PEARL HARBOR NAVAL SHIPYARD
Pearl Harbor, Hawaii

28 September 1978

MEMORANDUM TO FILE

Subj: Asbestos Control; X51 Facilities Meeting

1. Meeting was held Thursday, 21 September 1978, at 0900 in MEIO Branch Office conference room, to ensure that new X51 facilities would include adequate asbestos control.

2. Attendees:

T. Choy, H. Kaiser - MEIO
H. Lee, J. Carey, J. Nobriga, H. Yuen - X51
B. Jim On, G. Miyasaki - Production Engineering
A. Watanabe - NRMC

3. X51 Asbestos Work

a. Motor controllers overload relay has asbestos boards separating pieces, asbestos is very flaky. Shop work involves taking units apart to work on or replacing units. New units also contain asbestos boards. Made by Cutler-Hammer, Catalog No. 6957ED14-24A. No known asbestos-free substitute. Volume - frequent.

b. Motor controller wiring has asbestos covering, often frayed. Work includes cutting, skinning, plugging. No present directive to replace with asbestos-free. Possible substitute thermo-plastic coated wire. Volume - frequent.

c. Load bank heating elements used in equipment testing in shops and on the waterfront. Air exhausts through the unit, possibly carrying asbestos from insulation inside.

d. Arc chutes in motor controllers are composed of pressed asbestos board. Sometimes they have much loose dust on them when they come into the shop. Shop work includes sanding to clean-up charring, which could create asbestos dust in air. No known asbestos-free substitute. Volume - frequent.

e. Consako gasket in heating elements and CO_2 burners. Shop work consists of removing all gaskets and cutting new ones. No known asbestos-free replacement. Volume - low, about one hour/week average.

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f. Motor windings have asbestos tape wrapping sometimes. Shop work consists of heating units to free from lacquer, then peeling off winding and insulation. Done only when motor needs rewinding. Also, leads are occassionally changed which have asbestos insulation. Replacement with asbestos-free insulation is established policy. Volume - two motor generators this year plus one amplidyne motor.

4. Preliminary assessment. Work descriptions indicate that no work will approach the legal 2 fiber/cc limit, but for the Shipyard goal of zero exposure, precautions should be taken.

a. Local vacuum pickup and respirator use for workbench jobs.

b. Clean room and larger vacuum for generator rewinding and other larger jobs, with protective clothing yet to be determined. Area for wire storage designated as location for clean room in new facility.

5. Actions

a. X51

(1) Determine and procure number of portable vacuums necessary.

(2) Notify NRMC (Allan Watanabe, phone 474-7109) to monitor work processes and make final determination of safeguards required.

(3) Since MILCON project will not cover the clean room, have a clean room developed for the new facility.

b. NRMC

(1) Monitor work processes as necessary to ensure employee protection when requested by X51.

(2) Notify X51 of protection requirements determined from monitoring.

(3) Provide appropriate technical guidance as requested in clean room development.

c. Production Engineering

(1) Reserve designated space in new building for use as asbestos work room.

(2) Develop facility for asbestos work based on guidance received from X51 and NRMC.

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d. All codes keep Code 142.12 informed of progress by copy of memoranda or other records developed. Notify Code 142.12 immediately if project gets hung up.

e. Code 142.12 will assist with resolving coordination, authorization, or priority setting difficulties. Contact is Hugh Kaiser, phone 471-3488.

HUGH KAISER

Copy to:
Attendees

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DOCUMENT REQUEST FORM	INITIALS	DATE
	[illegible]	[illegible]

ACCESSION NUMBER	BOX NUMBER	SEGMENT NUMBER	NUMBER OF PAGES
35770A2470 128	4502	01	2

DESCRIPTION

~~No File~~

Chart

List of Material, Quantities for 1 Boiler ≈ ~~[illegible]~~ 7/08/60

SUT0015

1731

FILE COPY
MAIL & FILES BRANCH
WASHINGTON OFFICE

DEPT. OF COMMERCE MARITIME ADMINISTRATION
PLAN NO. 55-S 51-1-5 SUB. 5
TITLE Aux. Boiler - Material List
(B+W) (Cyclotherm Div.)
BUILDERS PLAN NO. D-11869
M. A. HULLS 55 DATE REC'D JUN 14 1961
DESIGN P2-N1-MA40a
REVIEWED AND APPROVED AS NOTED
IN M. A. MEMO
DATED BY

