DOE/OR/21999--T3

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OSTI

Hayes,
Seay,
Mattern &
Mattern, Inc.

ARCHITECTS
ENGINEERS
PLANNERS

U.S. DEPARTMENT OF ENERGY

REFURBISH POWER SUPPLY/DISTRIBUTION SYSTEM

PHASE II

Y-12 PLANT, OAK RIDGE

CONTRACT NO. DE-AC05-91OR21999

DOE PROJECT 88-D-122-270

HSMM COMMISSION NO. 2385A

PROGRESS STATUS REPORT NO. 51

NOVEMBER 30, 1995

PREPARED BY:

HAYES, SEAY, MATTERN & MATTERN, INC.

ARCHITECTS-ENGINEERS-PLANNERS

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P.O. BOX 13446

ROANOKE, VIRGINIA 24034

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DEPARTMENT OF ENERGY
REFURBISH POWER SUPPLY/DISTRIBUTION SYSTEM, PHASE II
Y-12 PLANT, OAK RIDGE, TN
CONTRACT NO. DE-ACO5-910R21999
DOE PROJECT 88-D-122-270
A&E COMMISSION NO. 2385A

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ATTACHMENTS:

- ATTACHMENT I: Milestone Schedule
- ATTACHMENT II: Drawing List - Percent Complete
- ATTACHMENT III: Conference Summaries
- ATTACHMENT IV: Title III Activities

APPROVED FOR RELEASE OR
PUBLICATION- O.R. PATENT GROUP
BY EDULL DATE 1/2/96

**DEPARTMENT OF ENERGY
REFURBISH POWER SUPPLY/DISTRIBUTION SYSTEM, PHASE II
Y-12 PLANT, OAK RIDGE, TN
CONTRACT NO. DE-AC05-91OR21999
DOE PROJECT 88-D-122-270
A&E COMMISSION NO. 2385A
PROJECT STATUS REPORT NO. 51**

Reporting Period - November 1 - 30, 1995

A. ACCOMPLISHMENTS

WBS 1.1.3.1 - TRANSFORMER RELAY MODIFICATIONS

HSMM is continuing design work on the Procurement Package, Installation Package and LMES Work Package. We are continuing work on schematics, wiring diagrams and elevations both in the POC/SCADA building and the process buildings. Schematics, wiring diagrams and elevations are being designed for the new pilot wire relay panels to be located in the POC control room.

WBS 1.1.3.2 - REPLACE 480-VOLT TRANSFORMERS

HSMM has received review comments for 90% submittal and is working on incorporating the comments into the drawings. The Fire Protection Control Board has requested HSMM to incorporate five additional drawings numbers into this project. HSMM is incorporating this request by adding five demolition drawings and five construction drawings to the project.

WBS 1.1.3.5 - STEAM PLANT - UNINTERRUPTIBLE POWER SYSTEM, 120 VOLT CONTROL POWER MODIFICATIONS

Final CFC documents were delivered to LMES on 1 August 1995.

TITLE III - RECORD DRAWINGS

HSMM has received some record drawing information for the SCADA Building addition, however we have not received the information on the locations of underground utilities. HSMM is holding onto these until the underground information is received.

B. ITEMS ISSUED

1. Fax dated 1 November 1995, Ed Colonna to Chuck Ochiltree; Sketches for the Steam Plant ash pump controls.
2. Fax dated 2 November 1995, Ed Colonna to Carl Thomas; Summary of Telephone Conversation regarding trip to Sudan.

3. Fax dated 6 November 1995, Ed Colonna to Chuck Ochiltree; Rating of the bus of the existing Area 5 Switching Center.

C. ITEMS RECEIVED

1. Letter of Transmittal, dated 7 November 1995, Marcus Whaley to Dick Burleigh; Transmittal of drawings AC-1, AC-2, AC-3, AC-4, E1, E2 and C1, including CADD Drawings and Disk.
2. Fax dated 10 November 1995, Dick Biggs to Ed Colonna; Design Review Comments.

D. PAST DUE

None

E. ITEMS REQUESTED

1. Direction on use of poles along north side of ELZA switchyard for Y-12 pilot wire re-routing.

F. MILESTONE SCHEDULE AND DRAWING STATUS

1. Attached you will find a Milestone Schedule showing each WBS (ATTACHMENT I) and a drawing list showing percent complete.

