	3,292.00	6,730.00	682.72	15,900.72

Total Removal Cost $696,687.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
4c Plant 4 Maint. Bldg.

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
6	8.1455	04c-004	Transite Sheet Material	No samples taken	8,530	S.F.				42.65	42.65
7	6.9644	04c-005	Transite Sheet Material	Interior transite	3000	S.F.				15.00	15.00
TOTALS:					11530					57.65	57.65

Total Removal Cost $46,120.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

3242

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date:
2/28/92

Revision Date:

Building # and Name
5 Metals Production Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	8.3148	05-024	Gasketry	Gasket on blower flange	1	S.F.		2.00	5.00		7.00
1	7.4723	05-027	Pipe Run Insulation	(8" O.D.) 150 pound steam line, between column 17F and	158	L.F.		3950.00	3002.00		6952.00
1	8.8247	05-039	Pipe Run Insulation	(4" O.D.) 150 pound steam line, near column 10A, branch	15	L.F.		330.00	195.00		525.00
1	8.4851	05-067	Pipe Run Insulation Lagging	(8" O.D.) Steam line lagging	60	L.F.		600.00	180.00		780.00
1	7.1387	05-089	Pipe Fitting Insulation	(6" O.D.) Steam line fitting, next to column 4F	3	EA.		81.00	87.00		168.00
3	8.8267	05-003	Pipe Run Insulation	(8" O.D.) Condensate line, near column 28B	340	L.F.	510.00			1.70	511.70
3	8.995	05-004	Pipe Fitting Insulation	(4" O.D.) Condensate line elbow, near column 26E	24	EA.	36.00			0.12	36.12
3	6.2852	05-063	HVAC Flexible Connector	(12" X 24" X 2") Woven	1	EA.	50.00			0.01	50.01
3	8.1465	05-076	Pipe Run Insulation	(6" O.D.) Process water line next to column 6A	194	L.F.	291.00			0.97	291.97
3	8.1465	05-078	Pipe Run Insulation	(6" O.D.) Condensate line, next to 2B	480	L.F.	720.00			2.40	722.40
4	9.8365	05-104	Pipe Run Insulation	(6" O.D.) 150 pound steam line, near column 26E	70	L.F.	105.00			0.35	105.35
4	9.8365	05-001	Pipe Run Insulation	(6" O.D.) 150 pound steam, line near column 29C	80	L.F.	120.00			0.40	120.40
4	9.4999	05-006	Pipe Fitting Insulation	(4" O.D.) Potable water line tee near column 26E	8	EA.	12.00			0.04	12.04
4	7.4743	05-007	Pipe Fitting Insulation	(2" O.D.)	26	EA.	39.00			0.13	39.13
4	8.3158	05-008	Pipe Run Insulation	(2" O.D.) Steam line, office 05-27	70	L.F.	105.00			0.35	105.35
4	8.4851	05-013	Acoustic Panel (2' X 4')	(2' X 4') Ceiling panel, hole and fissure	144	S.F.	100.80			0.72	101.52
4	8.4881	05-014	Transite Sheet Material	Transite walls from column 25 to column 29	1000	S.F.	700.00			5.00	705.00
4	8.8217	05-037	Pipe Run Insulation	(8" O.D.) 150 pound steam line, near column 14	350	L.F.	525.00			1.75	526.75
4	8.99	05-038	Pipe Fitting Insulation	(8" O.D.) 150 pound steam line elbow, near column 11F	15	EA.	22.50			0.08	22.58
4	9.8345	05-040	Pipe Run Insulation	(6" O.D.) Condensate line, near column 10A	297	L.F.	445.50			1.49	446.99
4	9.1613	05-041	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow, near column 11B	4	EA.	6.00			0.02	6.02
4	8.4851	05-044	Pipe Fitting Insulation	(6" O.D.) Potable water line elbow, near column 11F	6	EA.	9.00			0.03	9.03
4	9.6672	05-046	Joint Compound	(4" O.D.) Transite pipe joint generator 11 and 12, near	33	S.F.	23.10			0.17	23.27
4	9.6652	05-047	Transite Pipe	(4" O.D.) Transite exhaust flue generator 11 and 12, near	55	L.F.	82.50			0.28	82.78
4	8.6554	05-048	Transite Sheet Material	1/4" Walls and ceiling	8140	S.F.	5698.00			40.70	5738.70
4	8.6544	05-049	Transite Sheet Material	1/4" Transite corridor wall addition from 10A to 7A	900	S.F.	630.00			4.50	634.50
4	9.1583	05-051	Transite Pipe	(4" O.D.) Transite flue at remelt near furnace column 6D	56	L.F.	84.00			0.28	84.28
4	9.4969	05-052	Gasketry	8" Gasket	1	L.F.	1.50			0.01	1.51
4	7.9812	05-056A	Heat Shield	Gloves at column 11F	1	S.F.	0.70			0.01	0.71