SUT0015

1732

LIST OF MATERIAL QUANTITIES FOR ONE BOILER

P.C. NO.	NAME	NO. REQ'D	MATERIAL	DWG. NO.	MANUFACTURERS NAME	SERVICE PART NO OR DWG NO	REMARKS
1	BOILER SHELL ASSEMBLY	1	STEEL	G-11893	CYCLOTHERM		
2	BOILER INSULATION	1	KAO WOOL		BABCOCK AND WILCOX CO		2" THICK BLANKETS
3	JACKET	1	ALUMINUM		CYCLOTHERM		
4	BLOWER HOUSING	1	FABRI.STEEL		CYCLOTHERM		
5	BURNER HEAD	1	STEEL		CYCLOTHERM		
7	BLOWER COVER	1	STEEL		CYCLOTHERM		
8	IGNITION TRANSFORMER	1	COPPER-IRON		JEFFERSON ELECT. CO	638-285-217	230/10,000-VOLTS
9	OIL PUMP	1	BRONZE		TUTHILL PUMP CO.	2L	CW ROTATION
10	BLOWER MOTOR	1	COPPER-IRON	AIEE-45	MARATHON ELECT. CORP.		20 H.P. 3450 R.P.M. 440/60/3 T.E.F.C.
14	IGNITION ELECTRODES	2	CERAMIC-STEEL		AUBURN SPARK PLUG CO.	I-18	CAT. NO. I-18
15	IGNITION CABLES	2	COPPER-PLASTIC		PHELPS-DODGE		7 MM
16VA	OIL NOZZLE	1	STEEL		CYCLOTHERM		VARIABLE TYPE
18	STEAM PRESSURE GAGE	1	BRASS		J.E. LONERGAN	OC-301, C-11	8½" RANGE 0-300 LBS
20	BLOWER WHEEL	1	ALUMINUM		SPENCER TURBINE CO.		23"X2-¾"X1-5/8" 11"
21	COMBUSTION CONTROL	1	STEEL-PHENOLIC		MINN. HONEYWELL CO.	RA1908	230/60
22	PRESSURETROL	1	STEEL		MINN. HONEYWELL CO.	L404F	
23	NAME PLATE	1	ALUMINUM		CYCLOTHERM		
24	REAR COVER	1	FABRI-STEEL		CYCLOTHERM		
26	OBSERVATION WINDOW	1	PYREX		CORNING GLASS CO.		2½" DIA.X 1/4" THK
27	FRONT PLATE	1	FABRI-STEEL		CYCLOTHERM		
33	SAFETY VALVES	2	CAST STEEL		MANNING, MAXWELL & MOORE	1415 GA	ONE SET AT 170 LBS. 1" S.S.C.G ONE SET AT 175 LBS. 1" S.S.C.G 1 PP'D
34	BLOW OFF VALVES	2	CAST STEEL		YARNELL-WARING CO.	3406-3766	1-1/2"
36	WATER GAGE	1	STEEL & PYREX		JERGUSON GAGE & VALVE CO	15 R 20	
37	GAGE COCKS	3	BRASS		ERNST	NO. 06	1/2"
38	FEED STOP VALVE	1	BRONZE		LUNKENHEIMER	19-PS	1-1/2"
40	WATER LEVEL ELEC ASSEM	1	BRASS		CYCLOTHERM		
41A	WATER LEVEL RELAY	1	PHENOLIC-BRASS		CHARLES F. WARRICK CO.	UH-SPEC	230/60
41B	LOW WATER CUT OFF RELAYS	2	PHENOLIC-BRASS		CHARLES F. WARRICK CO.	DUM-SPEC	230/60
42	BLOWER MOTOR CONTROLLER	1	PHENOLIC-STEEL	AIEE-45	CUTLER-HAMMER INC	6862ED333	SIZE-2-440/60/3 W/220V.COIL
45	SALINOMETER VALVE	1	BRONZE		CRANE CO	214-P	1/2" ANGLE
46	SURFACE BLOW OFF VALVE	1	BRONZE		LUNKENHEIMER	1970	1" ANGLE
47	FUEL OIL PUMP MOTOR	1	COPPER-IRON	AIEE-45	MARATHON ELECT.		1 H.P.-T.E.F.C. 1750 R.P.M. 440/60/3