G. CONFERENCE SUMMARIES

1. Summary of Telephone Conversation dated 9 November 1995, Chuck Ochiltree to Ed Colonna; Proposed relay scheme for transformer protection.
2. Summary of Telephone Conversation dated 8 November 1995, Ed Colonna to Chuck Ochiltree; Regarding disposition of existing relays.

DISCLAIMER

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ATTACHMENT I. MILESTONE SCHEDULE

**FACILITIES CAPABILITY/ASSURANCE PROGRAM
REFURBISH POWER SUPPLY/DISTRIBUTION SYSTEM, PHASE II
Y-12 PLANT, OAK RIDGE, TN
DOE CONTRACT NO. DE-AC05-91OR21999
DOE PROJECT 88-D-122-270
A&E COMMISSION NO. 2385G, M, N
NOVEMBER 1995**

MILESTONE LOG (PLAN)

<u>Element Code</u>	<u>Description</u>	<u>Schedule</u>	<u>Forecast</u>	<u>Actual</u>	<u>Comments</u>
WBS 1.1.3.1 (2385G)	Transformer Relay Modifications				
A.	PRELIMINARY SUBMITTAL	21 Jul 95		4 Aug 95	
	PREFINAL SUBMITTALS				
B.	EQUIPMENT PROCUREMENT	22 Sep 95		22 Sep 95	
C.	INSTALLATION	13 Oct 95		18 Oct 95	
D.	LMES WORK	17 Nov 95	*Submittal delayed pending change in scope for relay panels		
	CFC SUBMITTALS				
E.	EQUIPMENT PROCUREMENT	29 Sep 95	*Submittal delayed pending change in scope for relay panels		
F.	INSTALLATION	27 Oct 95	*Submittal delayed pending change in scope for relay panels		
G.	LMES Work	30 Nov 95	*Submittal delayed pending change in scope for relay panels		
WBS 1.1.3.2 (2385N)	Replace 480-Volt Trans FA & FP Drawings				
A.	PREFINAL SUBMITTAL	18 Aug 95		6 Oct 95	
B.	CFC	15 Sep 95	15 Dec 95		
WBS 1.1.3.5 (2385M)	Steam Plant - 120V Control Power Modifications				
A.	PREFINAL SUBMITTAL	7 Apr 95	7 Apr 95	7 Apr 95	
B.	CFC	27 Jul 95	27 Jul 95	27 Jul 95	

ATTACHMENT II. DRAWING LIST - PERCENT COMPLETE

U. S. DEPARTMENT OF ENERGY
MILESTONE SCHEDULE PLAN

1. TITLE REFURBISH ELECTRIC POWER SUPPLY/DISTRIBUTION SYSTEM, PH II															2. REPORTING PERIOD 1 NOV '95 - 30 NOV '95					3. IDENTIFICATION NUMBER DE-AC05-91OR21999									
4. PARTICIPANT NAME AND ADDRESS HAYES, SEAY, MATTERN AND MATTERN, INC. ROANOKE, VIRGINIA															5. START DATE 1 MARCH 1995														
															6. COMPLETION DATE: NOV 95														
ELEMENT CODE	REPORTING ELEMENT	DURATION:																								FY	FY	10. PERCENT COMPLETE	
		FY 1995												FY 1996														PLAN	ACTUAL
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S				
1.1.3.1	161-KV TRANS	A B E C D G																											
	RELAY MODS	[REDACTED]																										62.4	67.1
		a																											
1.1.3.5	STEAM PLANT	A B																											
	120V MODS	[REDACTED]																										100.0	100.0
		a b																											
1.1.3.2		A B																											
	FA & FP DRWGS	[REDACTED]																										100.0	91.6
TITLE III		A																											
	RECORD DWGS	[REDACTED]																										21.4	22.0
11. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER AND DATE <i>Edward S. Clonma</i> 30 Nov 1995																													

DOE PROJECT 88-D-122-270
 FACILITIES CAPABILITY ASSURANCE PROGRAM
 REFURBISH POWER SUPPLY / DISTRIBUTION SYSTEM - Ph II
 Y-12 PLANT, OAK RIDGE, TENNESSEE
 WBS 1.1.2 - Refurbish Electric Power Control System
 Transformer Differential Protective Relay Modifications