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

Building # and Name
5 Metals Production Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	7.9812	05-056B	Heat Shield	Rope gasket, 1/4" X 1" flat ribbon, at column 11F	4	S.F.	2.80			0.02	2.82
4	9.3286	05-057	Pipe Run Insulation	(4" O.D.) Water line riser, at column 12G	2	L.F.	3.00			0.01	3.01
4	8.4851	05-057A	Transite Sheet Material	Transite on wall columns 13F and 10F	1460	S.F.	1022.00			7.30	1029.30
4	8.1465	05-060	Transite Sheet Material	Transite walls, office 05-24, at column 9G	1668	S.F.	1167.60			8.34	1175.94
4	8.3138	05-062	Pipe Fitting Insulation	(4" O.D.) Steam line elbow	11	EA.	16.50			0.06	16.56
4	8.8177	05-064	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, green	400	S.F.	280.00			2.00	282.00
4	8.8177	05-064	Floor Tile Mastic	Floor tile mastic, black	400	S.F.	280.00			2.00	282.00
4	9.4989	05-065	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 5G	31	EA.	46.50			0.16	46.66
4	8.991	05-069	Pipe Run Insulation	(3" O.D.) Steam line riser, near column 4E	610	L.F.	915.00			3.05	918.05
4	8.991	05-070	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 2D	63	EA.	94.50			0.32	94.82
6	6.9674	05-022	Transite Sheet Material	1/4" Transite wallboard	2800	S.F.				14.00	14.00
6	8.4831	05-036	Transite Sheet Material	Corregated Transite wall	646	S.F.				3.23	3.23
6	7.304	05-079	Transite Sheet Material	Corregated wall panel, next to elevator at column 1E	3809	S.F.				19.05	19.05
6	9.1603	05-092	Pipe Fitting Insulation	(4" O.D.) Condensate return line fitting, between column 2F	90	EA.				0.45	0.45
6	9.3276	05-093	Pipe Run Insulation	(3" O.D.) Condensate return line, by column 2D	345	L.F.				1.73	1.73
6	9.3276	05-094	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, on heater by column	115	EA.				0.58	0.58
6	8.8217	05-095	Pipe Fitting Insulation	(4" O.D.) 150 pound steam line fitting, by column 28F	1995	EA.				9.98	9.98
6	7.8109	05-097	HVAC Flexible Connector	Cloth like material (24" X 24"x4")	26	EA.				0.13	0.13
7	7.9782	05-010	Transite Sheet Material	Transite wall, office 05-27	960	S.F.				4.80	4.80
7	9.3246	05-011	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, white with gray streaks, office 05-27	120	S.F.				0.60	0.60
7	9.4979	05-015	Transite Sheet Material	No sample taken, unsafe to enter elevator shaft, Assumed	6400	S.F.				32.00	32.00
7	8.6514	05-016	Pipe Run Insulation	(8" O.D.) 150 pound steam line, metal jacketed, near	486	L.F.				2.43	2.43
7	8.3148	05-018	Pipe Run Insulation	(4" O.D.) Branch line off of (6" O.D.) condensate return line,	260	L.F.				1.30	1.30
7	8.4841	05-019	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, by caged	13	EA.				0.07	0.07
7	8.3148	05-020B	Pipe Run Insulation	(3" O.D.) Potable water line, near column 19E, metal	75	L.F.				0.38	0.38
7	8.6524	05-021	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 19E	6	EA.				0.03	0.03
7	8.6524	05-029	Pipe Run Insulation	(4" O.D.) Potable water line, metal jacketed, next to 16F	100	L.F.				0.50	0.50
7	8.989	05-032	Pipe Run Insulation	(6" O.D.) Condensate line	70	L.F.				0.35	0.35
7	9.1583	05-033	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	3	EA.				0.02	0.02