49	OIL SOLENOID VALVES	2	STEEL-BRONZE		GENERAL CONTROLS CO	K-10-16	230 V. A.C. -1/2"
51	OIL RELIEF VALVE	1	BRONZE		FULFLO SPEC CO INC		1/2" SET AT 200 LBS
56	OIL DIS. PRESSURE GAGE	1	STEEL-GLASS		MANNING MAXWELL & MOORE	1009G	2-1/2"-0 TO 400 LBS
57	CONTROL CKT. TRANSFORMER	1	COPPER-IRON		GENERAL ELECT CO.		440/220V. 5 KVA
58	LOW WATER ALARM AUDIO	1	STEEL		EDWARDS VALVE & MFG CO.	374	230/60
58-1	LOW WATER ALARM VISUAL	1	PHENOLIC PLASTIC		DIAL LIGHT CO.	921-308-991	230/60
59	OIL RET. PRESSURE GAGE	1	STEEL-GLASS		MANNING MAXWELL & MOORE	1009 G	2-1/2"-0 TO 200 LBS
60	STOP VALVE	1	BRONZE		CRANE CO	212 P	1/4"
61	FEED WATER STRAINER	1	BRONZE		ZURN	NO. 540	1-1/2"
62	MODUTROL MOTOR	1	COPPER-IRON		MINN. HONEYWELL CO.	M904E	15 SEC.
63	MODUTROL MTR. TRANSFORMER	1	COPPER-IRON		MINN. HONEYWELL CO.		230/24 V.
65	MODULATING PRESSURETROL	1	STEEL		MINN. HONEYWELL CO.	L91B	
66	MODUTROL RELAY	1	COPPER-PHENOLIC		POTTER AND BRUMFIED INC.	PR7AY	D.P.S.T
68	OIL FILTER	1	BRONZE-STEEL		COMMERCIAL FILTERS CORP.	BM-2	3/4" DUPLEX
76	IGNITION SWITCH	1	COPPER-PHENOLIC		ARROW HART HEGEMAN	81374	S.P.D.T
77	EMER. BURNER CONTROL SWT	1	COPPER-PHENOLIC	AIEE-45	WESTINGHOUSE ELECT. CORP.	135A833	TYPE H DW 5@47A4254G18 DPDT-PB-BREAK GLASS FEATURE
78	WATER SOLENOID SWITCH	1	COPPER-PHENOLIC		ARROW HART HEGEMAN	81374	S.P.D.T.
79	CONTROL CABINET	1	STEEL		CYCLOTHERM		12"X 42" X 5"
80	STEEL BASE	1	STEEL		CYCLOTHERM		STEEL CHANNEL
85	PRESSURE GAGE VALVE	1	BRONZE		CRANE CO	212 P	1/4"
87	AIR VENT VALVE	1	BRONZE		CRANE CO	422	1/2"
88	OIL REGULATING VALVE	1	BRONZE		HAUCK MFG CO		B-3/8"-16
96	WATER GAGE S.O. VALVES	2	BRONZE		CRANE CO.	422	1/2"
97	WATER GAGE B.D. VALVE	1	BRONZE		CRANE CO.	422	1/2"
108A	TUBE INSERTS	182	NICKEL-CHROME ALLOY		GENERAL ALLOYS CO		2" MACHINED
112	FEEDWATER SOLENOID VALVE	1	BRONZE		LAURENCE CO	60576	1-1/2"-230V. - 300#
115	TEST GAGE COCK	1	BRASS		CRANE CO	712	1/4"
117	FUSES	2	COPPER-FIBRE		BUSSMAN CO.		6 AMPS
131	FUEL PUMP MTR. CONTROLLER	1	COPPER-STEEL PHENOLIC	AIEE-45	CUTLER-HAMMER INC	6862ED309-3	SIZE 0, 440/60/3, W/220V. COIL
144	TERMINAL STRIP	1	COPPER-PHENOLIC		CURTIS DEVELOPMENT CO.	CDM-18	
154	RELIEF & C.O. DOOR ASSEMBLY	1	STEEL		CYCLOTHERM		