FILE: PROG-SUM.WQ1

PROGRESS SUMMARY

01-Dec-95

TITLE	DIFF	% COMP	10	20	30	40	50	60	70	80	90	100
=====+=====			=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
WBS 1.1.2 - 161-KV TRANSFORMER RELAY MOD												
=====												
MISCELLANEOUS TASKS		70.0	####	####	####	####	####	####	####			
FIELD INVESTIGATION		90.0	####	####	####	####	####	####	####	####	####	
DRAWINGS	5	60.6	####	####	####	####	####	####				
SPECIFICATIONS	43	59.4	####	####	####	####	####					
COST ESTIMATE		70.0	####	####	####	####	####	####	####			
	=====	=====										
Weighted Percent Complete Total		67.1	####	####	####	####	####	####				

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 FACILITIES CAPABILITY ASSURANCE PROGRAM
 REFURBISH POWER SUPPLY / DISTRIBUTION SYSTEM - Ph II
 Y-12 PLANT, OAK RIDGE, TENNESSEE
 WBS 1.1.2 - Refurbish Electric Power Control System
 Transformer Differential Protective Relay Modifications

FILE: NEW-DWGS.WQ1

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DRAWING LIST					PERCENT COMPLETE										
DRAWING TITLE		CADD	DESIGN	DIFF	% COMP	10	20	30	40	50	60	70	80	90	100
LMES WORK PACKAGE															
G 1	TITLE, DWG INDEX	N	*	5	60	####	####	####	####	####	####				
G 2	ABBREVIATIONS	N	*	5	50	####	####	####	####	####					
G 3	LEGENDS AND GEN NOTES	N	*	5	50	####	####	####	####	####					
		R		5											
D 1	PSS CONSOLE EQPT PLAN & DETAILS	R		5	40	####	####	####	####						
D 2	INTERCONNECT DIA SH 1, DIFF TRIPS	R		5	40	####	####	####	####						
D 3	INTERCONNECTION DIAGRAM SH 1	R		5	70	####	####	####	####	####	####	####			
D 4	INTERCONNECTION DIAGRAM SH 4	R		5	70	####	####	####	####	####	####	####	####		
D 5	INTERCONNECTION DIAGRAM SH 5	R		5	70	####	####	####	####	####	####	####	####		
D 6	DIFF. CABLE CODE SH #1	R		5	70	####	####	####	####	####	####	####	####		
D 7	SCHEMATIC DIA BRK #1 ORMAK	R		5	60	####	####	####	####	####	####				
D 8	SHEMATICS MAIN CB BUS 'M'	R		5	60	####	####	####	####	####	####				
D 9	13.8KV DC ELEM BRKR NO 1320C	R		5	60	####	####	####	####	####	####				
D 10	13.8KV SWGR MOD ELEM DIA UNITS 8, 9, 10	R		5	60	####	####	####	####	####	####				
D 11	13.8KV METAL CLAD SWGR BRKR CONTROL	R		5	60	####	####	####	####	####	####				
D 12	AC & DC MAIN CKT BRKR 1320 (UNIT 111)	R		5	60	####	####	####	####	####	####				

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DOE PROJECT 88-D-122-270
 FACILITIES CAPABILITY ASSURANCE PROGRAM
 REFURBISH POWER SUPPLY / DISTRIBUTION SYSTEM - Ph II
 Y-12 PLANT, OAK RIDGE, TENNESSEE
 WBS 1.1.2 - Refurbish Electric Power Control System
 Transformer Differential Protective Relay Modifications