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
5 Metals Production Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4959	05-053	Pipe Run Insulation	(4" O.D.) Steam line, at column F	80	L.F.				0.40	0.40
7	8.8227	05-054	Pipe Fitting Insulation	(4" O.D.) Steam line elbow, near column 10G	11	EA.				0.06	0.06
7	8.99	05-055	Gasketry	Sheet gasket material at column 11F	60	S.F.				0.30	0.30
7	9.6642	05-059	Resilient Floor Tile (9" X 9")	(9" X 9") Floor tile, brown and white, office 05-24	600	S.F.				3.00	3.00
7	9.6642	05-059	Floor Tile Mastic	Black floor tile mastic, office 05-24	600	S.F.				3.00	3.00
7	8.3158	05-071	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, at North end of men's	42	EA.				0.21	0.21
7	8.1465	05-072A	Pipe Run Insulation	(4" O.D.) Potable water line, next to column 2E	562	L.F.				2.81	2.81
7	8.3168	05-073	Pipe Fitting Insulation	(4" O.D.) Sump water line, South of column 5F	5	EA.				0.03	0.03
7	8.3158	05-077	Pipe Fitting Insulation	(6" O.D.) Condensate return line elbow, North of column 6A	25	EA.				0.13	0.13
7	8.993	05-080	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, next to column 26F	13	EA.				0.07	0.07
7	8.991	05-081	Pipe Run Insulation	(4" O.D.) Steam line, next to column 26F	110	L.F.				0.55	0.55
7	8.8217	05-082	Pipe Run Insulation	(6" O.D.) Condensate line, near column 24E	100	L.F.				0.50	0.50
7	8.8237	05-083	Pipe Fitting Insulation	(6" O.D.) Condensate line fitting, next to column 25F	6	EA.				0.03	0.03
7	7.9802	05-084	Transite Sheet Material	Transite wall, South of elevator wall	3836	S.F.				19.18	19.18
7	9.3266	05-085	Transite Sheet Material	Interior Transite	2568	S.F.				12.84	12.84
7	8.8237	05-086	Pipe Fitting Insulation	(6" O.D.) Condensate return line fitting, next to column 18F	28	EA.				0.14	0.14
7	8.6544	05-087	Pipe Run Insulation	(6" O.D.) Condensate line, next to column 15A	282	L.F.				1.41	1.41
7	9.1603	05-088	Pipe Run Insulation	(4" O.D.) Steam line, North of column 3D	12	L.F.				0.06	0.06
7	7.8119	05-090	Transite Sheet Material	Smooth Transite wall, by elevator	5316	S.F.				26.58	26.58
7	9.1593	05-096	Transite Sheet Material	Smooth Transite walls on elevator at south end of plant	2568	S.F.				12.84	12.84
7	8.3188	05-098	Transite Sheet Material	South side of plant 5, No samples taken Assumed	1,768	S.F.				8.84	8.84
7	9.4999	05-099	Pipe Fitting Insulation	(4" O.D.) Steam line fitting, Northwest side of plant	9	EA.				0.05	0.05
7	8.6524	05-030	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow, next to column 16F,	3	EA.				0.02	0.02
7	8.99	05-055	Gasketry	Sheet gasket material at column 10G	1	S.F.				0.01	0.01
TOTALS:					54105		14,144.50	4,963.00	3,469.00	269.34	22,845.84

Total Removal Cost $378,016.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
53a Health, Safety Building

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.4851	53-003	Other	Tar on insulation fasteners,sample taken south	20	S.F.	14.00			0.10	14.10
TOTALS:					20		14.00			0.10	14.10

Total Removal Cost $40.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

Building # and Name
54a UF Reduction Fac. 1

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
3	10.1741	54-040	Pipe Run Insulation	(4" O.D.) Dead line in refrigeration area, could not	320	LF.	480.00			1.60	481.60
6	9.8375	54-028	Pipe Run Insulation	(4" O.D.) Cooling water supply line over water pumps	80	LF.				0.40	0.40
6	9.5009	54-031	Pipe Fitting Insulation	(5" O.D.) Cooling water return line elbow above condensate	25	EA.				0.13	0.13
6	9.5009	54-032A	Pipe Run Insulation	(4" O.D.) Cooling water return line above water pumps	40	LF.				0.20	0.20
6	9.8375	54-033	Pipe Run Insulation	(4" O.D.) Potable water line left of stairs	379	LF.				1.90	1.90
6	9.8375	54-037	Pipe Run Insulation	(4" O.D.) Condensate line by condensate tank	71	LF.				0.36	0.36
6	10.5107	54-041	Pipe Fitting Insulation	(4" O.D.) Dead line elbow in refrigeration area, could not	12	EA.				0.06	0.06
6	9.5009	54-021	Pipe Fitting Insulation	Over (10" O.D.) steam line fitting on main line in steam	57	EA.				0.29	0.29
7	9.6682	54-003	Pipe Fitting Insulation	(2" O.D.) Condensate line fitting near garage door	7	EA.				0.04	0.04
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	White with gray splotches in office on NW corner of building	210	S.F.				1.05	1.05
7	9.3286	54-013	Floor Tile Mastic	Black in office on NW corner of building 54	210	S.F.				1.05	1.05
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	Computer room hallway	450	S.F.				2.25	2.25
7	9.3286	54-013	Floor Tile Mastic	Computer room hallway	450	S.F.				2.25	2.25
7	9.3286	54-013	Resilient Floor Tile (12" X 12")	Hallway of ladies restroom	140	S.F.				0.70	0.70
7	9.3286	54-013	Floor Tile Mastic	Hallway of ladies restroom	140	S.F.				0.70	0.70
7	9.8375	54-022	Pipe Fitting Insulation	(6" O.D.) Condensate line elbow	13	EA.				0.07	0.07
7	8.3168	54-024	Transite Sheet Material	Interior walls north side of plant	5160	S.F.				25.80	25.80
7	9.5009	54-026	Pipe Fitting Insulation	(5" O.D.) Cooling water supply line elbow above condensate	38	EA.				0.19	0.19
7	9.6682	54-027	Pipe Run Insulation	(4" O.D.) Cooling water supply line off catwalk south side	650	LF.				3.25	3.25
7	9.8375	54-034	Pipe Fitting Insulation	(4" O.D.) Potable water line elbow by stairs	21	EA.				0.11	0.11
7	9.8375	54-035	Pipe Run Insulation	(4" O.D.) Instrument air line in main steam room	27	LF.				0.14	0.14
7	9.8375	54-036	Pipe Fitting Insulation	(4" O.D.) Instrument air line elbow	2	EA.				0.01	0.01
TOTALS:					8502		480.00			42.51	522.51

