



NONCONFORMANCE - REPORT LOG & STATUS BOOK

11-4-75 1-2-76  
 8-6-75 9-8-75 10-7-75 11-4-75  
 12. 3-3-75, 4-1-75, 5-2-75, 6-2-75, 7-2-75, 8-1-75, 9-1-75, 10-1-75, 11-1-75, 12-3-75  
 REPORT DATE  
 PAGE COMPL. 11-9-76  
 O.C. ENG. SIGN James Miller

1. PROJECT NO. 7220

2. NCR NO.	3. ORIG. DATE	4. PREPARED BY	5. NONCONFORMANCE DESCRIPTION/REMARKS	STATUS					
				6. ROUTE	7. DATE XMTD	8. DATE RETD	9. DATE CLOSED	10. CLOSED BY	
220	11-12-74	W. C. O'Neil	C-111. Bulge in Shop Weld, S5-3-U-2 1.109	Field	No	11-14-74	12-16-74	S. Tucker	
221	11-14-74	R. G. Lussier	C-111. Bulged and Torn Liner Plate S2-10-U-2 & S1-11-U-2 1.109	Field	No	11-18-74	12-10-74	R. G. Lussier	
222	11-14-74	R. Revereza	C-231. Aux Bldg Rebar broken EL. 593', 7.4 Line 1.203	Field	No	11-18-74	11-22-74	L. Johnson	
223	11-14-74	R. Revereza	C-231. Aux Bldg Rebar broken, EL. 593' 1.203	Field	No	11-18-74	1-13-75	L. R. Albert	
224	11-15-74	R. A. Moray	G-5. Deviation from Storage Requirements	Field	No	2-10-74	4-7-75	R. A. Moray	
225	11-19-74	L. Shively	C-230. Slump out of spec. pour CC(606)a 1.105	Field	11-26-74	2-13-75	2-14-75	L. R. Albert	
226	11-19-74	L. R. Albert	C-230. Water/Cement Ratio out of spec. Pours A(583.25)d, A(578.67)f 1.205	Field	11-26-74	2-13-75	2-13-75	L. R. Albert	
227	11-20-74	P. Carpenter	C-230. Sand failed gradation requirement Pour A(597.25)b' 1.205	Field	11-26-74	2-12-75	2-14-75	L. R. Albert	
228	11-20-74	R. A. Moray	C-233A. G-321D Form improperly filled-out. 1.101	Field	No	1-21-75	1-22-75	L. R. Albert	
229	11-20-74	W.C.O'Neil	C-111. Gouge in Dome Liner Plate 1.109	Field	No	11-22-74	3-4-76	A. L. Boulden	
230	11-21-74	T. Haswood	C-111. Sharp Bend in Dome liner Plate RD-9-18 1.109	Field	No	11-25-74	11-9-76	A. Harrington	
231	11-21-74	T. Haswood	C-111. Bulge & Tear in Dome Plates RD-10-9 & RD-4-9 1.109	Field	No	11-25-74	12-11-75	A.L.Boulden	

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4-5-76 5-3-76 8-2-76  
 8-2-76 3-8-76 1-1-76 7-7-76  
 12. REPORT DATE 11-9-75, 12-4-75 1-7-76  
 PAGE COMPL. 11-2-76  
 G.C. ENG. SIGN. James W. Miller

1. PROJECT NO. 7220

NCR NO.	ORIG. DATE	PREPARED BY	NONCONFORMANCE DESCRIPTION/REMARKS	STATUS				
				6. ROUTE	7. DATE XMTD	8. DATE RETD	9. DATE CLOSED	10. CLOSED BY
352	10-29-75	R. A. Moray	E-205. Circuit Breakers: Nameplates, damaged, Identification 3.101	Field 10-29-75	No	11-26-75	10-19-76	R. A. Moray
353	11-4-75	H. D. Foster	C-111. Deep imperfections noted on C-111-14 during coating work 1.109	Field 11-4-75	No	11-5-75	11-18-75	H. D. Foster
354	11-5-75	C. F. Clark	C-111. Dome liner plate broken, C-111-15 1.109	Field 11-5-75	No	11-6-75	1-27-76	W. M Pardee
355	11-10-75	D. L. Osborn	C-230. Flyash below weight on one ticket, pour A(614)b 1.205	Field 11-10-75	12-8-75	1-23-76	1-26-76	L. R. Albert
356	11-14-75	L.R. Albert	C-230. Air content, Pours A(599)j' & A(587)b' 1.205	Field 11-14-75	12-8-75	1-23-76	1-26-76	L. R. Albert
357	11-17-75	R.A. Moray	F-1-193. M-92 Motors heaters disconnected 4.001	Field 11-17-75	No	12-8-75	2-19-76	R. A. Moray
358	11-17-75	H. Boleen	M-117. Valve Tagging requirements violated ASME 11-17-75	Field 11-17-75	No	11-25-75	3-2-76	H. D. Foster
359	11-24-75	E. Dutton	C-230. Air content high, Pour #A(619)a 1.205	Field 11-25-75	12-8-75	1-23-76	1-26-76	L. R. Albert
360	11-25-75	R. Bennett	C-231. Curing temperature below 50°, 3 hrs, Pour #A(619)a 1.205	Field 11-25-75	12-8-75	1-23-76	1-26-76	L. R. Albert
361	11-26-75	D.C. Thompson	E-42. Conduit spacing, Aux Bldg Slab Fuel Pool Slab 3.006	Field 12-1-75	12-12-75	DEV 1-27-76 1-30-76	2-6-76	D. C. Thompson
362	12-1-75	D.C. Thompson	E-42. Conduit size reduced, Aux Bldg slab. 3.006	Field 12-2-75	12-5-75	3-12-76	11-2-76	D. C. Thompson
363	12-1-75	L.R. Albert	C-230. Failing water user test. 1.105, 1.205	Field 12-1-75	12-1-75	DEV 12-23-75 12-16-75	12-18-75	L. R. Albert



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5-3-76 10-1-76  
2-2-76 2-2-76 6-1-76 7-7-76

12. REPORT DATE 12-4-75 1-7-76  
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O.C. ENG. SIGN Y. J. S. P. sub

1. PROJECT NO. 7220

NCR NO.	3. ORIG. DATE	4. PREPARED BY	5. NONCONFORMANCE DESCRIPTION/REMARKS	STATUS				
				6. ROUTE	7. DATE XMTD	8. DATE RETD	9. DATE CLOSED	10. CLOSED BY
364	12-4-75	D.L. Osborn	C-208. Concrete cylinder curing, Pour A(614)b 1.205	Field <del>12-4-75</del>	12-8-75	1-23-76	1-26-76	L. R. Albert
365	12-8-75	N. Shawl	C-38. Aux. Bldg. columns cut short. 1.201	Field <del>12-8-75</del>	12-8-75	1-8-76	1-19-76	A. L. Boulden
366	12-11-75	R. Bennett	C-231. Curing Temperature, A(590)a' & 1.105, & CC(635)b' 1.205	Field <del>12-11-75</del>	12-16-75	1-23-76	1-26-76	L. R. Albert
367	12-16-75	H. Boleen	M-104A. Damaged pipe spool upon receipt. ASME 4.104	-Field <del>12-16-75</del>	<del>1-14-76</del> 2-11-76	1-16-76	11-4-76	C. Groat
368	1-7-76	E. Dutton	C-231. Curing temperature, Pour A(626.25)a' 1.205	Field <del>1-7-76</del>	1-9-76	2-9-76	2-9-76	L.R. Albert
369	1-13-76	L. R. Albert	C-230. Fly Ash fineness not per ASTM C-618-72. 1.105, 1.205	-Field <del>1-13-76</del>	1-15-76	2-9-76	2-9-76	L.R. Albert
370	1-19-76	E. Dutton	C-230. Slump high, Pour A(599)i' 1.205	Field <del>1-20-76</del>	1-27-76	2-20-76	2-24-76	D. L. Osborn
371	1-20-76	T. Lieb	C-231. Field cylinder curing temperature, pour A(614)h 1.205	Field <del>1-21-76</del>	1-27-76	2-20-76	2-25-76	T. Lieb
372	1-27-76	G. E. Depew	C-50A. Liner Plate slab numbers not matching. 1.109	Field <del>1-28-76</del>	No	2-17-76	2-23-76	R. Lussier
373	1-29-76	T. R. Lieb	C-208. Concrete cylinder curing, pour A(614)i 1.205	Field <del>1-29-76</del>	2-12-76	2-25-76	2-23-76	L. R. Albert
374	1-29-76	E. Dutton	C-230. Concrete slump test frequency, pour A(633.25)a' 1.203	Field <del>2-2-76</del>	2-25-76	4-9-76	4-13-76	D. L. Osborn
375	2-3-76	R. A. Moray K. Pulito	M-1. Makeup Storage Tanks received with shipping damage ASME 4.039, 4.049	B&W <del>2-4-76</del>	No	10-15-76	11-22-76	P. M. Pitts



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O.C. ENG. SIGN	<i>K. Siple</i>

1. PROJECT NO. 7220

2. NCR NO.	3. ORIG. DATE	4. PREPARED BY	5. NONCONFORMANCE DESCRIPTION/REMARKS	STATUS					
				6. ROUTE	7. DATE XMTD	8. DATE RETD	9. DATE CLOSED	10. CLOSED BY	
424	5-19-76	P. M. Pitts	M-104; Pipe Spools Air Quenched, not Water Quenched 4.104, 4.114, 4.134	Field <del>5-17-76</del>	5-28-76	8-17-76	9-8-76	P. M. Pitts	
425	5-20-76	R. A. Moray	EPG-16, Decay Heat Removal Heat Exchange purge pressure out of req'ments ASME 4.101, 4.111	<sup>Boil</sup> Field <del>5-21-76</del>	No	7-21-76	9-3-76	J. F. Spence	
426	5-24-76	P. W. Ratter	10-1FCB-35-H3, Incorrect Fillet Weld 4.102	Field <del>5-24-76</del>	6-10-76	6-22-76	6-23-76	P. W. Ratter	
427	5-25-76	L. R. Alberts	C-275, Rebar Hooks, Elev. 629'± Aux. Bldg. 1.203	Field <del>5-25-76</del>	5-27-76	6-10-76	6-10-76	L. R. Alberts	
428	6-2-76	P. M. Pitts	M-106AC, Hanger Material Certifications ASME Various	Field <del>6-4-76</del>	& 6-18-76	7-8-76	7-9-76	P. M. Pitts	
429	6-3-76	W. Faulkner	C-231, Reinforcing Steel Slab Dowels 624'0" Broken 1.203	Field <del>6-3-76</del>	No	6-11-76	11-12-76	M. E. Foote	
430	6-8-76	R. Hendricks	M-104A. Pipe Spool tagging, spool misidentified ASME 1.114	Field <del>6-8-76</del>	6-10-76	7-8-76	7-30-76	P. M. Pitts	
431	6-10-76	P. M. Pitts	M-104A. Pipe spool Documentation without shop traveler ASME 4.164	MS <del>6-10-76</del>	No	8-10-76	7-17-76	P. M. Pitts	
432	6-10-76	L. R. Alberts	C-231 Cadweld Splice Testing 1.104 and 1.204	Field <del>6-11-76</del>	6-23-76	8-9-76	9-14-76	E. Dutton	
433	6-11-76	M. E. Foote	C-231 Dowels exceeding accepted tolerances 5.6 & 7.4 @ 624'0" 1.203	Field <del>6-11-76</del>	6-30-76	8-2-76	11-12-76	M. E. Foote	
434	6-11-76	M. E. Foote	C-231. Incorrect spacing of dowels, Aux. Bldg. 5.6 line wall @ 624'0" 1.203	Field <del>6-11-76</del>	6-23-76	7-26-76	9-8-76	M. Foote	
435	6-11-76	M. E. Foote	C-231. Incorrect spacing of dowels, Aux. Bldg. 'B' Line wall @ 634'0" 1.203	Field <del>6-11-76</del>	No	6-23-76	11-24-76	R. K. Siple	



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1. PROJECT NO. 7220

2. NCR NO.	3. ORIG. DATE	4. PREPARED BY	5. NONCONFORMANCE DESCRIPTION/REMARKS	6. STATUS					
				6. ROUTE	7. DATE XMTD	8. DATE RETD	9. DATE CLOSED	10. CLOSED BY	
448	6-21-76	P. M. Pitts	M-104A. Documentation for IHBC-133-S616-7-6 misidentified ASME 4.164	Field 6-22-76	No	7-22-76			
449	6-22-76	R. S. Morrow	M-106. Incorrect <sup>Dwg.</sup> Rev. sent with Hanger 12-1GCB-25-H14 ASME 4.102	Field 6-23-76	No	7-30-76	8-26-76		R. S. Morrow
450	6-22-76	R. S. Morrow	M-106. Incorrect <sup>Dwg.</sup> Rev. and Bechtel Approval level 4 sent w/ Hangers ASME 4.102, 4.112, 4.162	Field 6-23-76	8-5-76	9-16-76			
451	6-23-76	H. Boleen	M-104A. Venturi lacking from spool 2HBC-123-S617-8-4 ASME 4.174	Field 6-24-76	7-26-76	10-1-76	10-12-76		H. D. Foster
452	6-23-76	R. S. Morrow	M-106AC. PipeHanger 18-1HBC-133-H6 fabricated to a Bechtel level 4 sketch ASME 4.162	Field 6-28-76	8-5-76	8-23-76	11-30-76		P. M. Pitts
453	6-23-76	R. S. Morrow	M-106AC. Incorrect Dwg. Rev. sent with pipe hanger assemblies ASME 4.102; 4.172; 4.191; 4.341	Field 6-28-76	No	8-5-76			
454	6-24-76	J. R. Behres	M-204. Incorrect stamping of 26" yard piping. ASME 4.192	Field 6-24-76	No	7-2-76	7-7-76		J. R. Behres
455	6-24-76	W.M.Pardee	C-111. Heat Number discrepancy on Dome Liner Plate assemblies 1.109	Field 6-24-76	No	8-27-76	9-24-76		W. M. Pardee
456	6-28-76	W. M. Pardee	C-111. Shop Assembly Untraceable to Documentation Ht#21302 Slab#10 1.109	Field 6-28-76	No	8-31-76	9-16-76		W. M. Pardee
457	6-28-76	W.M.Pardee	M-120. Linear indications found on 16" Valve S/N 3N-641 ASME 4.164	Field 6-28-76	8-5-76	9-20-76	11-15-76		
458	7-1-76	R. S. Morrow	M-106AC. Wrong Dwg. Revs. on Hangers fab. to level 4 dwgs. ASME 4.102, 4.112, 4.172, 4.191	Field 7-1-76	8-5-76	9-16-76			
459	7-2-76	H. Boleen	M-104A. G-321-D not submitted. Sweepolets not capped. ASME 4.192	Field 7-6-76	No	8-5-76	8-19-76		H. Boleen



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2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
		SF/PSP G-3.2 Rev. O Implemented using new forms for Nonconformance Reports and Log Sheets			
460	7-2-76	M-106 Incorrect Dwg. Revs sent with Hangers	Rework & Doc		
461	7-7-76	M-106. Incorrect Dwg. Revs. sent with Hangers Fab. to Level 4 Dwgs.	Rework & Doc.		
462	7-8-76	Dwg. C-220 Rebars cut and not Replaced	Std. Repair	9-28-76	M. E. Foote
463	7-12-76	M-51. G-321-D not received for 4 sets of Gaskeys	Doc	8-11-76	H. Boleen
464	7-12-76	C-III. HAD and HaB sub-assays show inconsistent Heat Numbers.	Rework	10-5-76	W. M. Pardee
465	7-15-76	C-208. Strength Level of Concrete falls below req. fc'level. Cure Temp. of cylinders below requirements.			
466	7-16-76	M-104A. Three Pipe Spools Delivered Bent.	Reject	9-20-76	R. S. Morrow
467	7-19-76	M-104A. Venturi not installed in Spool Piece.	Use as is	10-12-76	H. D. Foster
468	7-20-76	M-106. Support Bars have incorrect inside diameter.	Reject	7-29-76	P. M. Pitts
469	7-21-76	C-233. Nelson Studs were broken off or missing channels. Aux. Bldg.	Rework	8-4-76	W. M. Pardee
470	7-21-76	Dwg. C-284. Two Dowels missing from El. 635'+ at intersection of wall 53 and 'H' Line.	Use as is	11-5-76	B. T. Cheek
471	7-21-76	Dwg. C-140. Lacking Rebars around door opening. El. 614'0" at 'H' Line and 5.3 Aux. Bldg.	Std. Repair	9-8-76	M. Foote
472	7-27-76	Dwgs. C-39-A32, A32A, & A23. Rebar Missing Aux. Bldg. 5.9 & 6.6S of 'H' 'Kc' @ 6.6 El. 632'6"	Rework	9-23-76	M. E. Foote
473	7-30-76	E-20. Flanges not coated upon receipt.			
474	7-30-76	E-20. Weld Neck flanges not oil coated upon receipt.			
475	7-30-76	E-20. Flanges not protected upon receipt.			
476	7-30-76	M-104A. Pipe spool IHCC-154-S616-10-1 damaged.	Repair		
477	8-2-76	C-III. Main Steam Penetration welding not full penetration welds	Rework	9-14-76	P. W. Ratter



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2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
478	8-6-76	C-231. Dwg. C-281. #6 stirrups installed on 12" center line instead of #8 at 9" Aux. Bldg. El. 614' to 630.75' 'Kc'	Use as is	Telex. 9-10-76 9-20-76	C. Kasch B. T. Cheek
479	8-6-76	M-104A. No reference of NDE on PT Examination Record for pipe spool OHCC-152-S506-1-2	Document Rework	11-18-76	P. M. Pitts
480	8-6-76	C-III, Welding of Dome Spray Header Lugs, Unit #2	Repair	9-21-76	A. L. Boulden
481	8-9-76	M-106. Hangers fabricated to not approved drawings and packing slip revisions do not match sketch revs.			
482	8-10-76	M-106. Hanger documentation for NDE & Weld Details,	Use as is	10-28-76	P. M. Pitts
483	8-11-76	C-233A. F-14061 Misc. Metal fabrications received without tag markings.	Reject	8-17-76	R. A. Moray
484	8-11-76	G-233A. F-1120 Trash Rack Guide Ass'ys received without tag markings	Document	9-3-76	R. S. Morrow
485	8-11-76	C-233A. F14439 Channel and Plates received without tag markings.	Use as is	10-5-76	H. Boleen
486	8-16-76	C-231. Dwg. C-212. Rebar omitted and Rebar installed too low. Aux. Bldg. E. Transfer Tube Room.	Use as is		
487	8-16-76	C-231. Dwg. C-256. Aux. Bldg. E Transfer Tube Room. Channel not embedded in concrete 620'0" to 630'0"	Use as is	Telex. 9-10-76 9-20-76	C. Kasch B. T. Cheek
488	8-17-76	M-104A. Code tag on pipe spool does not correspond with documentation, for pipe spool I-GCB-8-S612-1-3	Rework		
489	8-17-76	C-231. #6 Rebar cut to allow installation of Struct. base plate for beam 6'3" West of 8.7. Along 'A' Line El. 634'6" Aux.	Use as is	10-12-76	M. E. Foote
490	8-19-76	M-64. Radwaste Decay Tanks equipment bases not coated with an elastomeric Compound.	Rework	10-4-76	C. Groat
491	8-19-76	M-106AC. Pipe Supports Fabricated to Level 4 Dwgs. Packing List does not agree with Dwgs. sent.			
492	8-19-76	M-106AC. Pipe Supports fabricated to Level 4 Dwgs. Pkg. List does not agree with Dwgs. sent. Clamps not numbered.			
493	8-19-76	SIQ. PO F-14792. Bolt Heads not marked A490. Forms FPG-9-1 and FPG-9-2 not completed by Vendor.	Use as is		
494	8-19-76	M-1.35. No correlation between documentation for 4 NNI Non O System Cabinets and 4 Cabinets.	No Dispo	9-24-76 11-15-76	H. Boleen J. P. Connolly
495	8-19-76	M-106AC. Hangers fabricated to level 4 dwgs. Pkg. list does not agree with dwgs. sent. Hangers arrived before dwg. appr.			
496	8-19-76	E-42. Conduit damaged by drilling. Aux. Bldg. 584'0" slab.	Repair	11-4-76	D. T. Davis