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DRAWING LIST					PERCENT COMPLETE													
DRAWING TITLE					CADD	DESIGN	DIFF	% COMP	10	20	30	40	50	60	70	80	90	100
LMES WORK PACKAGE(CONT.)																		
E	59	9204-2 SWGR ROOM PLAN (9204-2)	R			5	65	####	####	####	####	####	####					
E	60	9201-2 RELAY & CONTROL WIRING DIA, REA	R			5	70	####	####	####	####	####	####	####				
E	61	9201-2 RELAY & CONTROL WIRING DIA, FRO	R			5	70	####	####	####	####	####	####	####	####			
E	62	RTU # 13 CABLE SCHEDULE (9201-2)	N	*		5	70	####	####	####	####	####	####	####	####			
E	63	9201-2 SWGR ROOM PLANE D-BUS (9201-2)	N	*		5	50	####	####	####	####	####						
E	64	9201-2 SWGR ROOM PLAN C-BUS (9201-2)	N	*		5	50	####	####	####	####	####						
E	65	RTU #26 CABLE SCHEDULE (9204-3)	R			5	70	####	####	####	####	####	####	####	####			
E	66	9204-3 SWGR ROOM PLAN (9204-3)	R			5	70	####	####	####	####	####	####	####	####			
E	67	COMPARTMENT 1330 WIRING DIA (9201-3)	R			5	70	####	####	####	####	####	####	####	####			
E	68	RTU #11 WIRING DIA (9201-3)	R			5	70	####	####	####	####	####	####	####	####			
E	69	RTU #11 CABLE SCHEDULE (9201-3)	R			5	70	####	####	####	####	####	####	####	####			
E	70	9201-3 SWGR ROOM PLAN (9201-3)	R			5	70	####	####	####	####	####	####	####	####			
E	71	BLDG 9204-1 SWGR WIRING DIA (9204-1)	R			5	50	####	####	####	####	####						
E	72	13.8KV SWGR WIRING DIA, UNIT #10 (9204-1)	R			5	70	####	####	####	####	####	####	####	####			
E	73	RTU #18 WIRING DIA (9204-1)	R			5	70	####	####	####	####	####	####	####	####			
E	74	RTU #18 CABLE SCHEDULE (9204-1)	R			5	70	####	####	####	####	####	####	####	####			
E	75	9204-1 SWGR ROOM PLAN (9204-1)	N	*		5	70	####	####	####	####	####	####	####	####			
E	76	1308KV SWGR DIFF CABLE CODE, SH #6 (9999	N	*		5	50	####	####	####	####	####						
E	77	CONDUIT ROUTING PLAN (9999-3)	N	*		5	50	####	####	####	####	####						
E	78	13.8KV SWGR DIFF CABLE CODE, SH #6 (9201-	R			5	50	####	####	####	####	####						
E	79	CONDUIT ROUTING PLAN (9201-4)	R			5	50	####	####	####	####	####						
E	80	9201-1 WIRING DIAGRAM SH #1 (9201-1)	R			5	30	####	####	####								
E	81	9201-1 WIRING DIAGRAM SH #2 (9201-1)	R			5	30	####	####	####								

DOE PROJECT 88-D-122-270
 FACILITIES CAPABILITY ASSURANCE PROGRAM
 REFURBISH POWER SUPPLY / DISTRIBUTION SYSTEM - Ph II
 Y-12 PLANT, OAK RIDGE, TENNESSEE
 WBS 1.1.2 - Refurbish Electric Power Control System
 Transformer Differential Protective Relay Modifications

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DRAWING LIST				PERCENT COMPLETE													
DRAWING TITLE				CADD	DESIGN	DIFF	% COMP	10	20	30	40	50	60	70	80	90	100
LMES WORK PACKAGE(CONT.)																	
E	82	9201-2C WIRING DIAGRAM SH #1 (9201-2C)	R			5	30	####	####	####							
E	83	9201-2C WIRING DIAGRAM SH #2 (9201-2C)	R			5	30	####	####	####							
E	84	9201-2D WIRING DIAGRAM SH #1 (9201-2D)	R			5	70	####	####	####	####	####	####	####			
E	85	9201-2D WIRING DIAGRAM SH #2 (9201-2D)	R			5	30	####	####	####							
E	86	9201-3 WIRING DIAGRAM SH #1 (9201-3)	R			5	30	####	####	####							
E	87	9201-3 WIRING DIAGRAM SH #2 (9201-3)	R			5	30	####	####	####							
E	88	9201-4L WIRING DIAGRAM SH #1 (9201-4L)	R			5	30	####	####	####							
E	89	9201-4L WIRING DIAGRAM SH #2 (9201-4L)	R			5	30	####	####	####							
E	90	9201-4M WIRING DIAGRAM SH #1 (9201-4M)	R			5	30	####	####	####							
E	91	9201-4M WIRING DIAGRAM SH #2 (9201-4M)	R			5	30	####	####	####							
E	92	9201-5N WIRING DIAGRAM SH #1 (9201-5N)	R			5	30	####	####	####							
E	93	9201-5N WIRING DIAGRAM SH #2 (9201-5N)	R			5	30	####	####	####							
E	94	9201-5P WIRING DIAGRAM SH #1 (9201-5P)	R			5	30	####	####	####							
E	95	9204-1 WIRING DIAGRAM SH #2 (9204-1)	R			5	30	####	####	####							
E	96	9204-1 WIRING DIAGRAM SH #2 (9204-1)	R			5	30	####	####	####							
E	97	9204-2 WIRING DIAGRAM SH #1 (9204-2)	R			5	30	####	####	####							
E	98	9204-2 WIRING DIAGRAM SH #2 (9204-2)	R			5	30	####	####	####							
E	99	9204-3 WIRING DIAGRAM SH #1 (9204-3)	R			5	70	####	####	####	####	####	####	####			
E	100	9204-3 WIRING DIAGRAM SH #2 (9204-3)	R			5	30	####	####	####							
E	101	9204-4 WIRING DIAGRAM SH #1 (9204-4)	R			5	30	####	####	####							
E	102	9204-4 WIRING DIAGRAM SH #2 (9204-4)	R			5	30	####	####	####							
E	103	9999-3 WIRING DIAGRAM SH #1 (9999-3)	R			5	30	####	####	####							
E	104	9999-3 WIRING DIAGRAM SH #2 (9999-3)	R			5	30	####	####	####							
Total - 161kv Transformer Relay Mods				6	40		60.6	####	####	####	####	####	####				