LIST OF MA

P.C. NO.	NAME	NO. REQ'D
183	PHOTO CELL ASSEMBLY	1
184	PROGRAMMER	1
195	BURNER BLOWER ASSEMBLY	1
200	FUEL PUMP MOTOR BASE	1
227	AIR SAFETY SWITCH	1
233	FLAME FAILURE SWITCH	1
235	POST PURGE RELAY	1
236	OBSER. WIN. & MAN. IGN. PORT	1
237	FEED TREATMENT TANK	1
238	FEED TREAT. TANK FUNNEL	1
241	F.T. TANK FUNNEL VALVE	1
242	F.T. TANK INLET VALVE	1
243	F.T. TANK OUTLET VALVE	1
244	F.T. TANK BY PASS VALVE	1
303	WATER GAGE TUBING	2
362	FLAME FAILURE ALARM AUD.	1
362-1	FLAME FAILURE ALARM VISUAL	1
363	LOW WATER ALARM SWITCH	1
364	FLAME FAILURE ALARM SWITCH	1
365	BURNER SWITCH	1
368	HANDHOLE ASSEMBLIES	6
368-A	HANDHOLE GASKETS	6
372	OIL STRAINER	1
375	STOP CHECK VALVE	1
19	WATER RELIEF VALVE	1
302	MANHOLE ASSEMBLY	1
98	CONT. CIRCUIT DISCONNECT SW.	1

U.S.C.G. APPROVED PER LTR
MMT DTD. 11 FEB. 19
A.B.S. APPROVED PER LTR
M-2 DTD. 10 DEC. 19

LTR	REVISION
D	REISED PER U.S.C.G. LTR. MMT-1 DTD. 8 JULY 1960
C	REV ITEM 77 & ADDED ITEM 98
B	REV ITEM 77
	REDRAWN
A	REV. PER U.S.C.G. LTR. MMT DTD. 6 JAN 1959 AND B&W LTR. DTD. 11 DEC. 195