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2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
497	8-23-76	M-106AC. Pipe clamps configurations not in agreement with Bechtel Eng. NDE documentation not included.	Use as is.	11-22-76	P. M. Pitts
498	8-24-76	C-230. Concrete placed in Pour CC(662.92)b' had a temperature of 76°	Use as is	Telex 8-26-76 9-8-76	B. T. Cheek E. Dutton
499	8-24-76	C-230. Entrained Air in concrete lower than the required 3 percent for Pour (603)a	Use as is		
500	8-24-76	M-1.35. 3 gauges do not correspond with the packing list.	Non Q No Dispo	11-4-76	R. A. Moray
501	8-25-76	C-231. 4 Dowels not embedded in 'D' line. 3'9" East of 6.6 Line, at El. 614'0". Aux. Bldg.	Repair		
502	8-26-76	E-42. PVC Conduit IBC007 damaged during repair of IBC008.	Repair	11-4-76	D. T. Davis
503	8-26-76	C-233. Channel and Plate Embeds not piece marked upon receipt.	Use as is	10-4-76	H. Boleen
504	8-26-76	M-204. Yard Piping, welding began upon a rejected fit-up.	Rework	9-3-76	A. L. Boulden
505	8-26-76	C-III. As-built location out of tolerance. Unit #2 AZ 207 Elev. 668'6"	Use as is	Telex. 11-19-76	D. L. Osborn
506	8-27-76	C-305. Two rebar cut at Hanger 18-2HBC-133-H6 without prior Project Engineering approval.	Use as is	11-2-76	B. T. Cheek
507	8-30-76	C-230. Mortar sand has greater water demand ratio than allowed by ASTM C-144-70.	Reject Use as is	11-11-76	B. T. Cheek
508	8-31-76	C-230. Flyash content of concrete placed in CC(619.5)h a higher than allowable limit.			
509	8-31-76	C-231. Curing of pour A(633.2) a, surface appeared dry.	Use as is	10-26-76	B. T. Cheek
510	9-2-76	C-208. 43 Density tests on Incoming Structural Sand Gradations failed to meet minimum volume.	Use as is	11-23-76	B. T. Cheek
511	9-2-76	C-231. 1-#5 dowel broken at temp. const. opening. Aux. Bldg. 614'0"	Std. Repair		
512	9-3-76	M-106. Hangers received, dwgs. not approved, and parts not identified.			
513	9-3-76	M-106. Hangers received, parts not identified properly.			
514	9-7-76	C-233A. Channel and Plates received without piece markings. F-14439.	Use as is	10-4-76	H. Boleen
515	9-7-76	E-20. Weld Neck Flanges received without coatings, nicked, scratches.			





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2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
516	9-7-76	M-106. Hangers received, not traceable markings, different revision on Packing List than Dwg. rec'd.	Documenta- tion	10-21-76	R. S. Morrow
517	9-9-76	M-1.18. Support feet of Heat Exchangers do not agree with details on drawing.			
518	9-10-76	M-106. Packing List does not agree w/dwgs. sent. Dwg. calls for 'I' Beam whereas a 'B' Beam was sent.	Doc. & Use as is		
519	9-13-76	Dwg. C-288, Aux. Bldg. slabs 62 1/2' x 6". Clear cover for Top Dowels vary between 2 and 3-1/2 inches.	Use as is	11-16-76	M. E. Foote
520	9-10-76	C-208. Cylinders were not stripped within 24 hours after casting. Cylinder sets #998 and #999.	Use as is	10-29-76	B. T. Cheek
521	9-10-76	M-106AC. Hangers and related sketches for two hangers have same mark number.	Use as is		
522	9-13-76	M-106. Figure 211 Pipe clamps do not conform to the applicable sketches bill of material.	Use as is	11-22-76	R. S. Morrow
523	9-13-76	M-120. Internal surface of valve had a light film of rust.			
524	9-13-76	M-1.35. NNI does not have a Material of Conformance.	Non Q No Dispo	11-4-76	R. A. Moray
525	9-13-76	M-1.35. Thermocouple Assemblies not traceable to the Certificate of Conformance.	Non Q No Dispo	11-15-76	J. P. Connolly
526	9-13-76	M-1.35. Pressure Switches, documentation packages not received.	Non Q No Dispo	11-15-76	J. P. Connolly
527	9-17-76	C-230. Entrained air in concrete exceeded spec. requirements. Aux. Bldg. Pour A(629.5)a	Use as is	11-2-76	B. T. Cheek
528	9-17-76	M-204. Rust on spool pieces @FW 37, M-610 Sht. 5.	Repair		
529	9-17-76	M-106 AC. Sway Strut 'W' Dimension. Size of piece does not agree with size on sketch.	No Noncon- formance	9-23-76	P. M. Pitts
530	9-21-76	M-51. Heat Exchanger 2E-73A has rust and scale on shell side.	Rework	10-8-76	C. Groat
531	9-22-76	C-233A. Plate dimensioned two different thicknesses on same drawing.	Rework		
532	9-23-76	M-104A. G-321-D not sent for 12" 150# Flange.	No Noncon- formance	9-24-76	H. Boleen
533	9-23-76	M-106AC. Random Hanger Support hanger rod was not threaded as required.	No Noncon- formance	10-7-76	R. S. Morrow
534	9-23-76	Dwg. C-256. Clear cover for rebar out of tolerance. Aux. Bldg. West Transfer. Tube Slab	Use as is.	Telex. 9-28-76 10-26-76	M. E. Foote M. E. Foote



## LOG OF NONCONFORMANCE REPORTS

PROJECT NAME <sup>1</sup> Midland 1 & 2 JOB NO. <sup>1</sup> 7220PAGE <sup>8</sup> 46

2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
535	9-23-76	C-230. Flyash content in concrete placed in Pour Y(623.0)a below minimum allowable weight.	No Nonconformance	11-8-76	B. T. Cheek
536	9-24-76	1-104A. 18" LR 90° Ell contains cracks, on Spool 2HBC-131-S617-9-7.	Reject		
537	9-24-76	M-106AC. Pipe Clamp does not conform to the sketches Bill of Material. Hanger MK 2-1/2-ICCB-10-H4	Use as is.	11-22-76	R. S. Morrow
538	9-24-76	M-104A. Shop Traveler Form, does not agree with the Code Data Plate or Code Data Form. 1-HBC-87-S619-7-2	Documentation		
539	9-27-76	C-233A. E-14430. Two ea. G <sub>4</sub> , J <sub>4</sub> , & K <sub>4</sub> Beams. Reentrant corners not filleted to a 1/2" radius.	Use as is	11-18-76	H. Boleen
540	9-28-76	C-39. Reinforcing Steel Received does not correspond with fabrication on Inland Ryerson Dwgs.	Rework and Reject	11-5-76	J. R. Slifer
541	9-28-76	C-208. Concrete Cylinders had a higher curing temperature than allowable maximum.	Use as is	11-23-76	B. T. Cheek
542	9-27-76	Dwg. C-276. Aux. Bldg. El. 528'6". #11 dowels omitted. 7.8 line for the north 2'6" of the slab.			
543	9-29-76	M-93. Nuts and bolts not secured, guard not provided on limit switch of crane.			
544	9-29-76	M-104A. Gaskets, wrong type of spiral wound gaskets marking, documentation.			
545	9-29-76	C-50A. Four Polar Crane Girder Support Brackets Damaged.	Std. repair		
546	9-30-76	C-39. Discrepancies in Vendor Dwgs. as to Rebar Fabricated and Rebar Received.	Rework	10-1-76	R. A. Moray
547	9-30-76	M-104A. MTR's lack Stress-Rupture and Cone Stripping Tests for studs and nuts.			
548	10-1-76	C-233A. P14 Pipe Restraint Embeds fillet welds have some incorrect dimensions.	Use as is	11-5-76	J. R. Slifer
549	10-4-76	C-38. Reactor Bldg Structural Steel, cutting past point of tangency.			
550	10-4-76	M-104A. Gaskets, wrong type of spiral wound gaskets marking, documentation.			
551	10-4-76	C-230. Low air content on one ticket, pour#C(593.5)a	Use as is	11-23-76	B.T. Cheek
552	10-5-76	Spec. C-305. Expansion anchors used for Class II Piping over 8" in diameter.			
553	10-5-76	C-231. Two sister splices taken from 90 Production instead of four splices.			



11-1-76

## LOG OF NONCONFORMANCE REPORTS

PROJECT NAME <sup>1</sup> Midland 1 & 2JOB NO. <sup>1</sup> 7220PAGE <sup>8</sup> 47

2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
554	10-6-76	Dwg. C-202. 1-#6 dowel missing at El. 624'0", 12' west of 6.2 on 'A' line wall. Aux. Bldg.	Repair	11-19-76	M. E. Foote
555	10-6-76	C-231. 2-#6 rebar damaged by concrete drilling. El. 624'0" @ 'B' line wall. Aux. Bldg.	Use as is	11-16-76	M. E. Foote
556	10-6-76	M-104A. Studs do not include the results of the stress-rupture test on the Certified MTR			
557	10-6-76	C-38. Dwg. -C-38-638. Plate bent at an angle c' due to a cracked weld.			
558	10-7-76	C-305. Expansion anchors used to fasten hanger 10-IFCB-19-H7 to wall. (over 8" in diameter)	Reject		
559	10-6-76	M-120. Two valves have a film of rust on the internal surfaces. Item #5.3 & 5.4			
560	10-8-76	M-1.17. Quality Documentation Package has not been received at the jobsite.			
561	10-11-76	M-93. Aux. Bldg. Crane components exposed to the weather.	Rework		
562	10-13-76	Dwg. M-616 Sht. 7. Weld completed without the Authorized Inspector's Hold Point on WR-19 Form	Use as is		
563	10-14-76	M-104A. ASME III Class 2 & 3 Studs and Nuts, marking & Documentation	Documentation & Reject		
564	10-13-76	Dwg. C-259. 3 Vertical rebar located outside of horizontal rebar rather than inside. Aux. Bldg.	Use As Is	TELETYPE 11-5-76 11-8-76	B. T. Cheek
565	10-15-76	Dwg. C-274. As-built conditions do not conform to sect. E of dwg. Aux. Bldg. 614'0" @ 5.3 & 7.8			
566	10-15-76	Dwgs. C-214, 202, & C-276. 10-#5 rebar omitted at El. 634'6" and 1-#5 rebar omitted at El. 534'6" Aux.			
567	10-15-76	Dwgs. C-210, C-219, C-140, & C-282. Rebar omitted. Aux. Bldg. Elev. 568'0"			
568	10-15-76	Dwgs C-213, C-140, C-282, C-284. Rebar omitted. Aux Bldg, 614'0", G, J, Hk, K line walls.			
569	10-15-76	Dwgs C-213, C-140, C-282, C-284. Rebar omitted. Aux Bldg, Elev. 614'0". 5.6 line, wall 32.			
570	10-19-76	Dwg. C-429. South wall of Cont. 2 feedwater chamber has 5" to 5 3/4" clear cover.	Use as is	11-19-76	D. L. Osborn
571	10-19-76	Dwg. -C-658 & 415. Type 48 embed notched by mistake and E-2 embeds notched too deep.	Rework		
572	10-19-76	C-208. Fineness of Flyash too low. Specific surface varied from average . . . more than 15%			



LOG OF NONCONFORMANCE REPORTS

11-1-76

PROJECT NAME <sup>1</sup> Midland I & 2 JOB NO. <sup>1</sup> 7220

PAGE <sup>8</sup> 48

2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
573	10-19-76	NDE Procedure PT-SR-1, 2. Liquid penetrant Cert. Records are not up to Rev. 1 requirements	Use as is.	Telex. 10-27-76 11-9-76	A. L. Boulden A. L. Boulden
574	10-20-76	M-106AC. Hanger rod delivered to jobsite not threaded. No G-321-D for Shop Order E-ME-242.	Use as is.		
575	10-20-76	M-104A. Pipe spool SN 106722-601A-276 delivered to the jobsite without G-321-D and Quality Verif. Doc.	Documentation		
576	10-22-76	C-208. Concrete User Tests #31 & #32, ice not tested.			
577	10-22-76	C-231. Unit #2 Exterior Wall, Rebar omitted.	Use as is	11-19-76	D. L. Osborn
578	10-26-76	C-211. Structural Backfill material not tested on delivery date.			
579	10-26-76	M-204. Spray Header pipe spools 2GCB-001-S613-1 & 2GCB-008-S613-1 came in contact with sheathing.	Rework Use as is	11/16/76	F. Mahala
580	10-28-76	C-231. Curing temperature dropped below 50° for 3 hours on Pour A(614)h-2 on 10-22-76			
581	10-29-76	C-231. Curing temperature dropped below 50° for an indeterminate amount of time on Pour A(614)h-3			
582	10-29-76	C-231. Curing temperature dropped below 50° for an indeterminate amount of time on Pour A(629.5)b'			
583	10-29-76	E-21. Cable received without required test results			
584	11-2-76	C-231. Curing temperature for grout fell below manufacturer's recommendation	No nonconformance	11-8-76	B. T. Cheek
585	11-2-76	M-51. Gouge in nozzles #3 & #4, 2E-73B			
586	11-4-76	M-204. Arc strikes on 2-GCB-006-7 RB Spray Piping			
587	11-4-76	C-233A. Welding and documentation, F-13637 embeds			
588	11-4-76	M-125C. Broken handle to the manual operator, item 17.6, 18HCB-GT-2MO-1310A-RL	Rework		
589	11-4-76	C-231. Curing temperature of grout, Aux Bldg. Elev. 584'0", C, D, & F lines	No nonconformance	11-8-76	B. T. Cheek
590	11-8-76	C-208. Intervals between cylinder sets taken exceeded 100 yards. CC(683.25)a'			
591	11-8-76	C-230. Slump and temperature tests exceeded 35 yard interval. CC(602.3)a'			



LOG OF NONCONFORMANCE REPORTS

PROJECT NAME <sup>1</sup> Midland 1 & 2 JOB NO. <sup>1</sup> 7220

PAGE <sup>8</sup> 49

2 NCR NO.	3 DATE	4 NONCONFORMANCE DESCRIPTION / REMARKS	5 DISPO.	6 DATE NCR CLOSED	7 CLOSED BY
592	11-9-76	C-230. Air content for Pour C.(619.5)a too high.			
593	11-9-76	C-38. G-321-D and accompanying documentation not traceable to each other or the shear studs.	Doc.		
594	11-9-76	Dwg. C-195. Over 10% of the rebar were cut U.N.O. when drilling anchor bolt holes at the CCW pump pads			
595	11-10-76	Dwg. 617 Sh. 8. Cover pass of Fw MCI exceeded specified tolerance. Weld varied 1 1/8" to 1 3/8"			
596	11-10-76	M-106A. Details of bolt and nut materials sizes and clamp bolt hole sizes are not provided w/hangers			
597	11-11-76	M-120. 10" HBB-GT-2MO-1760-RVE valve radio-graphs torn, bent, holes worn through.			
598	11-11-76	M510 sht. 7. FW #10. 10" FCB Class pipe welded with incorrect electrode			
599	11-12-76	C-231. Aux Bldg Elevator shaft out of dimensions per Dwg 7220-C-202 Rev. 6.			
600	11-12-76	M-92. Hole for mounting bolt drilled and reamed off from perpendicular. Unit #2.	Rework	11-29-76	R. J. Mesey
601	11-12-76	M-92. Three bolts failed during installation, appear to be under-cut at transition. Unit #2.	Reject		
602	11-15-76	C-230. Temp. of concrete at placement too high. Pour A(646)a'			
603	11-16-76	M-104A. NDE not performed on weld "D", spool OHCC-153-S506-2-1.	Rework	11-18-76	P. M. Pitts
604	11-16-76	M-326. Hanger 4-2HCB-21-H1 installed omitting 1/4" fillet weld. Aux. Bldg. El. 580'0"			
605	11-16-76	Dwg. C-219. Revision 8 of dwg. C-219 omits 4-#8 bars and 6-#5 caps. Aux. Bldg. El. 584' @ 'G' & 6.6			
606	11-18-76	Dwg. C-202. 24" spacing for #6 Rebar rather than 12" called out by Dwg. Aux. Bldg. El. 624'0"	Repair	11-24-76	R. K. Siple
607	11-22-76	M-106AC. 3/16" made completely around the flanges and web of the item 8 to item 9 joint. 2-617-6-I			
608	11-22-76	C-38. G-321-D not included in documentation for items on Ingalls Steel Packing List V2182.	Doc.		
609	11-24-76	Dwg. C-279. Dwg. called for installation of 6 #11 Bars. 5 #11 Bars were installed. Aux. Bldg. El 634'-6"	Use As Is	Telex 11-30-76	M. E. Foote
610	11-29-76	C-233A. F-16574 Rail Clamps, phosphorus content does not meet ASTM A-36.			

NONCONFORMANCE REPORT

12/1/76

Project Name Midland		Units 1 & 2		Job No. 7220	19. 585	20. Page 1 of 12
2. Unit 2	3. Drawing/Part No. K617 sh 5	4. Item Description CCU Ht. Ex. 2E73B	5. Item Location Aux. Bldg. 589	10. Contractor/Supplier Yuba Heat Recovery Corp.		
6. P.O. or Site No. 7220-N-51-AC	7. Serial No. N/A	8. Replacement Part QCIR GM-151-1E73A	9. Source Construction	11. ASME AUTHORIZED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	15. Equip Furnished By CLIENT <input type="checkbox"/> FERG <input type="checkbox"/>	
11. Inspection Criteria Flow <input type="checkbox"/> Spec <input type="checkbox"/> Other <input type="checkbox"/>	12. INSPECTION CODE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	13. SKETCH ATTACHED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	14. Discovered During TEST <input type="checkbox"/> OPER <input type="checkbox"/>	26. Disposition Comments		
During inspection of spools 16"-2EBC-135 and 16"-2EBC-123 at FW #9 and #1, defects (gouges) of varying depths were noted. FW #9 - Defect depths from .007" to .073". Approx. section thickness .497. FW #1 - Defect depths from .011" to .117" Approx. section thickness .507".						
17. Reported By: [Signature] Date: 11-2-76 21. Reason: <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OFFERS (SPECIFY) _____ 22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING						
23. Project Engineering Disposition						
24. Disposition Comments REWORK <input type="checkbox"/> REJECT <input type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS <input type="checkbox"/> PROJECT FIELD ENGINEER _____ DATE _____ PROJECT ENGINEER _____ DATE _____ PROJECT CONSTR QC ENGINEER _____ DATE _____ AUTHORIZED INSPECTOR _____ DATE _____						
25. Disposition Results						
26. QC Acceptance						
QC ENGINEER _____ DATE _____						
AUTHORIZED INSPECTOR _____ DATE _____						

Conditional Release: to NCR 585  
BLOCK #16 CONTINUATION:

Change Block 16 to indicate that the apparent discrepancies is on the Yuba Heat Exchanger Nozzles, (16") and not the connecting pipe spools. Also note that the discrepancies is not in "Weld Heat Zone" for the FW #1 & 9.