57 = Overall Total Drawings

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SPECIFICATIONS		New Spec	----	-+													
		Guide Spec	-+														
SECTION NO,	SECTION TITLE				DESIGN	DIFF	% COM	PERCENT COMPLETE									
								10	20	30	40	50	60	70	80	90	100
DIVISION 01																	
01010	Summary of Work	*				3	90	####	####	####	####	####	####	####	####	####	####
01015	Acronyms and Abbreviations	*				5	90	####	####	####	####	####	####	####	####	####	####
01300	Submittals	*				5	90	####	####	####	####	####	####	####	####	####	####
DIVISION 16																	
16050	Basic Materials and Methods	*				5	90	####	####	####	####	####	####	####	####	####	####
16195	Electrical Identification	*				5	90	####	####	####	####	####	####	####	####	####	####
16800	Control Equipment		*			5	90	####	####	####	####	####	####	####	####	####	####
16950	Electrical Testing	*				5	90	####	####	####	####	####	####	####	####	####	####
	Data Sheets		*			5	90	####	####	####	####	####	####	####	####	####	####
	CPRS Sheets		*			5	90	####	####	####	####	####	####	####	####	####	####
Subtotal - 161kv Transformer Relay Mods 0 0 90.0																	

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SPECIFICATIONS		New Spec	----	+-																					
		Guide Spec	+-																						
SECTION NO,	SECTION TITLE				DESIGN	DIFF	% COM	PERCENT COMPLETE																	
								10	20	30	40	50	60	70	80	90	100								
=====+=====																									
DIVISION 01																									
01010	Summary of Work	*				3	20	####	####																
01015	Acronyms and Abbreviations	*				5	20	####	####																
01300	Submittals	*				5	20	####	####																
-----+-----																									
DIVISION 05																									
05505	Miscellaneous Metals	*				3	20	####	####																
-----+-----																									
DIVISION 16																									
16050	Basic Materials and Methods	*				5	20	####	####																
16111	Conduit	*				5	20	####	####																
16120	Building Wire and Cable 600 V and Below	*				5	20	####	####																
16123	Splices and Terminations 600V and Below	*				5	20	####	####																
16130	Boxes and Covers	*				5	20	####	####																
16160	Equipment Cabinets and Enclosures	*				5	20	####	####																
16190	Supporting Devices	*				5	20	####	####																
16370	Overhead Construction	*				5	20	####	####																
16800	Control Equipment		*			5	20	####	####																
16801	SCADA RTU		*			5	20	####	####																
16950	Electrical Testing	*				5	20	####	####																
-----+-----																									
Data Sheets			*			5	20	####	####																
CPRS Sheets			*			5	20	####	####																
-----+-----																									
Subtotal - 161kv Transformer Relay Mods		0	0				16.0																		

Refurbish 120V AC Power System For Building 9401-3 Steam Plant

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Refurbish 120V AC Power System For Building 9401-3 Steam Plant 01-Dec-95

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DOE PROJECT 88-D-122-270
 FACILITIES CAPABILITY ASSURANCE PROGRAM
 REFURBISH POWER SUPPLY / DISTRIBUTION SYSTEM - Ph II
 Y-12 PLANT, OAK RIDGE, TENNESSEE
 WBS 1.1.3.2 - Replace 480-Volt Transformers
 Transformer Fire Protection and Fire Alarm Drawings