DWG. BY	F.S.M. 1-23	TRACED BY
CHECKED BY	59	APPROVED

QUANTITIES FOR ONE BOILER

DWG. NO.	MANUFACTURERS NAME	SERVICE PART NO. OR DWG. NO.	REMARKS
G-11893	CYCLOTHERM		
	BABCOCK AND WILCOX CO		2" THICK BLANKETS
	CYCLOTHERM		
	CYCLOTHERM		
	CYCLOTHERM		
	CYCLOTHERM		
	JEFFERSON ELECT. CO.	638-253-217	230/10,000-VOLTS
	TUTHILL PUMP CO.	2L	CW ROTATION
AIEE-45	MARATHON ELECT. CORP.		20 H.P. 3450 R.P.M. 440/60/3 T.E.F.C.
	AUBURN SPARK PLUG CO.	I-18	CAT. NO. I-18
	PHELPS-DODGE		7 MM
	CYCLOTHERM		VARIABLE TYPE
	J.E. LONERGAN	OC-301, C-11	8½ RANGE 0-300 LBS
	SPENCER TURBINE CO.		23"X2-3/4"X1-5/8"X11"
	MINN. HONEYWELL CO.	RA190B	230/60
	MINN. HONEYWELL CO.	L404F	
	CYCLOTHERM		
	CYCLOTHERM		
	CORNING GLASS CO.		2 1/2" DIA.X 1/4" THK
	CYCLOTHERM		
	MANNING, MAXWELL & MOORE	1415GA	ONE SET AT 170 LBS, 1" U.S.C.G. APP'D ONE SET AT 175 LBS
	YARNELL-WARING CO.	3408-3766	1-1/2"
	JERGUSON GAGE & VALVE CO	15 R 20	
	ERNST	NO. 06	1/2"
	LUNKENHEIMER	19-PS	1-1/2"
	CYCLOTHERM		
	CHARLES F. WARRICK CO.	UH-SPEC	230/60
	CHARLES F. WARRICK CO.	DUM-SPEC	230/60
AIEE-45	CUTLER-HAMMER INC	68626D333	SIZE 2-440/60/3 W/220V COIL
	CRANE CO	214-P	1/2" ANGLE
	LUNKENHEIMER	1970	1" ANGLE
AIEE-45	MARATHON ELECT.		1 H.P.-T.E.F.C. 1750 R.P.M. 440/60/3
	GENERAL CONTROLS CO	K-10-16	230 V. A.C. -1/2"
	FULFLO SPEC CO INC.		1/2" SET AT 200 LBS
	MANNING MAXWELL & MOORE	1009G	2-1/2"-0 TO 400 LBS
	GENERAL ELECT. CO.		440/220V. 5 KVA
	EDWARDS VALVE & MFG. CO.	374	230/60
	DIAL LIGHT CO.	521-308-991	230/60
	MANNING MAXWELL & MOORE	1009G	2-1/2"-0 TO 200 LBS
	CRANE CO.	212P	1/4"
	ZURN	NO. 540	1-1/2"
	MINN. HONEYWELL CO.	M904E	15 SEC.
	MINN. HONEYWELL CO.		230/24 V.
	MINN. HONEYWELL CO.	L91B	
	POTTER AND BRUMFIED INC.	PR7AY	D.P.S.T
	COMMERCIAL FILTERS CORP.	BM-2	3/4" DUPLEX
	ARROW HART HEGEMAN	81374	S.P.D.T
AIEE-45	WESTINGHOUSE ELECT. CORP.	135A833	TYPE H D W S @ 47A4254G18 DPDT-PB- BREAK GLASS FEATURE
	ARROW HART HEGEMAN	81374	S.P.D.T
	CYCLOTHERM		12"X 42" X 5"
	CYCLOTHERM		STEEL CHANNEL
	CRANE CO.	212 P	1/4"
	CRANE CO	422	1/2"
	HAUCK MFG. CO.		B-3/8"-16
	CRANE CO.	422	1/2"
	CRANE CO.	422	1/2"
	GENERAL ALLOYS CO.		2" MACHINED
	LAURENCE CO.	60576	1-1/2"-230V. - 300°F
	CRANE CO	712	1/4"
	BUSSMAN CO.		6 AMPS
AIEE-45	CUTLER-HAMMER INC.	68626D309-3	SIZE 0, 440/60/3, W/220V. COIL
	CURTIS DEVELOPMENT CO	CDM-18	
	CYCLOTHERM		