Total Removal Cost $65,209.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
55a Slag Recycling Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	9.5009	55a-004	Pipe Run Insulation Lagging	(4" O.D.) South Wall	245	S.F.	367.50			1.23	368.73
7	9.5009	55a-001	Transite Sheet Material	No sampleTaken, electrical transformer panel	500	S.F.				2.50	2.50
7	8.8277	55a-002	Transite Sheet Material	By control room	9100	S.F.				45.50	45.50
7	7.4723	55a-009	Transite Sheet Material	Exterior No Samples Taken, assumed to be positive	11800	S.F.				59.00	59.00
7	9.1643	55a-005	Pipe Fitting Insulation	(4" O.D.) Elbow , south wall at catwalk	31	EA.				0.16	0.16
7	9.5009	55a-006	Pipe Run Insulation	(4" O.D.) at South wall	60	L.F.				0.30	0.30
7	8.3188	55a-010	Transite Sheet Material	No samples taken	36,000	S.F.				180.00	180.00
TOTALS:					57736		367.50			288.68	656.18

Total Removal Cost $234,207.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 2/28/92 3242

Revision Date:

Building # and Name
6 Metals Fabrication Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
1	7.304	06-023B	Pipe Fitting Insulation	(2" to 4" O.D.) Condensate tank	14	EA.		378.00	406.00		784.00
1	6.4585	06-031	Transite Sheet Material	Transite	6250	S.F.		25000.00	56250.00		81250.00
1	8.6564	06-065B	Pipe Fitting Insulation	(2" O.D.) Elbow near column C14	4	EA.		108.00	116.00		224.00
1	8.4881	06-122	Pipe Run Insulation	Vertical run at tocco furnace	6	L.F.		132.00	78.00		210.00
1	7.8099	06-135	Pipe Fitting Insulation	Refer to sample 2314, pump pit	1	EA.		27.00	29.00		56.00
1	9.3296	06-137	Gasketry	(12" O.D.) Loose used gasket in pump pit	1	L.F.		2.00	5.00		7.00
1	7.1357	06-163	Pipe Fitting Insulation	(6" O.D.) Refer to 2334, steam elbow	1	EA.		27.00	29.00		56.00
1	6.6318	06-202	Pipe Fitting Insulation	(6" O.D.) Hot water elbow, west side of plant	6	EA.		162.00	174.00		336.00
2	6.9684	06-076	Pipe Fitting Insulation	(8" O.D.) Steam elbow by restroom	2	EA.	3.00			0.01	3.01
2	6.2952	06-078	Pipe Run Insulation	(8" O.D.) Steam line by restroom	5	L.F.	7.50			0.03	7.53
3	8.6554	06-045A	Pipe Run Insulation	(8" O.D.)	30	L.F.	45.00			0.15	45.15
3	8.4861	06-045B	Pipe Fitting Insulation	(8" O.D.) Steam elbow	7	EA.	10.50			0.04	10.54
3	9.3316	06-061	Pipe Fitting Insulation	(4" O.D.) Condensate elbow, north AHU catwalk	60	EA.	90.00			0.30	90.30
3	7.6436	06-086	Pipe Fitting Insulation	(4" O.D.) Air line elbow	7	EA.	10.50			0.04	10.54
3	9.1623	06-179	Pipe Fitting Insulation	(4" O.D.) Steam elbow, above chalkboard	15	EA.	22.50			0.08	22.58
3	6.2922	06-194	Pipe Fitting Insulation	(2" O.D.) Condensate, elbow by pickling,white exposed	6	EA.	9.00			0.03	9.03
3	6.2922	06-194	Pipe Fitting Insulation	(2" O.D.) Condensate elbow, by entrance G-90, exposed	2	EA.	3.00			0.01	3.01
3	8.8247	06-198	Pipe Fitting Insulation	(3" O.D.) Waste water elbow, north end of tank	35	EA.	52.50			0.18	52.68
3	8.8247	06-198	Pipe Fitting Insulation	Waste water fitting, east side	5	EA.	7.50			0.03	7.53
3	9.1653	06-117	Pipe Fitting Insulation	(6" O.D.) Steam elbow	20	EA.	30.00			0.10	30.10
4	9.3296	06-019B	Pipe Fitting Insulation	(8" O.D.) Steam; some metal clad	125	EA.	187.50			0.63	188.13
4	9.3296	06-019B	Pipe Fitting Insulation	(2" to 4" O.D.) 2 of 5 are metal clad	5	EA.	7.50			0.03	7.53
4	9.3296	06-029A	Pipe Run Insulation	(4" O.D.) Process water	45	L.F.	67.50			0.23	67.73