Project Engineering is to disposition the weld repair procedure. Yuoa Corp. was contacted by the Ann Arbor Office and Yuba to concur with the weld repair submitted by Sechtel.

The Field request that the Conditional Release be accepted by QC to allow the connecting spools to be installed and welded. The repair area is retrievable after the pipe spools are installed.

Concurrence

P.F.E. (signature)

*[Handwritten Signature]*  
P.F.Q.C.E. (signature)

*[Handwritten Signature]*  
Q. A. (signature)

*[Handwritten Signature]*  
Authorized Inspector (signature)



Sent to AH 11-30-76

Log

NONCONFORMANCE REPORT

1. Project Name Midland Units 1 and 2		Job No. 7220		19. No. 586	20. Page 1 of 25		
2. Unit(s) 2	3. Drawing/Part No. M-613 sh 1	Rev 3/F2	4. Item Description Nuclear Class 2 Pipe spool 2-GCB-006-S613-7	5. Item Location Containment Dome Unit 2			
6. P.O. Or Spec No. 7220-M115 A	7. Serial No. Pipe HT#738104	8. Replacement Part P/N N/A REV	SER NO.	9. Source Construction	10. Contractor/Supplier M.W. Kellogg Co.		
11. Inspection Criteria HOWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER <input type="checkbox"/>		IR NO. PI.10-613-1	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD	
16. Nonconforming Condition: The following defects were noted during inspection in the last 21 1/2" of 2 1/2" pipe spool 2-GCB-006-7.				24. Disposition Concurrence			
21 1/2" of 2 1/2" pipe spool 2-GCB-006-7.				REWORK	REJECT	REPAIR <input checked="" type="checkbox"/>	USE AS IS
a) Three areas approximately 1 1/2" in length each of arc strikes.				PROJECT FIELD ENGINEER		DATE	
b) One hole approximately 3/64" in diameter and .0465" in depth located 21 1/2" from the nozzle end, Ref. specification 7220-M-204 Rev. 4 Sect 5.2.				PROJECT ENGINEER		DATE	
"Q" Number 4.134				PROJECT CONSTR QC ENGINEER		DATE	
Q.C. Hold Tags Applied 1				AUTHORIZED INSPECTOR		DATE	
17. Reported By PM Pitts		Date 11-4-76	18. Validated By J.B. Kennolly		Date 11-4-76	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
Repair surface defects in accordance with Project Specification 7220-M-204, Paragraph 5.2.1 and ASME Code, Paragraph NB-2500 and 2539.6. Repair procedure and weld map attached.							
<i>Joseph H. Medhurst</i> <i>C. Williams</i> 11-30-76							
23. Project Engineering Disposition				26. QC Acceptance			
				QC ENGINEER		DATE	
				AUTHORIZED INSPECTOR		D	



NOTES

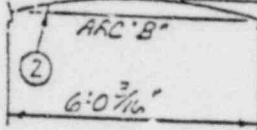
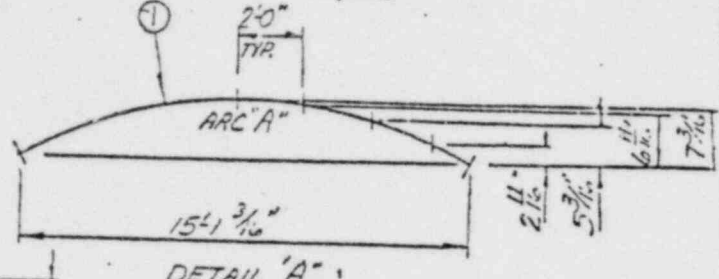
1. ASME CODE PLATE DATA

THE M. W. KELLOGG CO.  
 SERIAL NO. **26-005-5613-7**  
 DESIGN **ES-414**  
 CLASS 2  
 SIZE: 3/4" IN 3/4" (MIN) HIGH ANNUALS  
 AND ATTACH TO PIPE.

WORK NO. **26-005-5613-7** N-8007 F-37 1  
 SYSTEM **2. CONTAINMENT SPRAY** JOB NO. SHEET NO. REV.  
 REF. DGS. **M-613 SHT 1 OF 2** KEY-1  
 EST. VLT. **135** INSP. CUST. RETEL ENDS CLEAN FAB. SPEC. **ES-1**

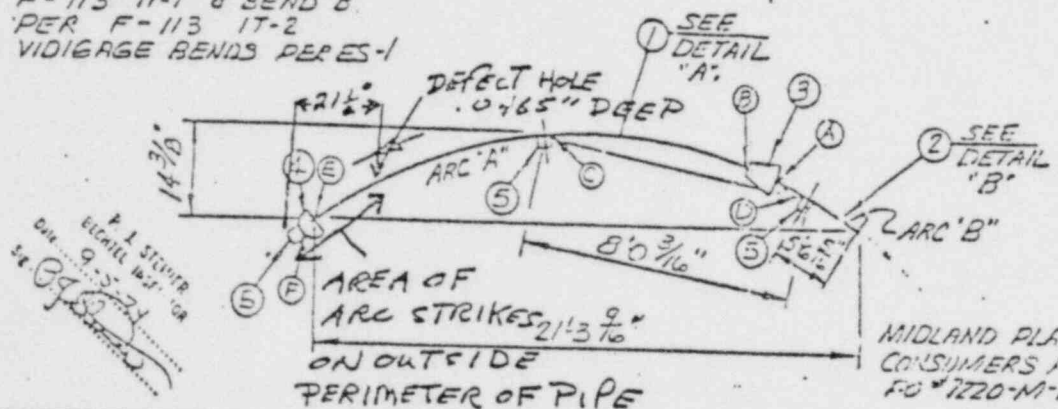
QUALITY ASSURANCE REQUIRED

- FERRITE CONTROL REQ'D  
**6 TO 25 %**
- All assemblable surfaces of completed inlet, outlet, attachment, and brace connections welds 4" min. x 48 inch outlet, and 1/2 inch diameter shall be subjected to the welds
- LIQUID PENET TEST PER ES-404
- RADIOGRAPH ALL BUTTWELDS PER ES-414, ES-415 & ES-416
- All Shop Butt Welds to be X-Insert Welds



REL. RAD.	ANGLE	TANG	LENGTH
A	40°0'	18°6'	7'-7 3/8"
B	18°0'	79'	3'-05"

- VIDIGAGE BEND "A" PER "F-113 IT-1" & BEND "B" PER "F-113 IT-2"
- VIDIGAGE BENDS PER ES-1



MIDLAND PLANT UNIT #2  
 CONSUMERS POWER CO.  
 EG # 7220-M-115-KC

REV.	DATE	BY	DESCRIPTION	3\"/>
1	2/11/57	JJ	REV'D PER CUST COMMENTS	3\"/>

MATERIAL				PRICING DETAIL			
ITEM	QUAN.	DESCRIPTION	SPEC.	SOURCE	UNIT	TOTAL	NET
STEEL AND STEEL ASSY.							
1	1	2 1/2\"/>					
2	1	3\"/>					
3	1	3\"/>					
4	1	2 1/2\"/>					
5	3	1\"/>					
6	1	3.193\"/>					
7	2	2.596\"/>					

QUAN.	SIZE	DESCRIPTION	PRICE PER PIECE
		LABOR	TOTAL PRICE THIS SHEET

NCR 586 Page 2 of 25

page 3 of 5

NCR 586

Repair Procedure for Elimination

of Surface Defects

On Austenitic Stainless Steel Piping Materials

In accordance with Project Specification 7220-M-204, Paragraph 5.2.1 and ASME Code Paragraph NB-2500 and 2539.6, the following welding repair procedure is defined:

I. Location: See attached sketch  
Size: See attached sketch

II. Defect Removal:

A. Grind out cavity (use wheel suitable for stainless)

B. Blend uniformly into surrounding surface

C. After defect elimination, the area shall be examined using PT-SR-1,2 Rev. 0 in accordance with Paragraph NB-2546. to assure the defect has been removed or reduced to an acceptable size. Base metal directly adjacent to cavity (within one inch) will be included in this examination.

III. Repair by Welding:

If defect prepared cavity reduces the thickness of the section below the minimum required to satisfy NB-3000, the defect shall be repaired as follows:

A. Welders qualified in accordance with ASME Section IX for process and thickness of repair weldment.

B. Utilize welding procedure P8-A Rev. 0 for repair with E308L filler material or as an alternate P8-T-Ag with ER309 filler material.

C. After repair, the surface shall be blended uniformly into the surrounding surface.

D. The repaired area will be examined as follows:

1. PT-SR-1,2 Rev. 0 in accordance with Paragraph NB-2546

2. RT-XG-2 Rev. 1 in accordance with paragraph NB-5110 and to the acceptance standards of NB-5320. The penetrometer and acceptance standards for radiographic examination of repair welds shall be based on the section thickness at the repair area.

3. Base metal directly adjacent to the repair (within one inch) will be included in this examination.

page 4 of 5  
NCR 586

E. The following information shall be described in the Certified Material Test Report:

1. Chart showing location and size of the prepared cavity.
2. The welding material designation
3. The welding procedure
4. Heat treatment, if required
5. The examination results, including the radiographic film

page 5 of 5

NCR 586

BASE MATERIAL REPAIR  
MAP  
FOR  
PIPE SPOOL 2-GCB-006-S613-7

DRAWING: M613 SHT 1

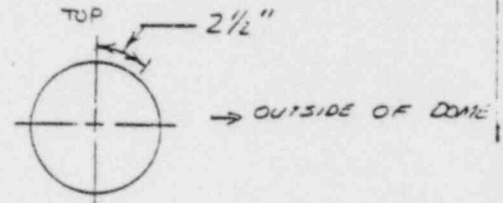
LOCATION: AS SHOWN

DEFECT # 1

ACTUAL SIZE



LOCATED:  $2\frac{1}{2}$ " FROM THE NOZZLE END.



DEFECT # 2

ARC STRIKES: BLEND IN ACCORDANCE WITH PARAGRAPH II.



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 587	20. Page 1 of 3	
2. Unit(s) Units 1 & 2	3. Drawing/Part No. See Block 16	Rev.	4. Item Description Pipe Restraint Embeds	5. Item Location Outside QC Hold Area		
6. P.O. Or Spec No. 7220-F-13637	7. Serial No. Type	8. Replacement Part P/N N/A REV	9. Source Supplier	10. Contractor/Supplier Mississippi Valley Structural Steel		
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. R-1,00-297 NO. See Block 16	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC:G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: 1. Bechtel approved Mississippi Valley Structural Steel Drawing F-7220-C233A-13637-MV-2-2 requires full penetration welds with 5/8" fillets between the pedestals and the base plate on type A2 & A2A embeds. Contrary to the above, the pedestal welds on four A2 and one A2A embeds have the full penetration welds, but lack the 5/8" fillets. 2. Cracked weld on embed A1C between pedestals as shown in Attachment A.			24. Disposition Concurrence (2) N/A REWORK REJECT REPAIR USE AS IS 3) Doc. X(U) <i>[Signature]</i> For T.C. Valeryanc 11/24/76 PROJECT FIELD ENGINEER DATE <i>[Signature]</i> 11-24-76 PROJECT CONSTR QC ENGINEER DATE AUTHORIZED INSPECTOR DATE			
17. Reported By <i>[Signature]</i>	Date 10-29-76	18. Validated By <i>[Signature]</i>	Date 11-4-76	25. Disposition Results Embeds returned to vendor on S/N 7220-2330 <i>[Signature]</i> For T.C. Valeryanc 11/24/76		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input checked="" type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
23. Project Engineering Disposition 1. The A2 & A2A embeds are to be rejected and returned to MVSS. 2. The "cracked weld" on embed A1C is actually an irregularity which occurred during the partial removal of a run off tab. This weld is not required by design drawings and the irregularity is not a nonconforming item. 3. The vendor has been requested to furnish the required mill test reports and						
26. QC Acceptance QC ENGINEER DATE AUTHORIZED INSPECTOR DATE						

Con't Pg. 2

Block 16 continued

3. Specification G-23, Rev 5, Para 3.4 states in part: "Engineering and quality verification documents shall be submitted to Bechtel in accordance with the provision of Form G-321-D." Contrary to the above, the material as indicated by the identification marks listed in Block 20 (Traceability) of the G-321-D is not traceable to the documentation (mill test reports, magnetic particle inspection report and ultrasonic inspection report) required by the G-321-D.

"Q" number is 1,102. Hold pending final disposition. <sup>5</sup> ~~10~~ hold tag(s) applied. *11/24/76*

Continued Block 5

Outside QC Hold Area - 4A2; 1A2A; A1C

Near Fabrication Shop - 1A1D

Unit II Containment - 1A1E

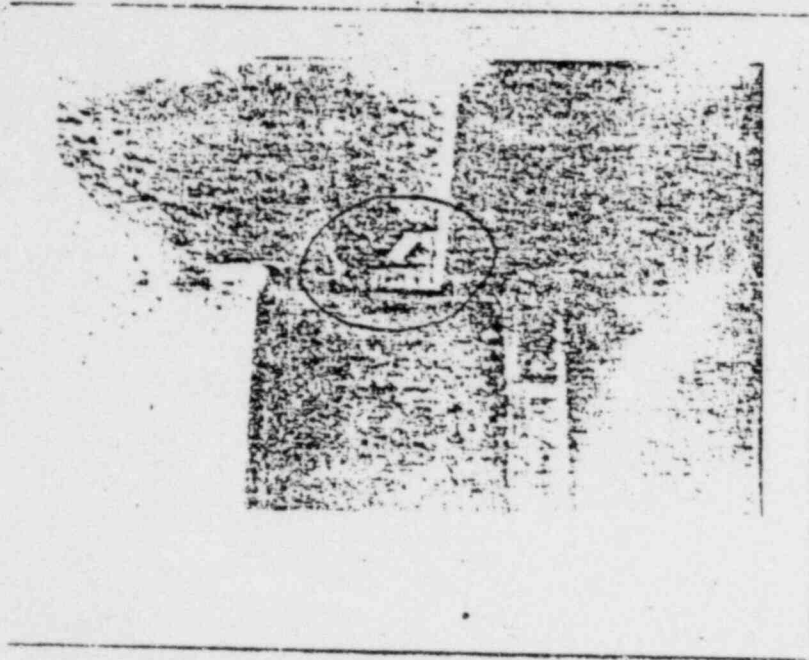
Sassco Rd Laydown Area - 1A1C; 1A1A

*John R. Slipsky 11-18-76*  
*M. H. 11-18-76*

Block 22 Continued

verification of complete documentation.

*Ment 11/24/76*  
*W. B. for F. Teague 11/24/76* *John C. Jones 11/24/76*



The weld in question is the area circled in the above picture.



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 588	20. Page 1 of 3	
2. Unit(s) Unit 2	3. Drawing/Part No. Sec: Block 16	4. Item Description 18" Gate Valve 18HCB-GT-2M01310A-RL	5. Item Location QC Hold Whse #1			
6. P.O. or Spec No. 7220-M-125C	7. Serial No. See Block 16	8. Replacement Part SER NO. _____ P/N _____ REV _____	9. Source Shipment	10. Contractor/Supplier Anchor/Darling, Hayward, CA.		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. R-1.00-379 Rev NO. 7220-M-125C	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC-G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Specification 7220-M-125C, Para 13.2 states: "All valves shall be boxed, crated or secured to skids and protected against damage during shipment, storage and handling." Contrary to the above, one 18" gate valve (18HCB-GT-2M01310A-RL, SN 5205-05-1-3, Item 17.6) was delivered to the jobsite with the handle to the manual operator broken off. See drawing attached - (Attachment A). "Q" number is indeterminate. Hold pending final disposition. 1 hold tag(s) applied. (cont. on page 2 OF 3)			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS
			Booster T.C. Valenyang PROJECT FIELD ENGINEER		DATE 11/16/76	
			J.J. Connolly PROJECT ENGINEER		DATE 11-17-76	
			[Signature] PROJECT CONSTR QC ENGINEER		DATE 11/17/76	
			[Signature] AUTHORIZED INSPECTOR		DATE	
17. Reported By Robert S. Monroe	Date 11/3/76	18. Validated By [Signature]	Date 11-4-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> NO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input checked="" type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING						
Material supervisor to notify Anchor/Darling and obtain manual operator (hand crank) replacement parts for rework at the jobsite. (Ref. OS&D #107)						
George G. Butler 11-16-76						
[Signature] 11/16/76						
W.K. Paulite 11-17-76						
23. Project Engineering Disposition						
26. QC Acceptance						
			QC ENGINEER	DATE		
			AUTHORIZED INSPECTOR	DATE		



**BECHTEL**

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 3

14 NCR NO. 588

Block #16 Cont.

Field engineering requests a conditional release of the subject valve through the point of installation.

*George S. Butts 11-16-76*

10098-2

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - POAE  
Goldenrod Copy - QC

QC-613

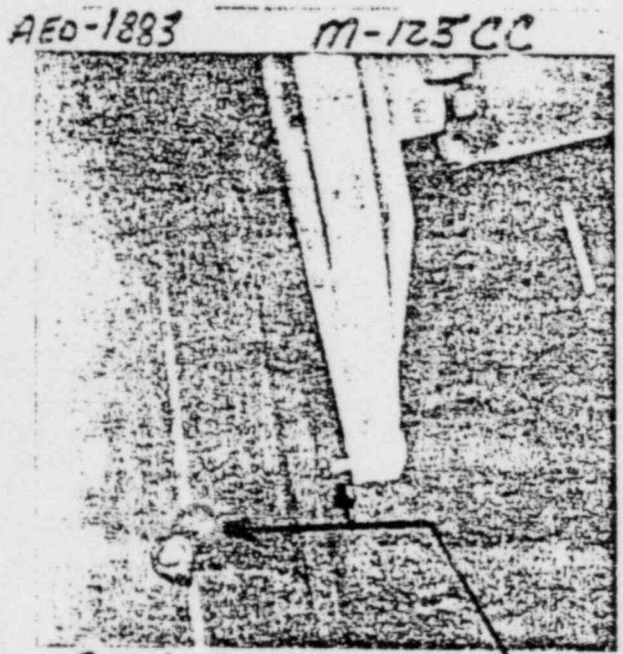
ATTACHMENT A

Pg <sup>3</sup>2 of <sup>3</sup>2

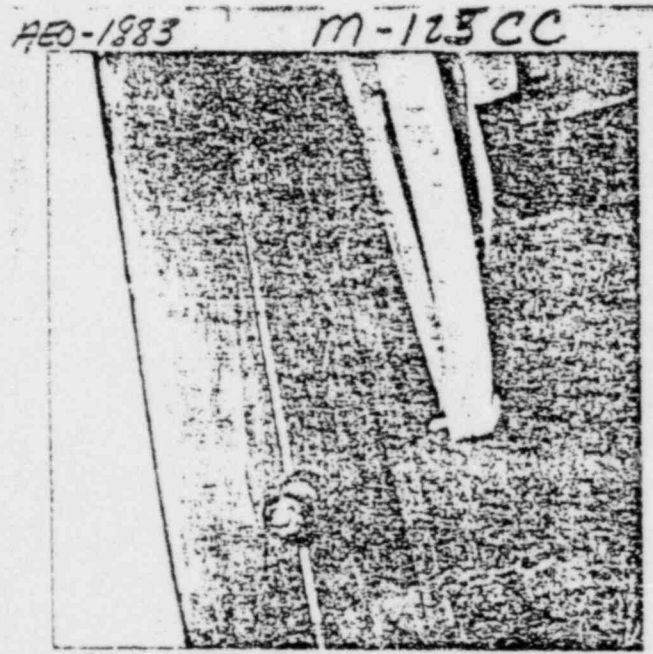
REC  
11/14/76

NCR 588

DATE 11-4-76



CENTRAL  
06-059917-5



CENTRAL  
06-059917-5

HANDLE BROKEN  
OFF MANUAL OPERATOR



NONCONFORMANCE REPORT

Sent to 4A 11-11-76  
Log

1. Project Name Midland Nuclear Power Plant		Job No. 7220		19. No. 590	20. Page 1 of 1		
2. Unit(s) 2	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Testing Frequency	5. Item Location Containment #2			
6. P.O. Or Spec No. C-208, Rev. 7	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Subcontractor	10. Contractor/Supplier U. S. Testing		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A P/N C-208, Rev. 7	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By SUBCONTRACTOR <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> PLD	
16. Nonconforming Condition: Specification C-208 states, "For Class I structures, one set of at least six specimens shall be taken, with intervals between each set not exceeding 100 cubic yards of concrete batched for each mix design." Contrary to this concrete placed 10/20/76 (CC(683.25)a') was sampled at Ticket #11000 (232 yards) and Ticket #11014 (336 yards) at an interval of 104 cubic yards, thereby exceeding the 100 cubic yard interval. One hold tag applied. Q-List is 6.101.				24. Disposition Concurrence			
				REWORK	REJECT	REPAIR	USE AS IS
				PROJECT FIELD ENGINEER	DATE		
				PROJECT ENGINEER	DATE		
				PROJECT CONSTR QC ENGINEER	DATE		
				AUTHORIZED INSPECTOR	DATE		
17. Reported By <i>[Signature]</i> Date 11/5/76				18. Validated By <i>[Signature]</i> Date 11-8-76			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)				25. Disposition Results			
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING							
Use as is.							
				<i>[Signature]</i> 11/11/76			
				<i>[Signature]</i> 11/11/76			
23. Project Engineering Disposition							
				26. QC Acceptance			
				QC ENGINEER	DATE		
				AUTHORIZED INSPECTOR	DATE		