LIST OF MATERIAL QUANTITIES FOR ONE BOILER

P.C. NO.	NAME	NO. REQ'D	MATERIAL	DWG. NO.	MANUFACTURERS NAME	SERVICE PART NO. OR DWG NO.	REMARKS
183	PHOTO CELL ASSEMBLY	1	STEEL-ALUMINUM	D-7550	CYCLOTHERM		
184	PROGRAMMER	1	STEEL-FIBRE		R.W. CRAMER CO. INC.	CF6-6	120 SEC.
195	BURNER BLOWER ASSEMBLY	1	STEEL-BRONZE	F-12033	CYCLOTHERM		
200	FUEL PUMP MOTOR BASE	1	STEEL		CYCLOTHERM		
227	AIR SAFETY SWITCH	1	STEEL-ALUMINUM		MINN. HONEYWELL CO.	C-645	
233	FLAME FAILURE SWITCH	1			ACRO MFG. CO	KLB 5081	
235	POST PURGE RELAY	1	COPPER-STEEL		POTTER AND BRUMFIELD INC.	PR5AY	S.P.D.T
236	OBSER. WIN. & MAN. IGN. PORT	1	PYREX-BRONZE	A-6416	CYCLOTHERM		1" DIA.X 1/4" THK.
237	FEED TREATMENT TANK	1	STEEL	D-12194	CYCLOTHERM		
238	FEED TREAT. TANK FUNNEL	1	COPPER OR STEEL		CYCLOTHERM		
241	F.T. TANK FUNNEL VALVE	1	BRONZE		CRANE CO	422	3/4"
242	F.T. TANK INLET VALVE	1	BRONZE		LUNKENHEIMER	19-PS	1-1/2"
243	F.T. TANK OUTLET VALVE	1	BRONZE		LUNKENHEIMER	19-PS	1-1/2"
244	F.T. TANK BY PASS VALVE	1	BRONZE		LUNKENHEIMER	19-PS	1-1/2"
303	WATER GAGE TUBING	2	COPPER		CYCLOTHERM		5/8"
362	FLAME FAILURE ALARM AUD.	1	STEEL		EDWARDS VALVE CO.	374	230/60
362-1	FLAME FAILURE ALARM VISUAL	1	PHENOLIC-PLASTIC		DIAL LIGHT CO.	521-308-991	230/60
363	LOW WATER ALARM SWITCH	1	COPPER-PHENOLIC		ARROW HART HEGEMAN	81374	S.P.D.T.
364	FLAME FAILURE ALARM SWITCH	1	COPPER-PHENOLIC		ARROW HART HEGEMAN	81374	S.P.D.T.
365	BURNER SWITCH	1	COPPER-PHENOLIC		ARROW HART HEGEMAN	81374	S.P.D.T.
368	HANDHOLE ASSEMBLIES	6	FORGED STEEL		CYCLOTHERM		4"X 6" X 3 3"R. SA-266
368-A	HANDHOLE GASKETS	6	ASBESTOS		CYCLOTHERM		4"X 6"
372	OIL STRAINER	1	BRONZE- BRASS		CUNO ENG. CORP.	EG	6" CARTRIDGE 3/4" I.P.S. .018" SPACING
375	STOP CHECK VALVE	1	BRONZE		LUNKENHEIMER	19-C-PS	1-1/2"
19	WATER RELIEF VALVE	1	BRONZE		J.E. LONERGAN	MODEL T	3/4" MODEL T, SET AT 175#
302	MANHOLE ASSEMBLY	1	STEEL		LENAPE CO.		11"X15"X5/8" X 33" SWEEP
98	CONT. CIRCUIT DISCONNECT SW.	1		AIEE-45	SQUARE D CO.	H-6534I-ND	NEMA XII - 3P - 30 AMP - 600V WITH DRIP HOOD

U.S.C.G. APPROVED PER LTR. MMT DTD. 11 FEB. 1959
A.B.S. APPROVED PER LTR M-2 DTD. 10 DEC. 1958

REFERENCE DRAWINGS

NO.	TITLE	DWG. NO.
1	ASSEMBLY AND FOUNDATION PLAN	G-11523
2	BOILER CONSTRUCTION DETAILS	G-11893
3	WIRING DIAGRAM	11092
4	SCHEMATIC DIAGRAM	11093

	REVISION	DATE	BY
D	REISED PER U.S.C.G. LTR. MMT-1 DTD. 8 JULY 1960	8-18-60	GRD
C	REVITEM 77 & ADDED ITEM 98	7-28-59	
B	REV. ITEM 77	5-13-59	
	REDRAWN	1-26-59	FSM
A	REV. PER U.S.C.G. LTR. MMT DTD. 6 JAN 1959 AND B&W LTR DTD. 11 DEC. 1958	1-26-59	FSM

DWG. BY FSM 1-23 TRACED BY
CHECKED BY 59 APPROVED

200 P.S.I. DESIGN PRESS.

TITLE
AUXILIARY BOILER
CYCLOTHERM MC-7500
MATERIAL LIST

CYCLOTHERM DIVISION
OSWEGO, N. Y.
SCALE
B & W NO
DWG. NO
D-11869-D