4	8.1485	06-047	Pipe Fitting Insulation	(8" O.D.) Steam tee at column C29 platform	41	EA.	61.50			0.21	61.71
4	8.993	06-051A	Pipe Fitting Insulation	Main steam line fitting at column C18	173	EA.	259.50			0.87	260.37
4	9.3296	06-051B	Pipe Run Insulation	(10" O.D.) At column C18	173	L.F.	259.50			0.87	260.37
4	8.6564	06-055B	Pipe Fitting Insulation	(6" O.D.) Condensate elbow near column C23	8	EA.	12.00			0.04	12.04
4	7.9812	06-077	Transite Sheet Material	Smooth interior wall	3000	S.F.	2100.00			15.00	2115.00
4	9.1633	06-087B	Pipe Run Insulation	(2" O.D.) Steam line, metal clad	10	L.F.	15.00			0.05	15.05

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
6 Metals Fabrication Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
4	8.3168	06-118	Pipe Run Insulation	(6" O.D.) Abandoned line leading to tocco furnace	25	LF.	37.50			0.13	37.63
4	9.6672	06-138	Resilient Floor Tile (9" X 9")	Black	75	S.F.	52.50			0.38	52.88
4	9.6672	06-138	Resilient Floor Tile (9" X 9")	White	75	S.F.	52.50			0.38	52.88
4	8.993	06-139	Fabric / Rope	Valve packing rope, north corner of pump pit	10	LF.	7.00			0.05	7.05
4	8.1485	06-151	Pipe Fitting Insulation	(2" O.D.) Water line	5	EA.	7.50			0.03	7.53
4	9.1623	06-161	Pipe Fitting Insulation	(6" O.D.) Steam elbow	19	EA.	28.50			0.10	28.60
4	9.1623	06-165	Pipe Run Insulation	(2" O.D.) Steam line bypass	40	LF.	60.00			0.20	60.20
4	8.992	06-171	Pipe Run Insulation	(10" O.D.) Steam line	40	LF.	60.00			0.20	60.20
4	9.1603	06-173	Pipe Run Insulation	(4" O.D.) Water line, at east wal	40	LF.	60.00			0.20	60.20
4	8.992	06-175	Pipe Fitting Insulation	(4" O.D.) Water elbow, at east wall	12	EA.	18.00			0.06	18.06
4	9.8375	06-207	Pipe Run Insulation	(5" O.D.) steam line by column B-3 Assumed per WEMCO	15	LF.	22.50			0.08	22.58
5	8.3218	06-099	Pipe Run Insulation	(2" O.D.) Condensate line, metal clad	26	LF.				0.13	0.13
6	8.4851	06-014	Storage Tank / Exchanger Insulation	Condensate tank	50	S.F.				0.25	0.25
6	8.6544	06-017B	Pipe Fitting Insulation	(4" O.D.) Condensate elbow	9	EA.				0.05	0.05
6	7.4723	06-044	Transite Sheet Material	Smooth cement wallboard, west wall	11,500	S.F.				57.50	57.50
6	7.6426	06-046	Resilient Floor Tile (9" X 9")	Green in quality control office	300	S.F.				1.50	1.50
6	8.993	06-050	Resilient Floor Tile (12" X 12")	Break room	150	S.F.				0.75	0.75
6	8.8227	06-059	Pipe Fitting Insulation	(6" O.D.) Steam elbow, south AHU catwalk	173	EA.				0.87	0.87
6	7.9802	06-068	Pipe Run Insulation	Water line	20	LF.				0.10	0.10
6	7.9802	06-070	Pipe Fitting Insulation	Water fitting by restroom	16	EA.				0.08	0.08
6	7.8119	06-072	Pipe Run Insulation	Water line outside restroom	60	LF.				0.30	0.30
6	8.8247	06-095B	Pipe Run Insulation	(4" O.D.) Steam line, metal clad	92	LF.				0.46	0.46
6	6.6288	06-190	Transite Sheet Material	North side of plant	10800	S.F.				54.00	54.00
6	8.6544	06-017B	Pipe Fitting Insulation	(4" O.D.)Condensate elbow	9	EA.				0.05	0.05
6	8.1465	06-209	Pipe Fitting Insulation	(6" O.D.) Steam elbows assumed positive per WEMCO	41	EA.				0.21	0.21
7	9.4969	06-007	Pipe Run Insulation	(6" O.D.)Steam line, on catwalk	130	LF.				0.65	0.65
7	9.1603	06-016	Pipe Run Insulation Lagging	(8" O.D.) Treated water line	570	S.F.				2.85	2.85
7	9.4969	06-020	Pipe Fitting Insulation	(8" O.D.)	17	EA.				0.09	0.09
7	9.1623	06-022	Pipe Run Insulation	(3" O.D.) Potable water	25	LF.				0.13	0.13