NONCONFORMANCE REPORT

Send to AH 11-11-76  
Log

1. Project Name Midland		Job No. 7220		19. No. 891	20. Page 1 of 1
2. Unit(s) 2	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Test Frequency	5. Item Location Cont. #2 Elev. 602.3'	
6. P.O. Or Spec No. C-230, Rev. 7	7. Serial No. N/A	B. Replacement Part P/N N/A REV N/A	SER NO. N/A	9. Source Subcontractor	10. Contractor/Supplier U. S. Testing
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. C-230, Rev. 7		IR NO. C-I.30-16	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Spec. C-230, Rev. 7 Para. 9.1.3 requires slump and temp. test <sup>9</sup> to be performed every 35 c.y. produced. On 11/1/76, Pour No. CC(602.3)a', tests were run on Ticket No. 11238 (264 c.y.) but not run again until Ticket No. 11243 (304 c.y.) exceeding the 35 c.y. requirement by 5 c.y. 1 Hold tag applied. Q-List No. 6.101.			24. Disposition Concurrence		
			REWORK	REJECT	REPAIR
					USE AS IS
			PROJECT FIELD ENGINEER	DATE	
			PROJECT ENGINEER	DATE	
			PROJECT CONSTR QC ENGINEER	DATE	
			AUTHORIZED INSPECTOR	DATE	
17. Reported By <i>Wanda Sub</i>	Date 11/5/76	18. Validated By <i>[Signature]</i>	Date 11-9-76	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
Use as is.					
<i>J. G. [Signature] 11/11/76</i> <i>K. [Signature] 11/11/76</i>					
23. Project Engineering Disposition					
26. QC Acceptance					
			QC ENGINEER	DATE	
			AUTHORIZED INSPECTOR	DATE	



NONCONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>592</b>	20. Page <b>1</b> of <b>1</b>
2. Unit(s) <b>COMMON</b>	3. Drawing/Part No. <b>N/A</b>	Rev <b>N/A</b>	4. Item Description <b>Concrete Air Content</b>		5. Item Location <b>Cont. 30. Elev. 619.5'</b>
6. P.O. Or Spec No. <b>C-230, Rev. 7</b>	7. Serial No. <b>N/A</b>	8. Replacement Part P/N <b>N/A</b> REV <b>N/A</b>		SER NO. <b>N/A</b>	9. Source <b>Subcontractor</b>
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER			IR NO. <b>C-1.30-17</b>	10. Contractor/Supplier <b>Champion, Inc.</b>	
16. Nonconforming Condition: <b>Spec. C-230, Rev. 7, Para. 9.1.5 requires that air content be maintained between 3-6%. On 11/2/76, Pour No. C(619.5)a, an air test was run on delivery ticket No. 11269. Contrary to requirements, resulting test was 6.4%. Field cylinders were cast from end of line sample. 1 Hold tag applied. Q-List No. 1.101.</b>			12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST
			15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD		
			24. Disposition Concurrence		
			REWORK	REJECT	REPAIR
			PROJECT FIELD ENGINEER	DATE	
			PROJECT ENGINEER	DATE	
			PROJECT CONSTR QC ENGINEER	DATE	
			AUTHORIZED INSPECTOR	DATE	
17. Reported By <i>[Signature]</i>		Date <b>11/5/76</b>	18. Validated By <i>[Signature]</i>		Date <b>11-8-76</b>
21. Routing <input type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)			25. Disposition Results		
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
23. Project Engineering Disposition					
			26. QC Acceptance		
			QC ENGINEER	DATE	
			AUTHORIZED INSPECTOR	DATE	



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 593	20. Page 1 of 1	
2. Unit(s) N/A	3. Drawing/Part No. N/A	Rev N/A	4. Item Description 4200 Shear Studs	5. Item Location Whse #1 QC Hold Area		
6. P.O. Or Spec No. 7220-C-38	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier	10. Contractor/Supplier Omark Industries - KSI; Fastening System Div	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. P-1.00-323 Rev 1 NO. 7220-C-38	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC:G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Specification 7220-C-38, Appendix A, Para 3.0 states in part: "The Seller/Subcontractor shall furnish documentation in accordance with the specification as summarized and directed by G-321-D." "The completed G-321-D form is then used for a cover sheet as directed on the back of the form." Contrary to the above, the G-321-D and accompanying documentation are not traceable to each other or the shear studs. Hold pending final disposition, "Q" number is indeterminate. 2 hold tag(s) applied.			24. Disposition Concurrence			
			REWORK REJECT REPAIR USE AS IS			
			PROJECT FIELD ENGINEER DATE 11-15-76			
			PROJECT ENGINEER DATE 11-17-76			
			PROJECT CONSTR QC ENGINEER DATE			
			AUTHORIZED INSPECTOR DATE			
17. Reported By John R. Schifer Jr	Date 11-8-76	18. Validated By MFL SUPERVISOR	Date 11-9-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input checked="" type="checkbox"/> Field Engineering Disposition		<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Material Supervisor to obtain documentation. James R. Bernard 11-15-76 [Signature] 11/15/76						
23. Project Engineering Disposition						
26. QC Acceptance						
QC ENGINEER			DATE			
AUTHORIZED INSPECTOR			DATE			



Sent to AA 11-10-76

Log

NONCONFORMANCE REPORT

1. Project Name Midland Units 1 & 2		Job No. 7220		19. No. 594	20. Page 1 of 3
2. Units) Common	3. Drawing/Part No. C-195 (Q)	Rev 4	4. Item Description CCW Pump Foundation	5. Item Location Aux. Bldg. 'C' Line at 5.6 & 7.4.	
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Construction	10. Contractor/Supplier N/A
11. Inspection Criteria <input checked="" type="checkbox"/> OWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. N/A		IR NO. -	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST
16. Nonconforming Condition: Note number six (6), on drawing C-184 (Q) Rev. 2, states that "Where drilled anchor bolts are used for equipment foundations, 10% of the number of reinforcing bars in an active section in any direction may be cut U.N.O." Contrary to this, when drilling for anchor bolt holes at the CCW pump pads, shown on drawing C-195 (Q) - 4, this limitation was exceeded. The number of bars allowed to be cut per note 6 on drawing C-184 is:				15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input checked="" type="checkbox"/> FLD	
a) One #5 bar and 5 #11 bars in the N/S direction.				24. Disposition Concurrence	
b) One #5 bar and 3 #11 bars in the E/W direction. (con't page 2)				REWORK REJECT REPAIR USE AS IS	
17. Reported By <i>[Signature]</i>		Date 11/8/76	18. Validated By <i>[Signature]</i>		Date 11-9-76
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
Project Engineering to evaluate.					
<i>[Signature]</i> 11-10-76					
<i>[Signature]</i> 11/10/76					
23. Project Engineering Disposition					
26. QC Acceptance					
QC ENGINEER				DATE	
AUTHORIZED INSPECTOR				DATE	

NONCONFORMANCE REPORT (CONT'D)

1. PAGE 2 OF 3

14. NCR NO. 594

Block 16 con't.

The CCW Pump Pad at 5.6 and "C" line has had four (4) #11 bars and one (1) #5 bar cut in the east-west direction. Hold for Engineering Disposition. 2 Hold Tags Applied.

Lined area for additional notes or details.

10098-2

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - FOAE  
Goldenrod Copy - QC

QC 613







DESIGN BY A. Gould

DATE \_\_\_\_\_

CHECKED BY \_\_\_\_\_

DATE 9/20/76

PROJECT MIDLAND 142

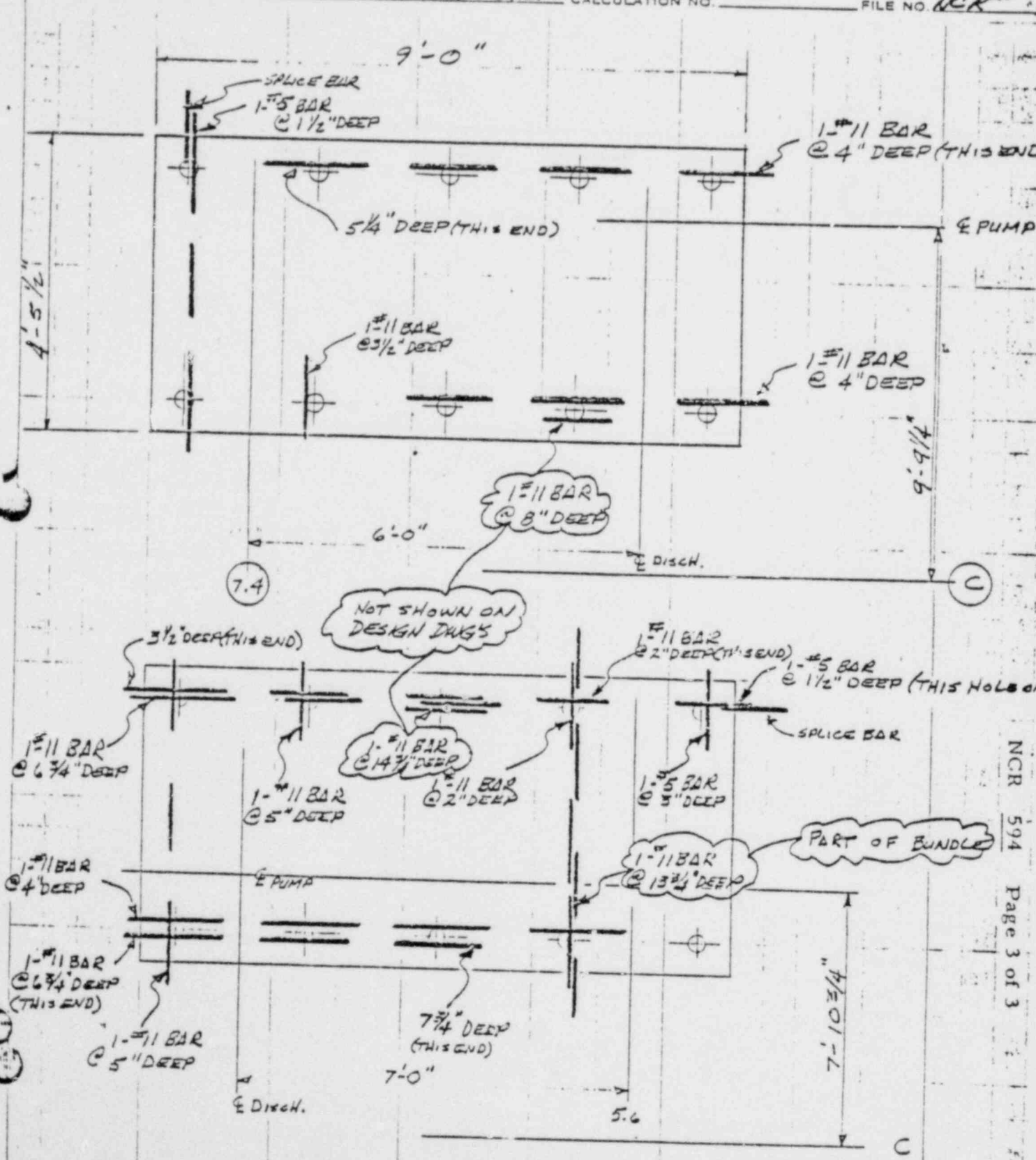
SHEET NO. 3-2

SUBJECT CCW PUMPS EL. 584'-0" AS BUILT \* OF CUT BARS

JOB NO. 7220

CALCULATION NO. \_\_\_\_\_

FILE NO. NCR



NCR 594 Page 3 of 3



Sent to A.A. 11-17-76

Log

### NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 595	20. Page 1 of 2		
2. Unit(s) 2	3. Drawing/Part No. M617 sh. 8	Rev L F/2	4. Item Description Field Weld 1/4 CI	5. Item Location AUX. #2 595 11' E of 6.9 3' N of C			
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A	9. Source Construction	10. Contractor/Supplier N/A			
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. - N/A NO. N/A	12. ASME AUTHORIZED INSPECTION REQ. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD	
16. Nonconforming Condition: Specification G 27, procedure GWS-FM, paragraph 5.5 (b) states "...the cover pass may be welded as a single weave bead provided the pipe wall thick- ness does not exceed a nominal 1-inch and the tie-in to base material on each side of the weld does not exceed a nominal 1/16 inch."  Contrary to the above, during final visual inspection of field weld 1/4CI (iso. M617 sh. 8), it was noted that the cover pass of the weld varied from 1 1/8" to 1 3/8". This joint configuration should not have had a cover pass greater				24. Disposition Concurrence			
				REWORK	REJECT	REPAIR	USE AS IS
				PROJECT FIELD ENGINEER	DATE		
				PROJECT ENGINEER	DATE		
				PROJECT CONSTR QC ENGINEER	DATE		
				AUTHORIZED INSPECTOR	DATE		
17. Reported By Paul W. Latus	Date 11/10/76	18. Validated By [Signature]	Date 11-10-76	25. Disposition Results			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
Field recommends "Use As Is" since the integrity and mechanical properties of the weld <sup>is</sup> <del>are</del> not affected. Nondestructive examination shall be in accordance with Form 84 - mechanical in spec. 7220-G-27Q, Rev. 3.							
Field welding engineers and construction superintendents shall be instructed on the requirements of para. 5.5(b) of General Welding Standard GWS-FM in spec. 7220-G-27Q, Rev. 3 to prevent recurrence.							
23. Project Engineering Disposition		J. R. Barber 11-17-76 D. Williams 11-17-76					
26. QC Acceptance							
QC ENGINEER				DATE			
AUTHORIZED INSPECTOR				DATE			



NONCONFORMANCE REPORT (CONT'D)

Block 16 Continued:

than 1" considering all allowable tolerances.

Hold for Engineering disposition.

"Q" Number 4.174

1 Hold Tag Applied

16088-2

White Copy — Originator  
 Canary Copy — Field Engineer  
 Pink Copy — POAE  
 Goldenrod Copy — QC

QC-633





NONCONFORMANCE REPORT

1. Project Name Midland Units 1 & 2		Job No. 7220		19. No. 596	20. Page 1 of 6		
2. Unit(s) 2	3. Drawing/Part No. GH-613 sh 1	Rev 0	4. Item Description Pipe Clamp Assemblies Fig 295	5. Item Location RB Unit 2 Down			
6. P.O. Or Spec No. 7220-N-100A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier Engineering	10. Contractor/Supplier ITT Grinnell, Warren, Ohio		
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. see block 16		IR NO. see block 16	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD	
16. Nonconforming Condition: Figure 295 pipe clamps are specified by the following ITT Grinnell hanger sketches required to complete pipe hanger installations shown on drawing GH 613 sh 1, Rev. 0. sketch 2-613-1-1 Rev. 1, sketch 2-613-1-22 Rev. 1, sketch 2-613-1-23 Rev. 2, sketch 2-613-1-21 Rev. 1			24. Disposition Concurrence				
(continued on next page)			REWORK	REJECT	REPAIR	USE AS IS	
			PROJECT FIELD ENGINEER	DATE			
			PROJECT ENGINEER	DATE			
			PROJECT CONSTR QC ENGINEER	DATE			
17. Reported By P.H.H. [Signature]	Date 11-12-76	18. Validated By [Signature]	Date 11-12-76	25. Disposition Results			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)							
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING							
23. Project Engineering Disposition							
26. QC Acceptance							
QC ENGINEER			DATE				
AUTHORIZED INSPECTOR							

Details of bolt and nut materials sizes and clamp bolt hole sizes are not provided in the references for two of the three fastener connections required on each assembly.

References ITT Grinnell catalog PH-76 (detail fig. 295 PH-1H)  
ITT Grinnell hanger standards (PH 41 and PH 42)

Reference PSP (7220) SF/PSP-3.2 Rev. 1 Para. 3.1.1.

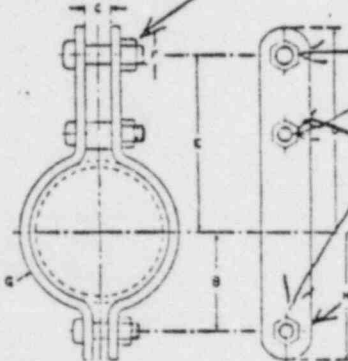
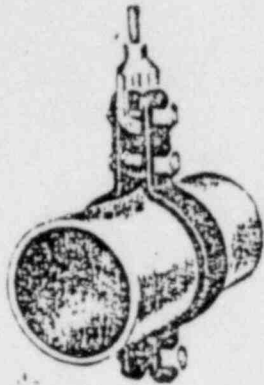
"C" Number: h.131

Open Affected QCIR's P-2.10-613-1  
P-2.20-613-1

400 Hand Tags Applied  
(One to each supply header) KCB 11-10-76

# steel pipe clamps

double bolt pipe clamp  
fig. 295



*F" BOLT DIAMETER  
NOT SPECIFIED  
AS TYPICAL  
3 PLACES*

*BOLT NUT  
MATERIALS  
NOT SPECIFIED*

*BOLT  
SIZE  
NOT  
DESIGNATED  
A.D./LENGTH*

SIZE RANGE: ¼ through 24 inch.

MATERIAL: Carbon steel.

FINISH: Black or galvanized; furnished black unless otherwise specified.

SERVICE: Recommended for suspension of pipe requiring up to 4 inches of insulation and where flexibility of the clamp is desirable — within the limitation of temperature and loads shown below.

MAXIMUM TEMPERATURE: 750°F.

APPROVALS: Complies with Federal Specification WW-H-171D (Type 3) and Manufacturers Standardization Society SP-69 (Type ...)

INSTALLATION: Attachment to the clamp may be made with a welded eye rod fig. 278, page ph-44, or the weldless eye nut fig. 290, page ph-49.

**FEATURES:**

- Load bolt and attachment will extend outside of 4 inch thick pipe covering.
- Load ratings meet ANSI code requirements and are substantiated by laboratory test.
- Rounded corners on clamp ends provide greater safety for personnel.