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DRAWING LIST					PERCENT COMPLETE											
DRAWING TITLE			CADD	DESIGN	DIFF	% COMP	10	20	30	40	50	60	70	80	90	100
Transformers 217 & 220																
D	18	DEMOLITION WATER FOG SYSTEM	R		2	90	####	####	####	####	####	####	####	####	####	####
D	19	DEMOLITION FIRE ALARM SYSTEM	R		2	90	####	####	####	####	####	####	####	####	####	####
FP	2	AREA 5 TRANSFORMER SPRINKLERS	R		2	90	####	####	####	####	####	####	####	####	####	####
E	19	FIRE ALARM SYSTEM WIRING DIAGRAM SH	R		2	90	####	####	####	####	####	####	####	####	####	####
Transformers 227 & 228																
D	16	TRANSFORMERS 227 & 228 DEMOLITION WA	R		2	90	####	####	####	####	####	####	####	####	####	####
D	17	TRANSFORMERS 227 & 228 DEMOLITION WA	R		2	90	####	####	####	####	####	####	####	####	####	####
D	20	DEMOLITION FIRE ALARM SYSTEM XFMRs 2	R		2	90	####	####	####	####	####	####	####	####	####	####
D	21	DEMOLITION FIRE ALARM SYSTEM XFMRs 2	R		2	90	####	####	####	####	####	####	####	####	####	####
FP	1	TRANSFORMER GROUP I WATER FOG SYSTE	R		2	90	####	####	####	####	####	####	####	####	####	####
E	20	FIRE ALARM SYSTEM WIRING DIAGRAM SH	R		2	90	####	####	####	####	####	####	####	####	####	####
E	21	BLDG 9212 FIRE ALARM SYSTEM INTERCON	R		2	90	####	####	####	####	####	####	####	####	####	####
Transformer 304																
D	22	DEMOLITION BLDG 9805-1 XFMR 304 DELUG	N		2	90	####	####	####	####	####	####	####	####	####	####
D	23	DEMOLITION FIRE ALARM SYSTEM XFMR 30	R		2	90	####	####	####	####	####	####	####	####	####	####
FP	3	MODIFICATIONS TO XFMR 304	N		2	90	####	####	####	####	####	####	####	####	####	####
E	22	MODIFICATIONS TO FIRE ALARM SYSTEM DI	R		2	90	####	####	####	####	####	####	####	####	####	####
Total - Transformer FA & FP			0	0		90.0	####	####	####	####	####	####	####	####	####	####

15 = Overall Total Drawings

ATTACHMENT III. CONFERENCE SUMMARIES

SUMMARY OF TELEPHONE CONVERSATION

PROJECT: Refurbish Power Supply / Distribution System, Ph II
Y-12 Plant, Oak Ridge, Tennessee
Project 88-D-122-270
Contract No. DE-ACO5-91OR21900

COMMISSION NO: 2385G DATE: 8 November 1995 TIME: 2:40pm

INITIATED BY: Ed Colonna FOR: HSMM, Inc.

RECEIVED BY: Chuck Ochiltree FOR: LMES

SUMMARY OF DISCUSSION:

There will be some relays which are no longer used when the Transformer Protective relay modifications are complete. Ed Colonna asked about the disposition of relays in existing switchgear and relay panels. Should the existing relays be disconnected but left in the switchgear and panels, or should the relays be removed and the panels patched?

Chuck stated that LMES is trying to clean up as much of the unused equipment as they can.

Based upon this approach, it was agreed that HSMM would indicate that any unused relays be removed and the panels patched.

PREPARED BY:
HAYES, SEAY, MATTERN AND MATTERN, INC.

Edward S. Colonna

SUMMARY OF TELEPHONE CONVERSATION

PROJECT: Refurbish Power Supply / Distribution System, Ph II
Y-12 Plant, Oak Ridge, Tennessee
Project 88-D-122-270
Contract No. DE-ACO5-91OR21900

COMMISSION NO: 2385G DATE: 9 November 1995 TIME: 10:46am

INITIATED BY: Chuck Ochiltree FOR: LMES

RECEIVED BY: Ed Colonna FOR: HSMM, Inc.