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: 3242
2/28/92

Revision Date:

Building # and Name
6 Metals Fabrication Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.1623	06-024	Pipe Fitting Insulation	(3" O.D.) Potable water elbow, over restroom	8	EA.				0.04	0.04
7	9.4969	06-026	Pipe Fitting Insulation	(3" O.D.) Water elbow, above work station	10	EA.				0.05	0.05
7	9.8335	06-028	Pipe Run Insulation	(10" O.D.) Metal clad steam line	50	LF.				0.25	0.25
7	9.3296	06-029B	Pipe Fitting Insulation	(4" O.D.) Process water fitting	3	EA.				0.02	0.02
7	9.8335	06-030	Pipe Fitting Insulation	(10" O.D.) Steam elbow	4	EA.				0.02	0.02
7	9.8335	06-032	Pipe Run Insulation	(4" O.D.)Condensate, metal clad	200	LF.				1.00	1.00
7	9.3286	06-036	Pipe Fitting Insulation	Condensate fittings	3	EA.				0.02	0.02
7	9.8335	06-040	Pipe Run Insulation Lagging	(8" O.D.) Metal clad steam, interior lagging	100	S.F.				0.50	0.50
7	8.991	06-041	Transite Sheet Material	Transite wall patch	17	S.F.				0.09	0.09
7	9.4969	06-042	Pipe Fitting Insulation	(8" O.D.) Steam elbow	10	EA.				0.05	0.05
7	10.1731	06-052	Floor Tile Mastic	Break room, Black	150	S.F.				0.75	0.75
7	8.6554	06-053	Pipe Fitting Insulation	(4" O.D.) Steam elbow	170	EA.				0.85	0.85
7	9.4969	06-056	Pipe Fitting Insulation	(4" O.D.) Water valve	6	EA.				0.03	0.03
7	9.3276	06-058	Resilient Floor Tile (12" X 12")	Brown, in rad tech office	400	S.F.				2.00	2.00
7	9.8355	06-060	Pipe Fitting Insulation	(4" O.D.) Steam elbow	12	EA.				0.06	0.06
7	9.4989	06-062	Pipe Run Insulation	(4" O.D.) 150 pound steam	75	LF.				0.38	0.38
7	9.4989	06-064	Pipe Fitting Insulation	Potable water elbow	5	EA.				0.03	0.03
7	9.3286	06-071	Storage Tank / Exchanger Insulation	500 gallon urea tank at column D29	500	S.F.				2.50	2.50
7	8.8237	06-080	Pipe Run Insulation	Steam line above restroom	630	LF.				3.15	3.15
7	8.8237	06-082	Pipe Fitting Insulation	Steam valve above restroom	22	EA.				0.11	0.11
7	8.4901	06-089	Transite Sheet Material	Interior transite panels, smooth green	3920	S.F.				19.60	19.60
7	9.8365	06-091	Gasketry	Vacuum line woven band, 4" x 8'	53	LF.				0.27	0.27
7	9.4989	06-098	Pipe Fitting Insulation	Hot water elbow at column B7	5	EA.				0.03	0.03
7	8.4871	06-106	Pipe Run Insulation Lagging	(8" O.D.) Steam line running north-south	165	S.F.				0.83	0.83
7	9.6672	06-108A	Pipe Run Insulation	(6" O.D.) Vertical hot water line by southwest roll-up door	35	LF.				0.18	0.18
7	8.6584	06-109	Transite Sheet Material	North office walls	100	S.F.				0.50	0.50
7	9.6672	06-110	Pipe Fitting Insulation	(6" O.D.) Hot water fitting, southwest corner	4	EA.				0.02	0.02
7	9.6672	06-110	Pipe Fitting Insulation	(3" O.D.) Hot water elbow	8	EA.				0.04	0.04
7	9.8355	06-112	Storage Tank / Exchanger Insulation	Hot water condensate tank, south end, west of catwalk	522	S.F.				2.61	2.61