ORDERING: Specify pipe size, figure number, name.

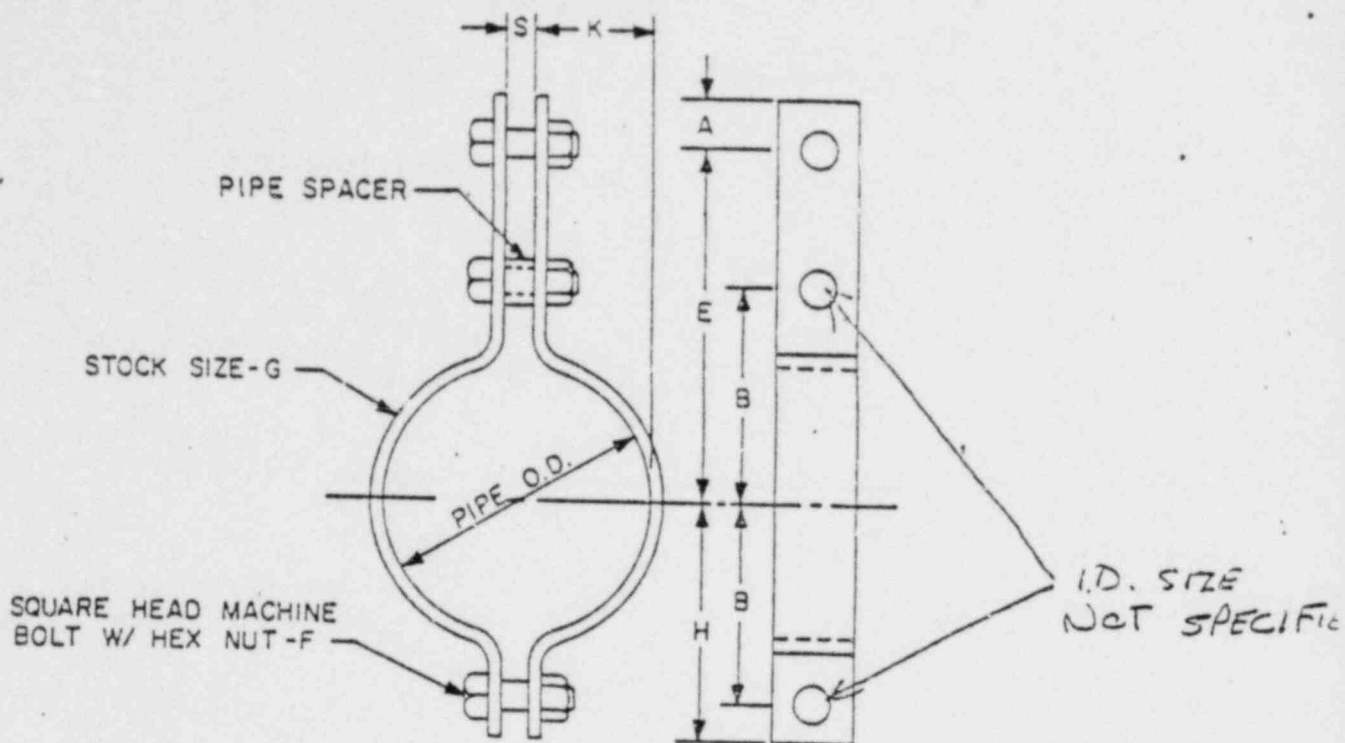
loads • weights • dimensions (inches)

pipe size	max recom load, lb* for service temp		wgt (approx) lb per 100	B	C	D	E	F	G	H
	650°F	750°F								
¼	950	850	70	15/16	¾	2 1/8	2 7/16	¾	3/16 x 1	1 3/8
1	950	850	76	1 1/16	¾	3	2 9/16	¾	3/16 x 1	1 1/2
1 1/4	950	850	81	1 1/4	¾	3 1/8	2 11/16	¾	3/16 x 1	1 11/16
1 1/2	1545	1380	234	1 13/16	1 1/16	4 1/8	4 1/8	¾	¼ x 1 1/4	2 3/8
2	1545	1380	258	2 1/8	1 1/16	5 1/8	5 1/8	¾	¼ x 1 1/4	2 11/16
2 1/2	1545	1380	272	2 1/8	1 1/16	6 1/8	5 3/8	¾	¼ x 1 1/4	2 5/8
3	1545	1380	304	2 3/4	1 1/16	6 11/16	5 5/8	¾	¼ x 1 1/4	3 1/2
4	2500	2230	666	3 3/8	1 1/16	7 5/8	6 1/2	¾	5/16 x 2	4 1/2
5	2500	2230	699	3 5/8	1 1/16	8 1/8	7	¾	5/16 x 2	5
6	2865	2555	1145	4 1/4	1 7/16	9 5/8	8 9/16	¾	¾ x 2 1/2	6 1/8
8	2865	2555	1315	5 1/4	1 7/16	10 5/8	9 9/16	¾	¾ x 2 1/2	7 1/8
10	3240	2890	1981	6 1/8	1 7/16	12	10 7/16	1	½ x 2 1/2	8 1/4
12	3240	2890	2225	7 1/8	1 7/16	13	11 7/16	1	½ x 2 1/2	9 1/4
14	4300	3835	3768	9 1/8	2	14 5/8	12 11/16	1 1/4	¾ x 3	10 11/16
16	4300	3835	4137	10 1/8	2	15 5/8	13 11/16	1 1/4	¾ x 3	11 11/16
18	4300	3835	4487	11 1/8	2	16 5/8	14 11/16	1 1/4	¾ x 3	12 11/16
20	5490	4900	5725	12 3/8	2	17 1/2	15 7/8	1 3/8	¾ x 3	14
24	4500	4015	6590	14 3/8	2	19 1/2	17 7/8	1 3/8	¾ x 3	16

\*Based on the allowable stresses shown in the ANSI Code for Pressure Piping.

ITT ARNELL CATALOG PH 76 (1976)

# THREE BOLT PIPE CLAMP



## TO ORDER SPECIFY:

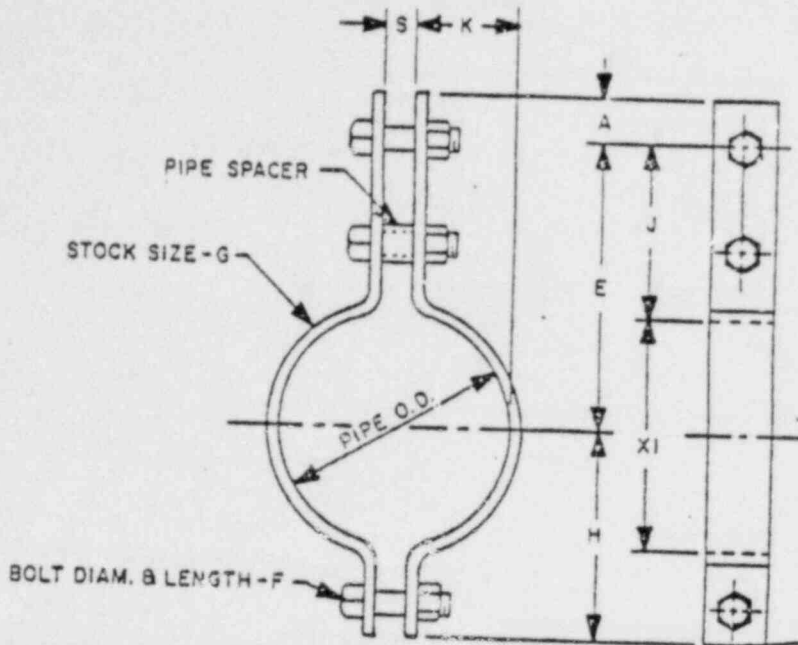
Hanger Standard 41 Double Bolt Pipe Clamp, (Material Specification), (Nominal Pipe Size), (Developed Length per Half Clamp), (E, F, G, H, K, & S Dimensions), (Total Weight)\*\*.

\*The "B" dimension need not be specified. The manufacturing plant will drill the required hole as close to the curvature of the clamp as possible, allowing a minimum clearance for the nut. If a definite "B" dimension is required, it must be specified.

\*\*Weight of required bolts or studs and nuts must be included in the total weight.

Alloy clamps, unless otherwise specified, will be furnished with alloy studs made from ASTM Spec. A-193-B7 stud stock with the center third unthreaded, and hex nuts.

# THREE BOLT PIPE CLAMP DESIGN



SEE NOTES  
CHART C

DETERMINE STOCK SIZE - G & BOLT DIAM. FROM PIPE CLAMP DESIGN CHART - C

A = 2 BOLT DIAM.

BOLT LENGTH = S + 1 R. TH'KN'S. + 2 BOLT DIA. + .25

OR

BOLT LENGTH = S + 2 R. TH'KN'S. + 1 BOLT DIA. + .25\*

WHICH EVER IS LONGER, SPECIFY BOLT LENGTH TO NEXT GREATER 1/2" LENGTH

MIN. E =  $\frac{X1}{2} + J$

H =  $\frac{X1}{2} + 4 \frac{1}{2}$  BOLT DIAM.

MIN. J = 5 BOLT DIAM. + 2 R. TH'KN'S.

X1 = O.D. OF PIPE

X2 = 1/2 (TT)(X1)

K =  $\frac{X1 - S}{2}$

\* NOTE - FOR STUDS USE  
(2 BOLT DIA. + 1/2")

DEVELOPED LENGTH PER HALF CLAMP = (H + E + A + X2 - X1 - S)

PIPE SIZE	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24	30	36
X1 IN.	2.375	2.875	3.5	4.0	4.5	5.563	6.625	8.625	10.75	12.75	14	16	18	20	24	30	36
X2 IN.	3.73	4.516	5.5	6.263	7.07	8.737	10.40	13.55	16.89	20.0	21.99	25.13	28.27	31.42	37.70	47.12	56.54
X2-X1	1.356	1.64	2.0	2.263	2.57	3.174	3.781	4.92	6.136	7.277	7.99	9.13	10.27	11.42	13.70	17.12	20.54

STANDARD A & S DIMENSIONS (INCHES)

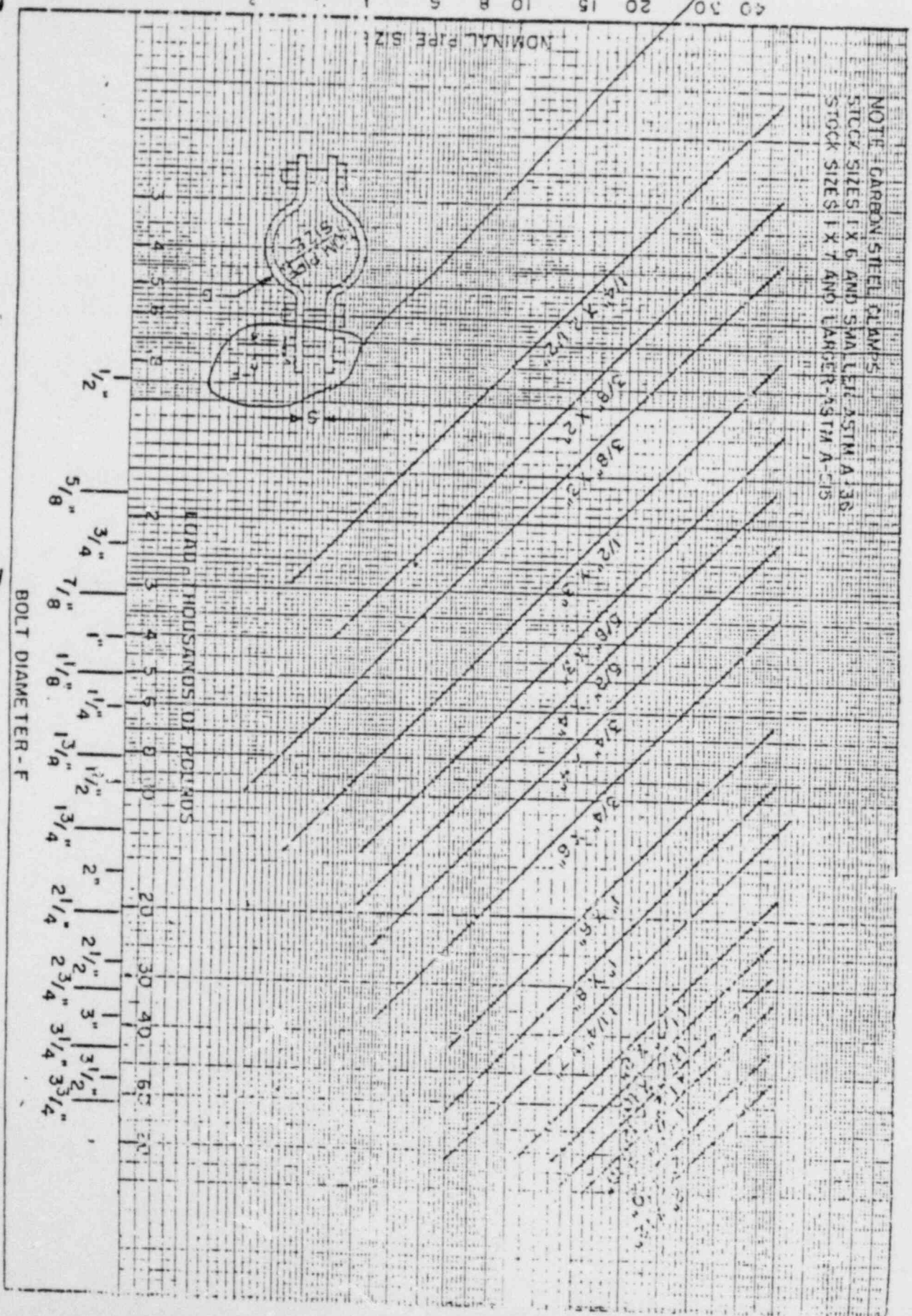
BOLT DIA.	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4
A	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2
S	1	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 1/2	3	3 1/2	4	4 1/4	4 1/2	5	5 1/4	5 1/2	6

TO ORDER SEE HANGER ST'D. - 41

ITT GRINNELL CORP. DATE August, 1973. . . . HANGER STD. . . 41 E . . .



August, 1973  
 F" DIMENSION NOT SPECIFIED AS TYPICAL 3 PLACES  
 CHART-C





Sent to A.A. 11-18-76

### NONCONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job No. <b>07220</b>		19. No. <b>597</b>	20. Page <b>1 of 2</b>
2. Unit(s) <b>1 &amp; 2</b>	3. Drawing/Part No. <b>E 6046-2-1</b>	Rev.	4. Item Description <b>Radiographs (Vendor Supplied for valve E 6046-2-1)</b>		5. Item Location <b>QA Vault (Film)</b>
6. P.O. Or Spec. No. <b>7220-M-120</b>	7. Serial No. <b>E 6046-2-1</b>	8. Replacement Part P/N <b>NA</b> REV <b>NA</b>		9. Source <b>Vendor</b>	10. Contractor/Supplier <b>Anchor Darling Valve Co.</b>
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input checked="" type="checkbox"/> OTHER		IR NO. <b>NA</b>	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
16. Nonconforming Condition: <b>The referenced 10" HBB-GT-2MO-1760-RVE valve radiographs were received in a manila type envelope which was badly torn. The radiographs were ripped, bent, had holes worn through by rubbing, and exposed to the elements. Five of the film are damaged in the area of viewing interest making their acceptability indeterminate. Vendor states that duplicate radiographs are not available. "Q" Number 4.176 1 hold tag applied to the valve in warehouse - QC Hold Area Hold for Engineering disposition</b>		14. Disposition during <input checked="" type="checkbox"/> REC.G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD		15. Equip Furnished By	
		24. Disposition Concurrence			
		REWORK	REJECT	REPAIR	USE AS IS
		PROJECT FIELD ENGINEER		DATE	
		PROJECT ENGINEER		DATE	
		PROJECT CONSTR QC ENGINEER		DATE	
		AUTHORIZED INSPECTOR		DATE	
17. Reported By <b>Ray W. Heron</b>		Date <b>11-11-76</b>	18. Validated By <b>[Signature]</b>		Date <b>11-11-76</b>
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
Field Engineering recommends "Use As Is". (1) The radiographic film package for valve E6046-2-1 contains acceptable repair radiographs that cover the same areas as the four radiographs that have holes, tears, etc. ASME Section III, Div. 1, 1974 Edition does not require that "in-process" radiographs be retained provided that there is an acceptable radiograph that represents the final condition of the material. Film identification					
23. Project Engineering Disposition					
26. QC Acceptance					
		QC ENGINEER		DATE	
		AUTHORIZED INSPECTOR		DATE	

BECHTEL

BLOCK 22 continued: is as follows:

a. Damaged Radiograph (2 film)	N1610F	F3904	4-1	10-22-75
Repair Radiograph (2 film)	N1610(Q)U	F3904	4-1	2-8-76
b. Damaged Radiograph(2 film)	N1610U	F3904	1-2	10-22-75
Repair Radiograph (2 film)	N1610(Q)U	F3904	1-2	2-6-76

(2) The radiograph film that has a fold through the area of interest, identification number F8051, P546(Q), 37-38 (Heavy Section), dated 4-27-76, is interpretative and acceptable. In addition, there are two other radiographs of the same area which show that there are not any unacceptable defects in the casting.

(3) Procurement notified Anchor/Darling Valve Company, Williamsport, PA that radiographs are required to be protected during shipment to avoid damage (i.e. holes, tears, folds, scratches, etc.). This action was taken to prevent recurrence.

*J. B. Barber 11-18-76*  
*D. Wilkerson 11-18-76*



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 598	20. Page 1 of 2
2. Unit(s) 1	3. Drawing/Part No. M610 sht. 7	Rev. 1/Fl	4. Item Description Field Weld #10		5. Item Location Aux. Bldg. El. 595'4"
6. P.O. Or Spec No. NA	7. Serial No. NA	8. Replacement Part P/N NA REV NA SER NO. NA		9. Source Engineering	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. WPMC-1 Rev. 1		12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
16. Nonconforming Condition: Bechtel Specification 7220-G-27 Mechanical Form 84 specifies that 10" FCB Class pipe be welded in accordance with Bechtel Welding Procedure P8-AT-Ag Rev. 0. The referenced welding procedure in conjunction with General Welding Standard GWS-SN Rev. 0 specifies ER-308L (bare rod) and E308L (covered electrode) be used for this application. Contrary to the above, Field Welding Engineering discovered that for Field Weld #10 on drawing M610 sht. 7, three electrodes of 3/32" E309L-16 had		14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD		15. Equip Furnished By	
		24. Disposition Concurrence			
		REWORK	REJECT	REPAIR	USE AS IS
		PROJECT FIELD ENGINEER		DATE	
		PROJECT ENGINEER		DATE	
		PROJECT CONSTR QC ENGINEER		DATE	
		AUTHORIZED INSPECTOR		DATE	
17. Reported By Douglas M Mathews 11-11-76		18. Validated By W J Kennedy 11-11-76		25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
Field recommends "Use As Is" since the integrity and mechanical properties of the welds are not affected. All welding filler materials conformed to the requirements of Appendix 3 of the BQAM-ASME III, Div. 1 and ASME Section III. ASME Sections III and IX do not require requalification of the welding procedure or the welders when E 309L-16 electrodes are used in lieu of E 308L-16 electrodes. (continued)					
23. Project Engineering Disposition					
				26. QC Acceptance	
		QC ENGINEER		DATE	
		AUTHORIZED INSPECTOR		DATE	

RECHT

Block 16 continued

been consumed in welding the cover pass. A check of the electrode warmer by Field Welding Engineering and QC Welding Engineering showed that E308L-16 and E-309L-16 were mixed in the container.

"Q" Number 4.104

4 X hold tag applied *11/14/76*

Hold for Engineering Disposition

Block 16 continued.