SUMMARY OF DISCUSSION:

Chuck Ochiltree reported that he and Richard Goins have looked at the proposed relay scheme (sketch dated 7 Nov 95, Rev 1) and did not have any comments. It was agreed that HSMM would proceed with the development of the transformer protection relay panels based upon this sketch.

Richard will be looking at it in detail, this afternoon, but it was agreed that the concept and implementation appear to be good. Richard will let us know if he has any further comments.

I asked Chuck to call Mike Salmon if they have any comments while I am gone.

PREPARED BY:
HAYES, SEAY, MATTERN AND MATTERN, INC.

Edward S. Colonna

ATTACHMENT IV: TITLE III ACTIVITIES

DOE TITLE III BUDGET CONTROL DATA SHEET

30 November 1995

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Note 1: Hours moved from 2385BB and 2385BE to 2385 BC to allow for additional RFI's April 1995

Note 2: Hours shifted among tasks for 2385BA to allow for additional reporting requirements. July 1995.

Note 3: Hours added for WBS 1.1.3 Mod M012 - October 1995

Edward S. Clonm 30 Nov 95

TITLE III ACTIVITIES REPORT
November 1995

6/29/92 Vendor Site visit- Trip to Atlanta to visit Barco for presentation on their large screen display monitors for use in the SCADA control room.

2/3/93 Pre-Bid Meeting Procurement Package.

2/3/93 Constructability Review at MK-F (Site Work & Control Bldg).

7/19/93 RFI Contractor requested soil data

7/28/93 Post Award Meeting-Equipment Procurement

8/6/93 RFI- Control Building Footing elevation

8/20/93 RFI Request for information on anchor bolt embedment.

8/31/93 RFI Provided information to ABB on tape - Installation Package Interconnect wiring diagrams.

9/02/93 Shop Drawing Transmittal No. 1 - anchor bolt templet

9/22/93 RFI Responded to RFI for copies of existing switchyard structural steel drawings for ELZA Station.

10/4/93 Meeting at Oak Ridge - ABB Circuit Breaker

10/12/93 Circuit Breaker and Current transformers

10/14/93 Letter in regard to Fax from ABB

10/28/93 Identified correct number of ducts in duct bank at ELZA 1 Station

11/19/93 Drawings on computer disk to ABB requested by Dick Biggs

11/23/93 Use of spare conductors in interconnecting cables for relay and control panels Bill Needham

12/09/93 Site visit and inspection of the Elza Station Construction.

TITLE III ACTIVITIES REPORT

Page 2

01/31/94 Battery charger size verification for Elza Station

01/31/94 Lindsey line post sensors vs Square D.

02/16/94 Shop drawing Review -Elza 1 control wiring diagrams.

03/15/94 Chang-MD Henry Anchor bolts

03/16/94 Chang Tower leg

03/23/94 Tower set on foundations after 7 day break

03/23/94 Donnie Shankland embedment depth for anchor bolts SCADA building.

03/24/94 Pole location SCADA control building.

03/24/94 Foundation design for Elza Towers.

03/24/94 Additional information on Elza tower foundations- Dick Biggs.

03/24/94 Building insulation Elsa Control Building batt vs Wall insulation.

03/22/94 Location of insulation in control building.

03/28/94 Verify cost of equipment in Alexia Installation Contract.

03/22/94 Structural steel shop drawing transmittal #25

04/08/94 Request for information on fiberglass insulation

04/13/94 Review sample anchor bolt.

04/13/94 Evaluation of R8 vs R12 insulation in ELZA control building.

04/12/94 Shop drawing Scada Steel.

04/12/94 Shop drawing SCADA building foundations.

04/01/94 Change analysis for Elza tower foundations

04/12/94 RFI Elza foundation design.

04/04/94 Shop Drawing Structural Steel Mill test reports and shop drawing test reports.

05/23/94 Dead End Towers & Girders

05/06/94 Site visit Elza Station

TITLE III ACTIVITIES REPORT

Page 3

05/03/94 RFI for Area Five Switching Station

05/04/94 Change ceiling in mechanical room (Elza Control Bldg) from GWB to layin to permit electrical junction boxes to be installed above ceiling

06/09/94 Question about air thermal pump in SCADA building.

06/10/94 Review of sequence of construction for Elza Station.

JULY

07/20/94 Reviewed Roden cost proposal for Steam Plant Procurement.

AUGUST

08/15/94 Request for information on tower bolts for Elza 1 tower bolts.