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

3242

Report Date:
2/28/92

Revision Date:

Building # and Name
6 Metals Fabrication Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	9.4989	06-114B	Pipe Run Insulation	(10" O.D.) Horizontal steam line, north of pickling area	15	LF.				0.08	0.08
7	9.1623	06-114C	Pipe Run Insulation	(6" O.D.) Steam line, above enriched materials storage	400	LF.				2.00	2.00
7	8.8257	06-116	Pipe Fitting Insulation	(6" O.D.) Steam elbow, southwest corner	40	EA.				0.20	0.20
7	8.995	06-123	Pipe Run Insulation	(8" O.D.) Elevated steam line	135	LF.				0.68	0.68
7	9.8385	06-124	Pipe Run Insulation	(4" O.D.) Steam line, above office	70	LF.				0.35	0.35
7	9.4999	06-125	Pipe Fitting Insulation	(4" O.D.) Steam tee	24	EA.				0.12	0.12
7	8.995	06-126	Pipe Fitting Insulation	Steam fitting above office	20	EA.				0.10	0.10
7	10.3434	06-127	Pipe Fitting Insulation	(6" O.D.) Roof drain elbow	5	EA.				0.03	0.03
7	9.3286	06-128A	Resilient Floor Tile (9" X 9")	Green with white streaks, in office	300	S.F.				1.50	1.50
7	9.1603	06-134	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate/steam elbow lagging	20	S.F.				0.10	0.10
7	7.1377	06-136	Transite Sheet Material	Cement board by central exit door	46,000	S.F.				230.00	230.00
7	8.8267	06-142	Pipe Run Insulation	(3" O.D.) Condensate line	8	LF.				0.04	0.04
7	9.3246	06-143	Resilient Floor Tile (9" X 9")	Green	1800	S.F.				9.00	9.00
7	8.8257	06-148	Pipe Fitting Insulation Lagging	(3" O.D.) Condensate valve lagging	5	S.F.				0.03	0.03
7	10.1721	06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit	50	LF.				0.25	0.25
7	9.1623	06-158	Pipe Run Insulation	Line to XFMR switch gear, south end near boiler	3	LF.				0.02	0.02
7	9.5009	06-160	Storage Tank / Exchanger Insulation	XFMR tank by boiler, 4'L x 1'D	1	S.F.				0.01	0.01
7	9.3296	06-162	Pipe Run Insulation	(4" O.D.) Steam line	60	LF.				0.30	0.30
7	9.3296	06-164	Pipe Fitting Insulation Lagging	(4" O.D.) Steam elbow lagging, above waste water tank	3	S.F.				0.02	0.02
7	8.991	06-166	Resilient Floor Tile (12" X 12")	Brown	240	S.F.				1.20	1.20
7	9.8375	06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting, southeast corner	2	EA.				0.01	0.01
7	9.8375	06-169	Pipe Fitting Insulation	(10" O.D.) Steam fitting	2	EA.				0.01	0.01
7	9.8345	06-170	Resilient Floor Tile (9" X 9")	Green	985	S.F.				4.93	4.93
7	10.5107	06-177	Pipe Fitting Insulation	(10" O.D.) Refer to 2318, steam fitting, east side	1	EA.				0.01	0.01
7	9.4989	06-178	Pipe Run Insulation	(6" O.D.) Steam line	100	LF.				0.50	0.50
7	7.8129	06-185	Transite Sheet Material	Cement board	4000	S.F.				20.00	20.00
7	8.6564	06-187	Pipe Run Insulation	Air line, north side	200	LF.				1.00	1.00
7	8.8247	06-189	Fire Retardant Clothing	Silver pants within cabinet	18	EA.				0.90	0.90
7	8.8247	06-189	Fire Retardant Clothing	Silver mittens within cabinet, 18 pair	36	EA.				1.80	1.80