A further check of Welding Filler Metal Control records indicate that three (3) Q-listed stainless steel pipe welds could possibly have been made with the wrong filler material.

They are: Field Weld 4 on Dwg. 7220-M-610 Sht. 5

Field Weld 4 on Dwg. 7220-M-610 Sht. 7

Field Weld 24 on Dwg. 7220-M-610 Sht. 7

*J. R. Bourke 11/16/76*  
*H. W. Williams 11-16-76*

Block 22 continued: Nondestructive examination shall be in accordance with Form 84-Mechanical in Spec. 7220-G-270, Rev. 3.

Austenitic stainless steel electrodes E 308L-16 and E 309L-16 are compatible as paragraph 5.4(m) of General Welding Standard GWS-DM permits either 308L or 309L welding filler material to be used for dissimilar metal welds after buttering the ferritic or martensitic material with 309 welding filler material.

All Field Welding Engineers, Rod Room Attendants, and Q.C. Welding Engineers shall be instructed on proper handling of welding filler materials to prevent recurrence.

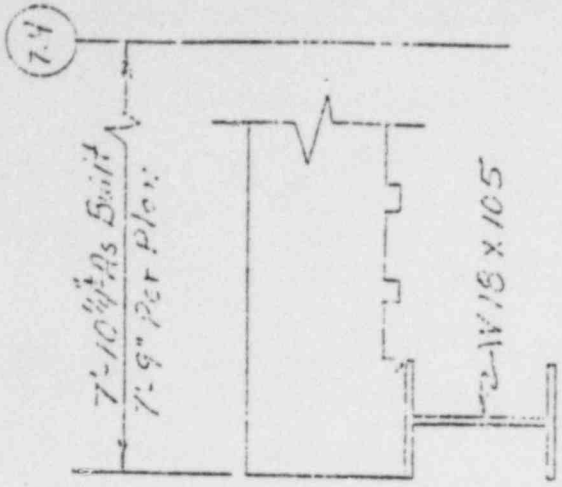
*J. R. Bourke 11-17-76*  
*H. W. Williams 11-17-76*



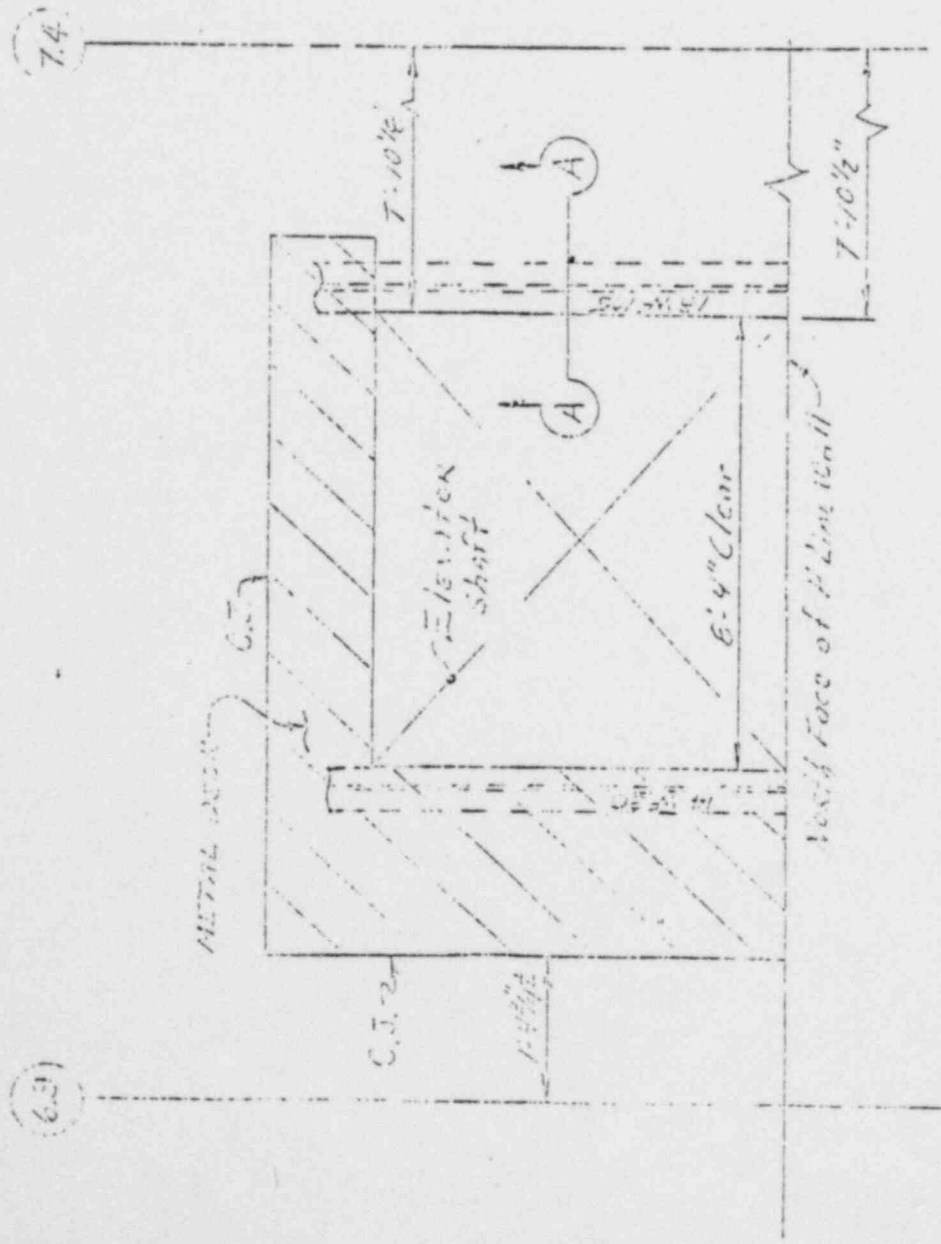
Sent to AA 11-15-76  
Log

NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 599	20. Page 1 of 2		
2. Unit(s) Common	3. Drawing/Part No. 7220-C-202	Rev 6	4. Item Description Elevator shaft opening	5. Item Location Aux. Build. El. 584 Elevator shaft			
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO. Construction	10. Contractor/Supplier N/A			
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-202, Rev. 6	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD	
16. Nonconforming Condition: The attached sketch shows the El. 584'0" elevator shaft as-built condition which does not conform to the dimensions called out on drawing 7220-C-202 Revision 6. 1 Hold Tag Applied. Q-List No. 1.00. Hold for Engineering Disposition.				24. Disposition Concurrence			
				REWORK	REJECT	REPAIR	USE AS IS
				PROJECT FIELD ENGINEER	DATE		
				PROJECT ENGINEER	DATE		
				PROJECT CONSTR 3C ENGINEER	DATE		
				AUTHORIZED INSPECTOR	DATE		
17. Reported By Larry P. Weber	Date 11-11-76	18. Validated By W. J. Kennedy	Date 11-12-76	25. Disposition Results			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
Project Engineering to evaluate and resolve.							
<i>J. Desmond 11-11-76</i>							
<i>F. G. Joyce 11/15/76</i>							
23. Project Engineering Disposition							
26. QC Acceptance							
				QC ENGINEER	DATE		
				AUTHORIZED INSPECTOR	DATE		



SECTION A-A



PLAN @ EL. 584.0



NONCONFORMANCE REPORT

100  
12/2/76

1. Project Name Midland		Job No. 7220		19. No. 601	20. Page 1 of 2
2. Unit(s) Unit #2	3. Drawing/Part No. 20H2786D10	Rev. 0	4. Item Description 1" x 1/4" Hi. Str. Coupl. Bolt		5. Item Location Polar Crane Unit #2
5. P.O. Or Spec No. M-92	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier	10. Contractor/Supplier Harnischfeger P & H
11. Inspection Criteria Vendor <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		11/17/76 IR NO. M-3.10 Rev. 0	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC.G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Three bolts, P/N-20H2786D10, used in mating the End-Truck Drivers and Idlers, failed while being torqued to manufacturer's specs... Failure of bolts occurred at the outboard aft. side of Corner #4 and the inboard center, center of Corner #1. This type bolt P/N-20H2786D10, is used to mate both Drivers and Idlers to the G-1 and G-2 Girders. These bolts appear to be under-cut at the thread shank transition. (See attached twx 26 (I) M-92)			24. Disposition Concurrence		
Hold for Engineering Disposition. "Q" No. 4.001			2 RA's 11/29/76 <input checked="" type="checkbox"/> Hold Tags Applied.		
17. Reported By A.J. Meser	Date 11/11/76	18. Validated By S. J. Connelly	Date 11-12-76	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input checked="" type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
The bolts which failed were broken and have been rejected and scrapped.					
Field tests established that bolt failure was due to incorrect torque value specified by the Vendor.					
P & H has revised torque requirements and furnished additional bolts. (See attached twx 26 (I) M-92)					
23. Project Engineering Disposition					
26. QC Acceptance					
QC ENGINEER			DATE		
AUTHORIZED INSPECTOR			DATE		

agb 11/19/76  
PROJECT FIELD ENGINEER DATE

PROJECT ENGINEER DATE 11-26-76  
PROJECT CONSTR QC ENGINEER DATE

AUTHORIZED INSPECTOR DATE

Mont A.E. Morris 11/18/76  
Fred G. Fyfe 11/17/76



BECKETEL MIDL

VU INFOMASTER 1-020311A324 11/19/76  
TLX HARNIS 1 BKFD  
SI PD BKFD HIS  
TKK 3102660497 BECKETEL MIDL  
MIDLAND MICHIGAN

*26(I) M-92*

RE: POLAR CRANE P&H C-25039 YR PO 7220-1-72  
DIMS. 20A5755 END TIE, 31A5067, 31A5370 END TRUCKS, AND 20F2833  
SEISMIC RESTRAINTS, ALL SPECIFY MINIMUM BOLT TENSION FOR SPECIFIC  
BOLT TYPE AND DIAMETER. EXAMPLE - 1" DIA. A-325 HI-STRENGTH BOLT  
TORQUED TO 0 STAIN MINIMUM BOLT TENSION OF 51,000 LBS.  
THE APPROX. TORQUE WRENCH VALUE LISTED ON DIMS IS A RECOMMENDED  
VALUE ONLY. A MORE ACCURATE TORQUE VALUE, OBTAINED FROM RANDOM  
TENSION TESTS, IS ACCEPTABLE TO HARNISCHFELDER AS MINIMUM SPECIFIED  
TENSIONS VALUES WILL BE INSURED.  
ERONIE THORSET - SERVICE  
HARNISCHFELDER CORP 11-19-76 1200  
CC W. D. BOLESSEL - DET  
CC PODOLAK  
CC ANDERSON  
MHI

1434 EST  
BECKETEL MIDL

JOB 7220		A	R	I
ROUTING		C	T	N
		T	E	T
Proj. Supt.				
P. Sup.				
P.F. Engr.				
APP. Eng. 1				
APP. Eng. 2				
Cost-Sch.				
Cont Bldg.				
Adv. Bldg.				
Yard-Turb.				
Civ. Sup.				
Civ. Eng.				
Mach. Sup.				
Mach. Eng.				
Elec. Sup.				
Elec. Eng.				
Weld. Eng.				
OH. Eng.				
P & A				
QC				
Purch.				
Sub-Con				



*LEVERING* *file* 11-22-76  
2:45 PM



NONCONFORMANCE REPORT

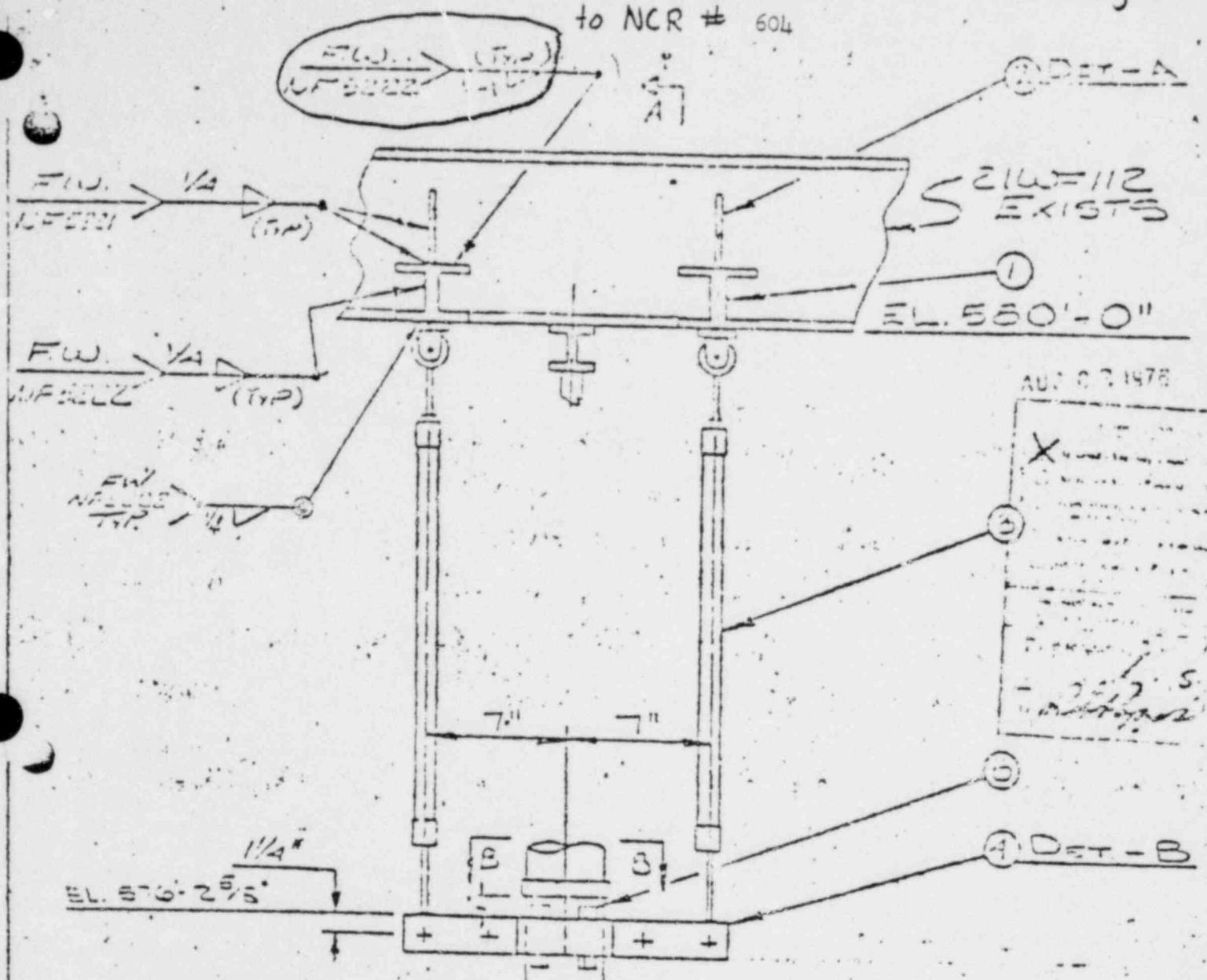
Log Sent to AA  
EPCO  
11-17-76

1. Project Name Midland		Job No. 7220				19. No. 602	20. Page 1 of 1	
2. Unit(s) N/A	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Concrete		5. Item Location Aux. Bldg., El. 646'			
6. P-0-0r Spec No. C-230, Rev. 7	7. Serial No. N/A	8. Replacement Part P/N _____ REV _____ SER NO. _____		9. Source Subcontractor	10. Contractor/Supplier Champion, Inc., Midland, MI			
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1.30-53 NO. C-230, Rev. 7	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input checked="" type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Spec. C-230, Rev. 7, Sec. 11.1 Cold weather concreting, states in part that "when the ambient air temp. is between 31° and 45° and we are placing a mass of concrete using a mix design without flyash, the concrete temp. must be maintained within 40° & 60°." Contrary to the above, the concrete represented by Truck Ticket No. 11449 for concrete placement A(646)a' at the point of placement had a temperature of 64° F. NCR noted during Q.C. surveillance. Hold for final Engineering Disposition. One Hold Tag Applied.					24. Disposition Concurrence			
					REWORK	REJECT	REPAIR	USE AS IS
					PROJECT FIELD ENGINEER		DATE	
					PROJECT ENGINEER		DATE	
					PROJECT CONSTR QC ENGINEER		DATE	
					AUTHORIZED INSPECTOR		DATE	
17. Reported By <i>Stephen D. Galt</i>				Date 11/15/76	18. Validated By <i>John Kennedy</i>		Date 11-15-76	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING				<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition				<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Use as is.				<i>K. K. With 11/17/76</i> <i>J. C. Payne 11/17/76</i>				
23. Project Engineering Disposition								
26. QC Acceptance								
QC ENGINEER						DATE		
AUTHORIZED INSPECTOR						DATE		



### NONCONFORMANCE REPORT

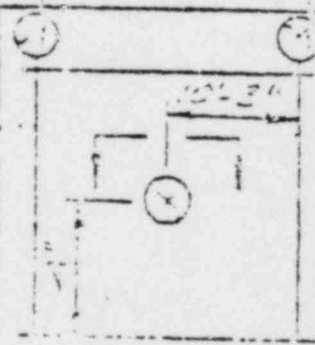
1. Project Name Midland		Job No. 07220		19. No. 604	20. Page 1 of 2								
2. Unit(s) 2	3. Drawing/Part No. Grinnell 2-613-4-24		Rev 3	4. Item Description Grinnell Pipe Hanger # 4-2HCB-21-HI									
6. P.O. Or Spec No. N/A		7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A		10. Contractor/Supplier Construction N/A								
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. M326-148W NO. 2-613-4-24	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO								
16. Nonconforming Condition:		24. Disposition Concurrence			15. Equip Furnished By								
<p>Grinnell drawing 2-613-4-24 details a <math>\frac{1}{2}</math>" fillet weld connecting item #1 to existing 21 WF112 beam. (Ref. Sketch Attachment #1)</p> <p>Contrary to the above, hanger 4-2HCB-21-HI has been installed omitting the weld across the top flange of Item 1. Q.C. final visual inspection has been accepted on this item.</p> <p>"Q" No. 4.131 1 Hold Tag Applied</p> <p>Hold for disposition</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REWORK</th> <th>REJECT</th> <th>REPAIR</th> <th>USE AS IS</th> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>			REWORK	REJECT	REPAIR	USE AS IS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>PROJECT FIELD ENGINEER <i>T.C. Valomyans</i> 11/17/76</p> <p>PROJECT ENGINEER <i>[Signature]</i> 11-18-76</p> <p>PROJECT CONSTR QC ENGINEER <i>[Signature]</i></p> <p>AUTHORIZED INSPECTOR <i>[Signature]</i></p>
		REWORK	REJECT	REPAIR	USE AS IS								
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
		17. Reported By <i>Kenneth O. Anderson</i> 11-15-76			18. Validated By <i>[Signature]</i> 11-16-76								
		21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHER'S (SPECIFY)		25. Disposition Results									
22. <input checked="" type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		<p>Rework in accordance with Grinnell Drawing 2-613-4-24.</p> <p><i>D. R. Bales</i> 11-15-76 <i>D. Williams</i> 11-17-76</p>											
23. Project Engineering Disposition		26. QC Acceptance											
		<p>QC ENGINEER _____ DATE _____</p> <p>AUTHORIZED INSPECTOR _____ DATE _____</p>											



NOTES

- 1) All tolerances in accordance with CCP #24001 U.N.O.
- 2) Fab. Procedure is PE-101-10
- 3) All products designed in accordance with HEB File No. 1