08/18/94 Relocate control for 161 kV circuits to SCADA room.

08/18/94 Investigate Area 5 switchgear building.

SEPTEMBER

9/21/94 Site visit Elza 1 Station and SCADA Building.

9/7/94 Analyze building at Area Five Station.

9/26/94 Analyze proposed change to sequence of construction for Elza Station. (requested by Bill Needham 9/23/94.

OCTOBER

10/03/94 Site inspection SCADA Building

10/04/94 Site inspection Elza I Station.

10/05/94 Information about the use of cold-rolled threads

10/05/94 Question about the steel girders diagonals upper line C

10/05/94 Steel covers fot cable trench at Elza I.

10/26/94 Question about using deep penetration welds

NOVEMBER 1994

11/03/94 Problems with Square D line post sensors.

11/02/94 Modification to existing towers.

11/10/94 Steam Plant cable tray.

11/17/94 Elza I Station Site Visit.

11/17/94 SCADA Building Site Visit.

11/17/94 Modification to Elza I Station construction sequence.

December 1994

12/01/94 RFI Circuit breaker/CT bus connection

12/15/94 RFI Circuit breaker anchor bolts

12/16/94 RFI Bus fittings for bus tap

12/16/94 RFI Bus fittings WTH vs WURE

January 1995

1/5/95 ELZA Cable Trough and Yard Drainage

1/23/95 Trough grounding

1/26/95 Steam Plant Boiler Feed Pump Starters

February 1995

2/2/95 Out of place anchor bolts at ELZA CB

2/3/95 SCADA Bldg Surge Arrestor & Initial Barco Bracing

2/7/95 Table of Offsets for expansion connectors @ ELZA

2/10/95 Trip to SCADA Bldg & Additional work on installation of BARCO Display Units

March 1995

3/3/95 Recommended method of adjusting height of PT's.

April 1995

3/29/95 Recommendation on additional concrete finishing on existing structures at ELZA.

4/10/95 Site visit to Steam Plant regarding location of MCC 2, 3 and DP2, DP3. Sketch showing new locations issued 4/11/95.

TITLE III Activities Report
Page 5

May 1995

5/10/95- Site visit to investigate proposal to re-use existing OCB
5/11/95 pads at the ELZA substation.
5/12/95 Configuration of west end of south Elza bus.
5/16/95 Extension of steam pipe support beam at Steam Plant.
5/17/95 Additional work on rigging for BARCO display units.

June 1995

5/30/95 Telephone conduit, record drawing info, ELZA station
5/31/95 Loop isolator, ELZA station
6/2/95 BARX seal-in modification, ELZA station.
6/20/95 Placement and installation of overhead channels for BARCO
units.
6/21/95 Response to questions on D2 & E2 of Steam Plant Inst Dwgs
6/30/95 BARCO Installation, SK-8 with suggested installation
method.

July 1995

7/12/95 Site visit to the ELZA Substation
7/12/95 Site visit to SCADA Building addition.
7/17/95 Details for reinforcing manufacturer's joint for upper
BARCO display units.
7/20/95 Recommendation for anchoring Steam Plant 480V Switchgear
to pad.
7/26/95 Response to Steam Plant questions of 7/25/95.

August 1995

- 8/1/95 Provide drawings E1, E2, A5, A6, C1, C2, and E2 on disk to Larry Davis of LMES for fire protection study.
- 8/16/95 Response to vendor question on switchgear 332.
- 8/22/95 Site visit to ELZA station regarding transformer switch operator mounting.
- 8/23/95 Site visit to Steam Plant for observation of new cable tray and circuit routing.

September 1995

- 8/31/95 Shop drawing review, switchgear for Station 332
- 9/11/95 Site visit to SCADA Building, noise survey.
- 9/19/95 Respond to MKF comments and questions on Crosstie Pkg.
- 9/21/95 Shop drawing review, Square D transformers.

October 1995

- 10/3/95 Site visit summary and recommendations on noise levels in the SCADA building.
- 10/19/95 Review of alternate cable routing plans for the steam plant, site visit and meeting with MK-F.
- 10/20/95 Sketch for splicing 3 conductors to muti-conductor cable.
- 10/27/95 Steam plant annunciator connections (4 sketches)

November 1995

- 11/1/95 Two sketches for Steam Plant Ash Pump controls.
- 11/6/95 Question regarding the rating of existing Area 5 switching center bus.