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

Client:
WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY (WEMCO)

Facility:
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

City, State:
FERNALD, OHIO

ASBESTOS CONTAINING MATERIALS BY REMOVAL PRIORITY AND COST ESTIMATES TABLE

DIAGNOSTIC ENGINEERING INC.
5725 Dragon Way, Suite 321
Cincinnati, Ohio 45227
(513) 271-3737

Report Date: **2/28/92** 3242

Revision Date:

Building # and Name
6 Metals Fabrication Plant

WEMCO Removal Priority	WEMCO Harm Score	Homogeneous Area Number (b)	Material	Comments	Estimated Quantity (a)	Unit (LF,SF, EA)	Repair Cost $	Removal Cost $	Replacement Cost $	O & M Cost $	Total Cost $
7	8.994	06-191	Storage Tank / Exchanger Insulation	Nitric acid tank by pickling	164	S.F.				0.82	0.82
7	8.1515	06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	30	L.F.				0.15	0.15
7	8.1515	06-193	Pipe Run Insulation	(4" O.D.) Condensate, metal jacket by pickling	20	L.F.				0.10	0.10
7	8.1515	06-193	Pipe Run Insulation	(4"O.D.) Condensate, north side by empty tank	12	L.F.				0.06	0.06
7	8.1515	06-193	Pipe Run Insulation	(2"O.D.) Condensate line, west side, cloth clad	15	L.F.				0.08	0.08
7	7.4783	06-196	Pipe Run Insulation	(4" O.D.) Vertical waste water, metal clad, on east side of	11	L.F.				0.06	0.06
7	7.4783	06-196	Pipe Run Insulation	(4" O.D.) Waste water line, east side of tank	110	L.F.				0.55	0.55
7	9.4989	06-004	Pipe Run Insulation	(10" O.D.) Roof drain line, north end at men's restroom	260	L.F.				1.30	1.30
7	8.8247	06-039A	Gasketry	Assembly 06-8044-Con, northwest corner	1	L.F.				0.01	0.01
7	9.8335	06-040	Pipe Run Insulation	(8" O.D.) Metal clad steam, at column C6	100	L.F.				0.50	0.50
7	9.8355	06-002	Pipe Fitting Insulation	(2" O.D.)Dead water fitting, by column C6	1	EA.				0.01	0.01
7	9.4989	06-003	Pipe Fitting Insulation	(10" O.D.) Roof drain fitting; by north wall at men's restroom	3	EA.				0.02	0.02
7	9.4989	06-004	Pipe Run Insulation	(10" O.D.)Roof drain line, by north wall at men's restroom	10	L.F.				0.05	0.05
7	9.4969	06-018A	Pipe Run Insulation	(8" O.D.)Treated water line over column	470	L.F.				2.35	2.35
7	10.1721	06-150	Pipe Run Insulation	(6" O.D.) Gray steam line live to fan unit, resample of 5147	80	L.F.				0.40	0.40
7	10.0058	06-206	Pipe Run Insulation	(5" O.D.) Steam line insulation grey in color assumed per	125	L.F.				0.63	0.63
7	10.1751	06-208	Pipe Fitting Insulation	(5" O.D.) steam fittings Assumed per WEMCO	8	EA.				0.04	0.04
7	8.1465	06-210	Pipe Fitting Insulation	(4" O.D.) Steam elbows assumed Positive per WEMCO	7	EA.				0.04	0.04
7	10.0038	06-211	Pipe Run Insulation	(4" O.D.) east side wall next to door hard line	45	L.F.				0.23	0.23
7	7.6436	06-213	Transite Sheet Material	No samples taken	458,900	S.F.				2294.50	2294.50
TOTALS:					556503		3,667.00	25,836.00	57,087.00	2,753.53	89,343.53

Total Removal Cost $2,359,546.00

(a) - (R#) Denotes that the estimated quantity and cost for the homogeneous area is included at reference sample number.
(b) - The first two digits (and letter if applicable) of the Homogeneous Area Number indicates the Building Number.

DIAGNOSTIC ENGINEERING INC.

REPORT PRODUCTION TEAM

The DEI Report Team is dedicated to providing engineering services of the highest quality. The signatures below attest to the team members' continuing personal commitment to that goal.

PROJECT MANAGER _____

PROJECT MANAGER _____

PROJECT ASSISTANT _____

PROJECT ASSISTANT _____

PROJECT ASSISTANT _____

DATA ENTRY _____

SECRETARIAL _____

QUALITY CONTROL _____

PUBLICATION _____

REVIEWING PRINCIPAL _____