HEB INC. HCB 3-4(3)-0  
ALL POINTS  
HEB INC. HCB 3-4(3)-0



HEB INC. HCB 3-4(3)-0



Sent to A.A. 11-17-76

Log

### NONCONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>605</b>	20. Page <b>1</b> of <b>2</b>
2. Unit(s) <b>Common</b>	3. Drawing/Part No. <b>7220-C-219</b>	Rev <b>8</b>	4. Item Description <b>Additional Rebar in header above door opening</b>		5. Item Location <b>Aux. Bldg. El. 584 @ 'G' &amp; 6.6</b>
6. P.O. Or Spec No. <b>N/A</b>	7. Serial No. <b>N/A</b>	8. Replacement Part P/N <b>N/A</b> REV _____	SER NO. _____	9. Source <b>Construction</b>	10. Contractor/Supplier <b>N/A</b>
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. _____			IR NO. _____	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
16. Nonconforming Condition: <b>Sections F &amp; G of Dwg. 7220-C-219, Rev. 8 shows an additional 4-#8 horizontal bars and 6-#5 cap bars @ 12" below an additional horizontal construction joint for the door header @ G/6.6. This area was built as shown on Dwg. 7220-C-219, Rev. 7 which does not include the additional items. Q-List No. 1.203. Hold for Engineering Disposition. 1 Hold Tag Applied.</b>				14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD	
				15. Equip Furnished By	
				25. Disposition Concurrence	
				REWORK	REJECT
				REPAIR	USE AS IS
				PROJECT FIELD ENGINEER	DATE
				PROJECT ENGINEER	DATE
				PROJECT CONSTR QC ENGINEER	DATE
				AUTHORIZED INSPECTOR	DATE
17. Reported By <i>Larry P. Wilner</i> Date <b>11-16-76</b>		IR Validated By <i>H. J. Connolly</i> Date <b>11-16-76</b>		25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
Field Recommends disposition as called out by FCR-C-378 (Attached).					
<i>James Raymond</i> 11-17-76					
<i>Paul G. Joyce</i> 11/17/76					
23. Project Engineering Disposition					
26. QC Acceptance					
				QC ENGINEER	DATE
				AUTHORIZED INSPECTOR	DATE



FIELD CHANGE REQUEST

PAGE 1 OF 1

No. C-378

PROJECT NO. 7220

Q No. 1.203

DATE 4 22 76

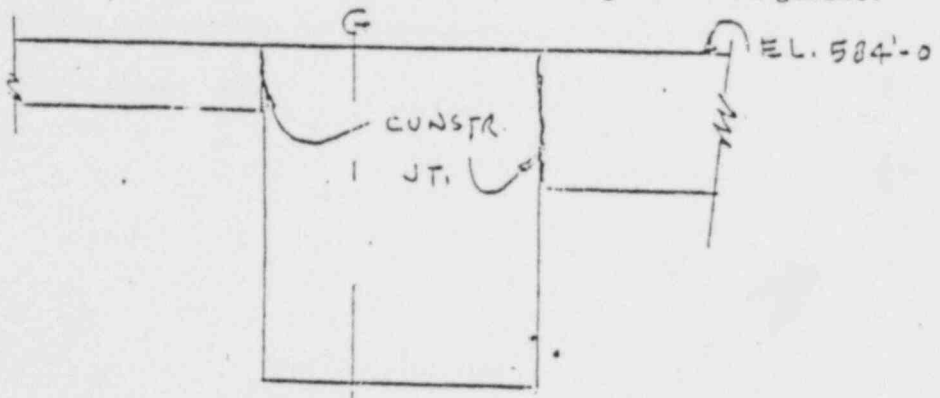
4. REF. DWG. OR SPEC. 7220-C-219  
 REV. 8  
 5. TITLE Add'l rebar in header above door opening at G/6.6  
 DESIGN ORIGIN: ENGRG  VENDOR  (IDENTIFY) NAME

7. EXISTING CONDITION: Sections F & G of the referenced drawing show an additional 4-#8 horizontal bars and 6-#5 cap bars @ 12" below an additional horizontal construction joint for the door header at G/C 6.

8. CHANGE REQUEST SKETCH

Revise sections F and G of the referenced drawing to:

- a) Delete the additional 4-#8 horiz. bars and 6-#5 cap bars.
- b) Show the following as-built construction joint arrangement:



The above requests are made to reflect the as-built condition of the door header at G/6.6. The as-built condition conforms to the original project engineering design to pour the door header to elev. 584' without an intermediate horizontal construction joint.

Corrected Copy

NCR 605 Page 2 of 2

10. REVIEWED BY:

CIVIL	<i>[Signature]</i>	Date	4-22-76
ELECT.	<i>[Signature]</i>	Date	4-26-76
MECH.	<i>[Signature]</i>	Date	4-22-76
WELDING	<i>[Signature]</i>	Date	4-22-76

11. APPROVAL OF FIELD DISPOSITION:

*[Signature]* Project Field Engineer Date: 4-26-76

PROJECT ENGR'G APPROVAL: YES  NO  PROJ. ENGR.: \_\_\_\_\_ Date: \_\_\_\_\_

REMARKS: \_\_\_\_\_

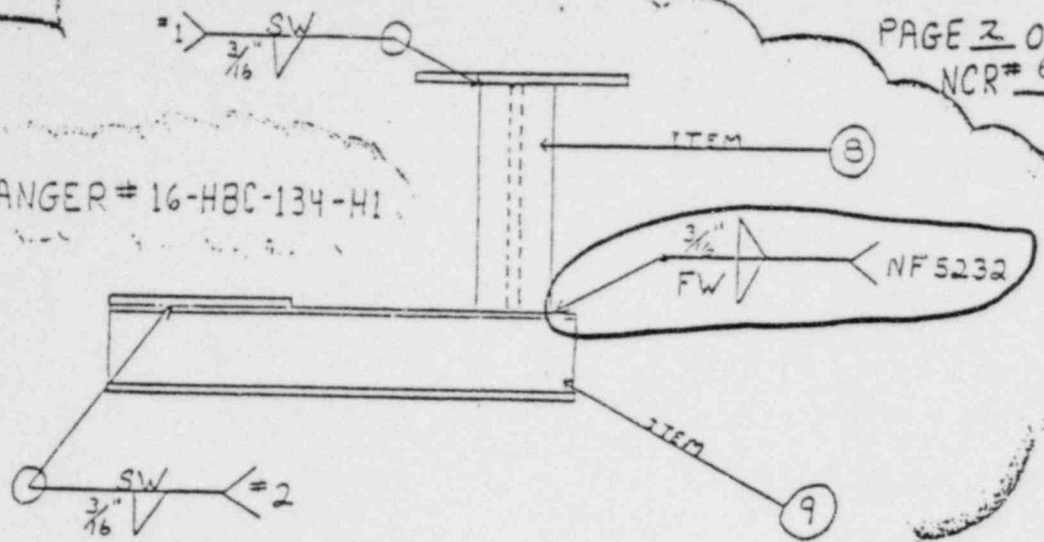
WHITE - PRINT COORDINATOR  
CANARY - FIELD ENGR.



NONCONFORMANCE REPORT

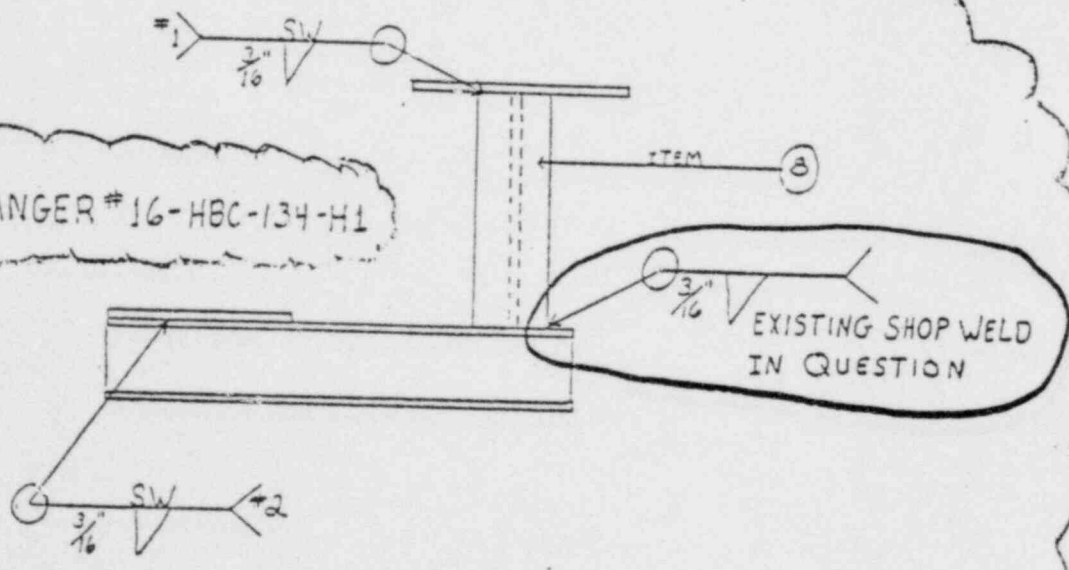
1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>607</b>	20. Page <b>1</b> of <b>2</b>
2. Unit(s) <b>2</b>	3. Drawing/Part No. <b>Grinnell</b> <b>2-617-6-1</b>	Rev <b>2</b>	4. Item Description <b>ASME Pipe Hanger #16-2HBC-1 3/4-HL</b>		5. Item Location <b>Aux. 608' E</b> <b>E of 7.4 of B Line</b>
6. P.O. Or Spec No. <b>#7220-M-105-AC</b>	7. Serial No. <b>N/A</b>	8. Replacement Part P/N <b>N/A</b> REV <b>N/A</b> SER NO. <b>N/A</b>		9. Source <b>Supplier</b>	10. Contractor/Supplier <b>ITT Grinnell</b>
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. <b>2-617-6-1</b>		IR NO. <b>M326-199W</b>	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> C'G <input type="checkbox"/> FLD
16. Nonconforming Condition: <b>Grinnell Hanger Sketch (Drawing) 2-617-6-1 Rev. 2 for the referenced Hanger, requires the 3/16" Fillet Weld joining item 8 to item 9 to be a Field Weld across the flange of item 8 only.</b>			24. Disposition Concurrence		
<b>Contrary to the above design, a 3/16" Shop Fillet Weld has been made completely around the flanges and web of the item 8 to item 9 joint.</b>			REWORK		
<b>"Q" Number <b>4.172</b> 1 Hold Tag Applied</b>			REJECT		
<b>Hold for disposition</b>			REPAIR		
			USE AS IS		
			PROJECT FIELD ENGINEER		
			DATE		
			PROJECT ENGINEER		
			DATE		
			PROJECT CONSTR QC ENGINEER		
			DATE		
			AUTHORIZED INSPECTOR		
			DATE		
17. Reported By <i>W. J. ...</i>		Date <b>11-19-76</b>	18. Validated By <i>...</i>		Date <b>11/17/76</b>
25. Disposition Results					
21. Routing <input type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
23. Project Engineering Disposition					
26. QC Acceptance					
QC ENGINEER					
DATE					
AUTHORIZED INSPECTOR					
DA					

ASME HANGER # 16-HBC-134-H1



DETAIL: AS PER SECTION AA  
ITT GRINNELL DWG.# 2-617-6-1 Rev. 2  
DESIGN AS SHOWN

ASME HANGER # 16-HBC-134-H1



AS BUILT





NONCONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job #		19. No. <b>608</b>		20. Page <b>1</b> of <b>1</b>	
2. Unit(s) <b>Units 1 &amp; 2</b>		3. Drawing/Part No. <b>N/A</b>		4. Item Description <b>Nuts, Bolts or Washers as listed on Packing List V2182</b>		5. Item Location <b>Whse #1 QC Hold Area</b>	
6. P.O. Or Spec-No. <b>7220-C-38 Rev 8</b>		7. Serial No. <b>N/A</b>		8. Replacement Part <b>P/N N/A REV</b>		9. Source <b>Supplier</b>	
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. <b>B-1.00-395</b> NO. <b>C-38 Rev 5</b>		12. ASME AUTHORIZED INSPECTION READ <input type="checkbox"/> YES <input type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input type="checkbox"/> NO	
16. Nonconforming Condition:		14. Discovered During		15. Equip Furnished By		10. Contractor/Supplier <b>Ingalls Steel</b>	
<p><b>Spec 7220-C-38, Appendix A, Rev 5, Para 3.0 states in part: "The completed G-321-D form is then used for a cover sheet as directed on the back of the form." Contrary to the above, a completed G-321-D form was not included in the documentation package for items listed on Ingalls Steel Packing List V2182.</b></p> <p><b>Hold pending final disposition, "Q" number is 1.101, 3 <sup>11-23-76</sup> 11-28-76 hold tag(s) applied.</b></p>		24. Disposition Concurrence		14. Discovered During		15. Equip Furnished By	
		<input type="checkbox"/> REWORK		<input type="checkbox"/> REJECT		<input type="checkbox"/> REPAIR	
		<input type="checkbox"/> USE AS IS					
		PROJECT FIELD ENGINEER		DATE			
		PROJECT ENGINEER		DATE			
		PROJECT CONSTR QC ENGINEER		DATE			
		AUTHORIZED INSPECTOR		DATE			
17. Reported By <i>[Signature]</i>		Date <b>11-22-76</b>		18. Validated By <i>[Signature]</i>		Date <b>11-22-76</b>	
21. Routing		<input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)		25. Disposition Results	
22. <input type="checkbox"/> Field Engineering Disposition		<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
23. Project Engineering Disposition							
						26. QC Acceptance	
						QC ENGINEER	
						DATE	
						AUTHORIZED INSPECTOR	



NONCONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>610</b>	20. Page <b>1</b> of <b>1</b>
2. Unit(s) <b>Units 1 &amp; 2</b>	3. Drawing/Part No. <b>7220-C-350</b>	Rev <b>6</b>	4. Item Description <b>500 Rail Clamps</b>		5. Item Location <b>Whse #1 QC Hold Area</b>
6. P.O. Or Spec No. <b>7220-F-16574 Rev 0</b>	7. Serial No. <b>N/A</b>	8. Replacement Part P/N <b>N/A</b> REV _____	SER NO. _____	9. Source <b>Supplier</b>	10. Contractor/Supplier <b>Wiltse and Co.</b>
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. <b>R-1,00-522</b>	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST
15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD		16. Nonconforming Condition: <b>Purchase Order 7220-F-16574, Rev 1. Note 1 states: "All material to be ASTM A-36." Contrary to the above, the 500 rail clamps do not meet the chemical requirements of ASTM A-36 steel. Requirements for phosphorus is .04 maximum for A-36. Mill test report states phosphorus to be .044.</b>		24. Disposition Concurrence	
17. Reported By <i>H. B. Bolson</i>		Date <b>11-24-76</b>	18. Validated By <i>A. K. ...</i>		Date <b>11-29-76</b>
21. Routing <input type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		25. Disposition Results	
23. Project Engineering Disposition		26. QC Acceptance		QC ENGINEER _____ DATE _____	
				AUTHORIZED INSPECTOR _____ DATE _____	

BECHTEL

NONCONFORMANCE REPORT

1. PAGE 1 OF 1	14. NCR NO. 230
25. DISPOSITION CONCURRENCE	
REWORK	REJECT
REPAIR	USE AS IS
DOC	
PROJECT FIELD ENGINEER <i>J. C. Wenzel</i> 11-22-74 DATE	
PROJECT FIELD QC ENGINEER <i>J. Monnelly</i> 12-4-74 DATE	
AUTHORIZED INSPECTOR DATE	

2. DRAWING/PART NO. FSK-C-34A	REV. 1	7. PROJECT NO. 7220	12. REPORTED BY <i>Jal Boulton</i> 1-20-75 DATE 11/21/74
3. ITEM DESCRIPTION Dome Liner Plate Section	8. ITEM LOCATION <i>Outside Dome Top</i> RD-1-20-75 Paseyville Siding	13. VALIDATED BY <i>J. Monnelly</i>	DATE 11-24-74
4. SERIAL NUMBER RD-9-18	9. STARTUP SYSTEM NO. N/A	14. REPLACEMENT PART NO. N/A	REV.
5. PURCHASE ORDER NO. N/A	10. QC FIELD INSPECTION PLAN NO. C-111-119	15. REPLACEMENT SERIAL NO. N/A	
6. CONTRACTOR/LOCATION N/A	11. ASME CODE ITEM <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	17. SOURCE Construction	
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR			

19. NONCONFORMING CONDITION: During routine QC Inspection of liner plates, a sharp bend was discovered at the top right corner of dome liner plate RD-9-18. Repair was started on 10/3/74 in accordance with Specification 7220-C-111 Rev. 5. "Q" No. is 1.109.

1 Q-HOLD TAG APPLIED

20. <input checked="" type="checkbox"/> FIELD DISPOSITION	<input type="checkbox"/> FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING
REPAIR. Remove nonconforming area of plate and replace with conforming material. All new seams to be covered with leak chase. Repairs will be made in accordance with Spec. C-111, Appendix "B". This is an approved standard repair procedure. Work may proceed. Implementation expected prior to 11/30/74.	
22. ENGINEERING DISPOSITION	<i>William C. O'Neil</i> 11/22/74

21. FIELD DISPOSITION RESULTS:
Work completed as required by disposition in block 20. (Weld is covered with leak chase to be completed and tested with some set). <i>Al Harrison</i> 11-09-76
23. ENGINEERING DISPOSITION RESULTS:
23. QC ACCEPTANCE <i>Al Harrison</i> 11-09-76 QC ENGINEER AUTHORIZED INSPECTOR DATE

24. IS DESIGN CHANGE REQUIRED	<input type="checkbox"/> NO	<input type="checkbox"/> YES, SEE ATTACHED:
DRAWING _____ REV. _____ DCN _____		
SPEC _____ REV. _____ ADD _____		

26. REJECTED MATERIAL DISPOSITION	<input type="checkbox"/> RETURN TO SUPPLIER	<input type="checkbox"/> SCRAP
REMARKS		

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

QC-03-2

BECHTEL

NONCONFORMANCE REPORT

2. DRAWING/PART NO. E-537 "Q"		REV. 4	7. PROJECT NO. 07220	12. REPORTED BY <i>DC Thompson</i>	DATE 12-1-75	1. PAGE 1 OF 1	14. NCR NO. 362
3. ITEM DESCRIPTION Embedded Conduit		8. ITEM LOCATION Aux. Bldg.		13. VALIDATED BY <i>Manolly</i>	DATE 12-1-75	25. DISPOSITION CONCURRENCE	
4. SERIAL NUMBER N/A		9. STARTUP SYSTEM NO. N/A		14. REPLACEMENT PART NO. N/A	REV.	REWORK	REJECT
5. PURCHASE ORDER NO. N/A		10. QC FIELD INSPECTION PLAN NO. E-42-1-42 Rev. 0		15. REPLACEMENT SERIAL NO. N/A		REPAIR	USE AS IS
6. CONTRACTOR/LOCATION N/A		11. ASME CODE ITEM <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		16. REPLACEMENT SERIAL NO. N/A		DATE 1-12-76	DOC
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING				17. SOURCE Construction		DATE 12-26-75	
19. NONCONFORMING CONDITION:						DATE 12/19/75	

Three inch (3") Conduit 2AC010 was displaced approximately one inch (1") from its coupling at the point of exit from the slab to the pull box below the slab. The inside diameter of the conduit at that point has been reduced from the 3" PVC Conduit as originally installed as per E-36 Rev. 5 Raceway Schedule. "Q" No. 3.006. Nonconformance discovered during post placement inspection of embedded raceway.

One tag applied.

20. <input type="checkbox"/> FIELD DISPOSITION	<input checked="" type="checkbox"/> FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING	21. FIELD DISPOSITION RESULTS:
<ol style="list-style-type: none"> <li>1. Realign lower section of conduit (G.R.S.) with PVC section embedded in ceiling above.</li> <li>2. Weld larger radius pipe sectors to "Q"-deck to secure conduit in position.</li> <li>3. Remove sharp edges on PVC adaptor shear line. <i>James K. Schuster 12-5-75</i></li> </ol>		
22. ENGINEERING DISPOSITION Make correction per field suggestion. <i>T. Supple 12-10-75</i> Engineering Rationale: The proposed repair of the nonconforming conduit as shown on FSK-EA-15 Rev. 0 (attached) will meet the design requirements. Therefore, the field disposition is acceptable. <i>T. Supple 3-4-76</i> <i>AS 3-8-76</i>		23. ENGINEERING DISPOSITION RESULTS: CONDUIT REPAIRED PER ENGINEERING DISPOSITION AND FSK-EA-15 REV 2 <i>James K. Schuster 11/21/76</i>

24. IS DESIGN CHANGE REQUIRED <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES, SEE ATTACHED:	26. REJECTED MATERIAL DISPOSITION <input type="checkbox"/> RETURN TO SUPPLIER <input type="checkbox"/> SCRAP	27. QC ACCEPTANCE <i>DC Thompson 11-2-76</i>
DRAWING _____ REV. _____ DCN _____	REMARKS _____	QC ENGINEER _____ DATE _____
SPEC _____ REV. _____ ADD _____		AUTHORIZED INSPECTOR _____ DATE _____

10088-1

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PGAE  
 Goldenrod Copy - QC

QC-G32

BECHTEL

NONCONFORMANCE REPORT

1147  
1. PAGE 1 OF 24 14. NCR NO. 367

2. DRAWING/PART NO. Spec. M-201	REV. 6	7. PROJECT NO. 7220	12. REPORTED BY Fellow Bolan	DATE 12-15-75
3. ITEM DESCRIPTION Shop Spool	8. ITEM LOCATION LOADED AREA #1 Receiving Area	9. STARTUP SYSTEM NO. N/A	13. VALIDATED BY J. Maxonally	DATE 12-16-75
4. SERIAL NUMBER 1-FCB-22-5610-7-11 HMC-10-3610-3-4 4B 12-24-75	10. QC FIELD INSPECTION PLAN NO. M-104-A-R-13 Rev. 0	14. REPLACEMENT PART NO. N/A	15. REPLACEMENT SERIAL NO. N/A	REV.
5. PURCHASE ORDER NO. 7220-M-104A	11. ASME CODE ITEM <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	16. SOURCE Supplier		
6. CONTRACTOR/LOCATION ITT Grinnell, Kernsville, S. C.				
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR				

25. DISPOSITION CONCURRENCE				
REWORK	REJECT	REPAIR	USE AS IS	DOC.
		STD.		
PROJECT FIELD ENGINEER J. Maxonally		DATE 1-15-76		
PROJECT ENGINEER J. Maxonally		DATE 1-15-76		
AUTHORIZED INSPECTOR Green Labot		DATE 3.2.76		

19. NONCONFORMING CONDITION:  
Spec. 7220-M-201 Rev. 6 Para. 6.6.2 states, "Stainless steel flanges shall be sealed with a plywood disc bolted to the flange. A 1/8" thick rubber gasket is required for sealing". Contrary to the above, the flanged end of pipe spool <sup>1-FCB-22-5610-7-11 4B 12-24-75</sup> HMC-10-3610-3-4 did not have a rubber sealing gasket and the plywood disc was not bolted to the flange. Para. 6.6.8 of the same spec. states, "Pipe and fittings shall be adequately blocked, strapped, or otherwise held in position during shipment and they shall be separated by dunnage as may be necessary to prevent damage". Contrary to the above, there were numerous marks, gouges and chatter marks in the pipe surface,

20.  FIELD DISPOSITION  
 FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING  
Seal the flanged end of spool 10" - 1FCB-22-5610-7-11 by bolting a plywood disc to the flange with a 1/8" thick rubber gasket for sealing. Two unacceptable surface defects shall be removed in the following manner:  
  
Continued on Page 2--

21. FIELD DISPOSITION RESULTS:  
Flange was sealed with plywood and gasket. Unacceptable surface defects were removed and uniformly blended in. Liquid ambient examination initiated in four areas. See attached certified NDT report. *egh*  
11/4/76

22. ENGINEERING DISPOSITION	23. ENGINEERING DISPOSITION RESULTS: See attached certified NDT report. <i>egh</i> 11/4/76
24. IS DESIGN CHANGE REQUIRED <input type="checkbox"/> NO <input type="checkbox"/> YES, SEE ATTACHED:	26. REJECTED MATERIAL DISPOSITION <input type="checkbox"/> RETURN TO SUPPLIER <input type="checkbox"/> SCRAP
DRAWING _____ REV. _____ DCM _____	REMARKS _____
SPEC _____ REV. _____ ADD _____	

27. IS ACCEPTABLE  
Charles Breat 11/4/76  
QC ENGINEER  
Green Labot 11/4/76  
AUTHORIZED INSPECTOR

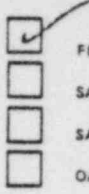
White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - POAE  
Goldenrod Copy - QC

QC 63-2



# Peabody Testing

a division of X-Ray Engineering Company



FOSTER CITY - MAIN OFFICE 1118 Chess Drive, Foster City, CA 94404, (415) 573-6000

SAN MATEO OFFICE 145 North Bayshore Blvd., San Mateo, CA 94401, (415) 342-4183

SAN LEANDRO OFFICE 2506 Davis Street, San Leandro, CA 94577, (415) 569-5274

OAKLAND OFFICE 950 - 97th Street, Oakland, CA 94606, (415) 652-1100

NCR 367 Page 3 of 4

## CERTIFIED REPORT of NONDESTRUCTIVE EXAMINATION

CUSTOMER <b>BECHTEL POWER CORP.</b>		DATE <b>11-2-76</b>
ADDRESS <b>MIDLAND NUCLEAR POWER PLANT</b>		CONTROL NO. OR REPORT NO. <b>2067</b>
JOB OR PROJECT LOCATION <b>MIDLAND, MICHIGAN</b>	P.O. NO. <b>7220 FSC 206</b>	PLAN OR DWG. NO. <b>M-610 SH-7(a) 367</b>
SURFACE CONDITION <b>BUFFED SMOOTH</b>	HEAT NO. <b>N/A</b>	HEAT TREAT <b>N/A</b>
TYPE OF EXAMINATION <b>PT</b>	EXAMINATION STANDARD <b>PT-5A 1-2 PART 927</b>	ACCEPTANCE STANDARD <b>ASME Sect III G</b>
UT <input type="checkbox"/> MT <input type="checkbox"/> RT <input checked="" type="checkbox"/>	N.D.T. PROCEDURE NO. <b>IPPT-300-23-03</b>	TEMP. OF MAT'L <b>68° EPC 2138</b>

### ULTRASONIC EXAMINATION

EQUIPMENT	TRANSDUCER	TEST BLOCK	METHOD USED	SCANNING METHOD	SENSITIVITY LEVEL
-----------	------------	------------	-------------	-----------------	-------------------

### MAGNETIC PARTICLE EXAMINATION

EQUIPMENT	DRY <input type="checkbox"/>	VISIBLE <input type="checkbox"/>	AC <input type="checkbox"/>	DC <input type="checkbox"/>	AMPERAGE	PROD. SPACING	PARTICLES - COLOR
	WET <input type="checkbox"/>	FLOURESCENT <input type="checkbox"/>	RECTIFIED <input type="checkbox"/>			HEAD <input type="checkbox"/>	COIL <input type="checkbox"/>

### LIQUID PENETRANT EXAMINATION

METHOD Solvent	PENETRANT		CLEANER		EMULSIFIER		DEVELOPER		
<b>REINOL</b>	BRAND NO. <b>REINOL-5</b>	BATCH NO. <b>441149</b>	DWELL TIME <b>15 min</b>	BRAND NO. <b>SKL-5</b>	BATCH NO. <b>3M113</b>	BRAND NO. <b>SKD-5</b>	BATCH NO. <b>44012</b>	DEV. TIME <b>10 min</b>	DRY <input type="checkbox"/> NON-WET <input type="checkbox"/> ADJUST <input checked="" type="checkbox"/>
PART NO. <b>SPOOL # 1-FCB-22-860711</b>	TOTAL LENGTH EXAMINED		TYPE OF WORK		NO. OF ITEMS ACCEPTED		NO. OF ITEMS REJECTED		
TYPE OF DEFECTS CODE	FEET <b>spot checks</b>	INCHES		NEW <input type="checkbox"/>	REPAIR <input checked="" type="checkbox"/>	<b>1</b>		<b>0</b>	

C - Cracks    P - Porosity    NF - Non-Fusion    LI - Linear Indication    S - Slag    LA - Lamination    OTHER - Specify

PC # OR SN #	ACC	REJ	DEFECT CODE	REMARKS	PC # OR SN #	ACC	REJ	DEFECT CODE	REMARKS
AREA # 1	✓			see attachment.					
AREA # 2	✓								
AREA # 3	✓								
AREA # 4	✓								

~~IN~~ ~~OUT~~

~~\_\_\_\_\_ A.M. \_\_\_\_\_ P.M.~~

~~\_\_\_\_\_ Total Hours at Jobsite \_\_\_\_\_~~

~~\_\_\_\_\_ Lunch \_\_\_\_\_ Standby \_\_\_\_\_ Travel \_\_\_\_\_~~

~~\_\_\_\_\_ Total Hours \_\_\_\_\_ Total Mileage \_\_\_\_\_~~

Technician C. Goin SNT-TC-1A Level II

Asst. Technician \_\_\_\_\_

Customer: William M. Parde Level II

Witnessed by \_\_\_\_\_ SIGNATURE \_\_\_\_\_

ENCLOSURE ADDED Yes  No

Page ONE of Two

PEABODY TESTING, a division of X-Ray Engineering Company assumes no responsibility for losses of any kind due to interpretation.



PROJECT Midland, Michigan

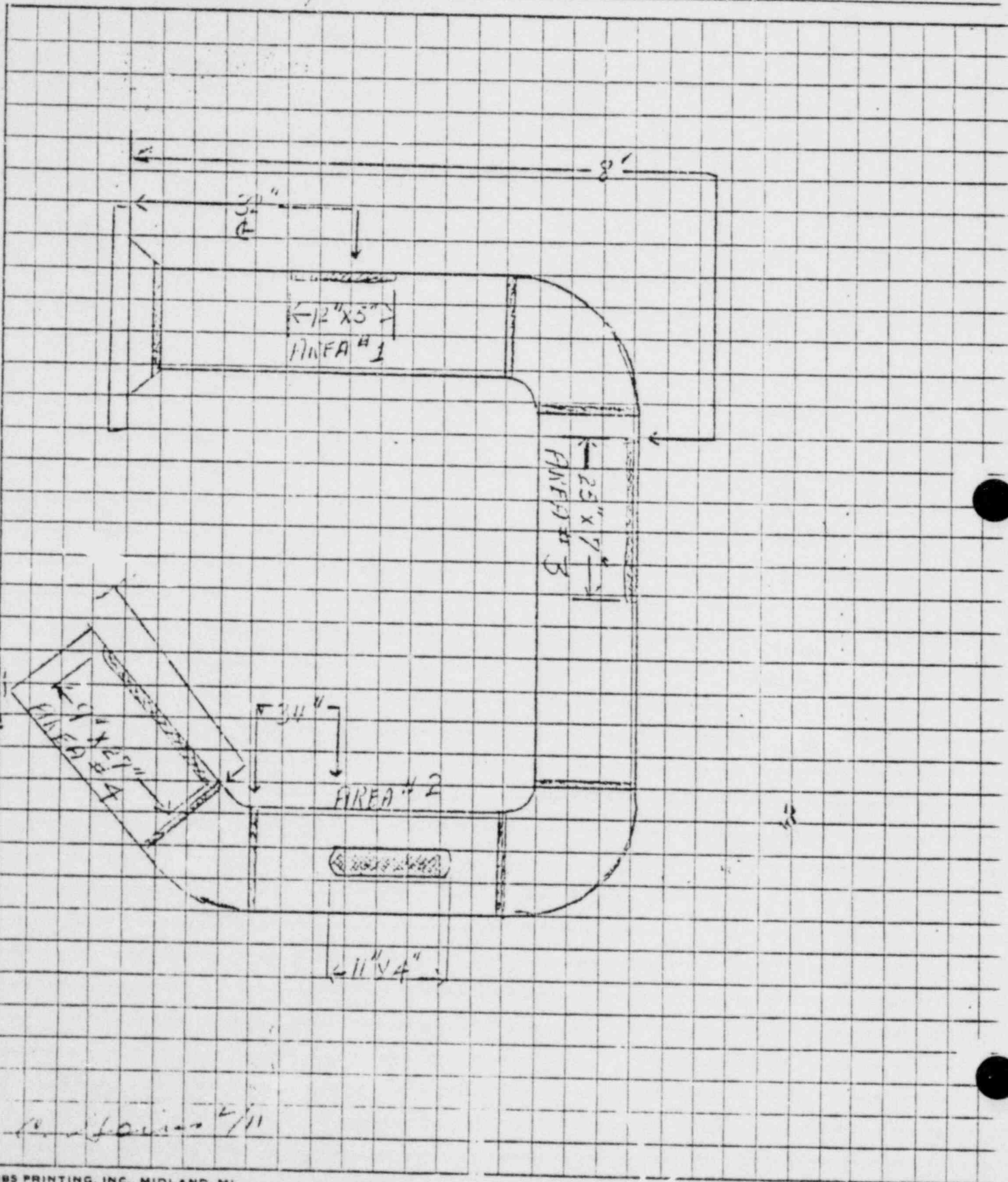
JOB NO. 07220

SHEET TWO OF TWO

NDE REPORT NO. 2067

COMMENTS DRAWING NOT TO SCALE.

NCR 367 Page 4 of 4





RECEIVED

### NONCONFORMANCE REPORT

1. PAGE 1 OF 1  
14. NCR NO. 375

2. DRAWING/PART NO. B&W Spec. FS III-10	REV. 1	7. PROJECT NO. 7220	12. REPOSED BY <i>H. Pulito</i>	DATE 2-3-76
3. ITEM DESCRIPTION Makeup Storage Tanks		8. ITEM LOCATION "F" Laydown Area	13. VALIDATED BY <i>M. Moll</i>	DATE 2-3-76
4. SERIAL NUMBER 1T58 and 2T58		9. STARTUP SYSTEM NO. N/A	14. REPLACEMENT PART NO. N/A	REV.
5. PURCHASE ORDER NO. M-1.15		10. QC FIELD INSPECTION PLAN NO. MRI-M63	15. REPLACEMENT SERIAL NO. N/A	
6. CONTRACTOR/LOCATION B&W/Jobsite		11. ASME CODE ITEM <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	17. SOURCE Vendor	
18. ROUTING INSTRUCTIONS: <input type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR <i>A B &amp; W</i>				

25. DISPOSITION CONCURRENCE				
REWORK	REJECT	REPAIR	USE AS IS	DOC.
PROJECT FIELD ENGINEER <i>Victor Labat</i>			DATE 10/15/76	
PROJECT ENGINEER <i>Dr. Phil. Love</i>			DATE 11/19/76	
PROJECT FIELD QC ENGINEER <i>Victor Labat</i>			DATE 10/22/76	
AUTHORIZED INSPECTOR			DATE	

19. NONCONFORMING CONDITION: Makeup Storage Tanks 1T58 and 2T58 were received on a truck with carbon steel chains wrapped around the upper nozzles. Chains caused surface marks on nozzles and upper head. Stainless steel surfaces covered with heavy winter road film. Units 1 and 2. "Q" No's. 4.039 and 4.049. Nonconformance noted during receipt inspection. 2 Hold Tags applied. *H. Pulito 4-27-76*

20.  FIELD DISPOSITION  FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING

Route to B & W Site Representative  
*H. Pulito 2-3-76*

21. FIELD DISPOSITION RESULTS:

22. ENGINEERING DISPOSITION

Use as is per B & W letter of 11-18-75 and internal memo 7571-01.  
*J. M. Hall 11-17-76*

23. ENGINEERING DISPOSITION RESULTS:

*Use as is per B&W letter dated 11-18-75  
H. Pulito 11-22-76*

24. IS DESIGN CHANGE REQUIRED  NO  YES. SEE ATTACHED:

DRAWING \_\_\_\_\_ REV. \_\_\_\_\_ DCN \_\_\_\_\_

SPEC \_\_\_\_\_ REV. \_\_\_\_\_ ADD \_\_\_\_\_

26. REJECTED MATERIAL DISPOSITION  RETURN TO SUPPLIER  SCRAP

REMARKS

27. QC ACCEPTANCE  
QC ENGINEER  
*Victor Labat* 11-22-76  
AUTHORIZED INSPECTOR



BECHTEL MIDL

B&W PGG LYN

B&W PGG LYN  
OCTOBER 14, 1976

MR. J.P. CONNOLLY  
BECHTEL POWER CORP.  
MIDLAND, MICHIGAN

FINAL WIPE SAMPLE ANALYSIS FOR THE B&W SUPPLIED MAKEUP TANK  
BECHTEL - 2028

WE HAVE RECEIVED THE FINAL ANALYSIS FOR THE WIPE SAMPLES TAKEN FROM THE B&W SUPPLIED MAKEUP TANKS OF WHICH THERE IS A NEW B&W SPR#11 AND A BECHTEL NCR#375. THE FINAL ANALYSIS OF THESE SAMPLES HAVE BEEN REVIEWED BY OUR TECHNICAL STAFF AND BEEN FOUND ACCEPTABLE AND WE REQUEST THAT BECHTEL CLOSE NCR#375 AND INSTALL THE MAKEUP TANKS.

OUR FINAL WRITTEN DISPOSITION FOR BOTH THE B&W SPR#11, AND BECHTEL NCR#375 WILL BE FORWARDED TO BECHTEL IN THE VERY NEAR FUTURE TO OFFICIALLY CLOSE BOTH OF THESE ITEMS.

G L DUPRIEST, PROJ. MGMT., BABCOCK & WILCOX CO., LYNCHBURG, VA.

BECHTEL MIDL  
2

CC: TO RAY MAES  
10-15-76 Jm

NCR 375 2 of 24

10/15/76

PA 311 201 7  
NCR 375

Babcock & Wilcox

B&W Construction Company  
Copley, Ohio 44321  
Telephone: (216) 666-8841

November 18, 1976

Bechtel Power Corporation  
P. O. Box 2167  
Midland, Michigan 48640

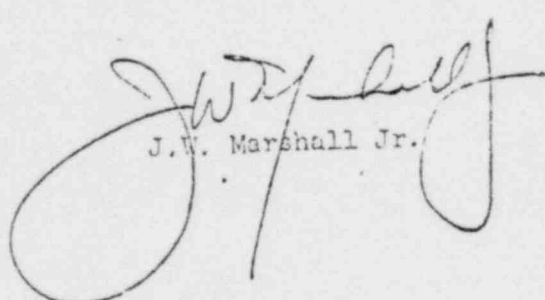
Attention Mr. J.F. Newgen

Re: Midland Project # 7220  
Nonconformance Report # 375  
Makeup Tanks 1T58 & 2T58

Dear Mr. Newgen:

To complete closeout of Nonconformance Report # 375, we have enclosed a copy of B & W internal memorandum # 7571-01 dated October 25, 1976. This document prepared by our Alliance Research Center personnel contains results of the wipe sample tests performed on Makeup Tanks 1T-58 and 2T-58 (our 1MU-T1 & 2MU-T1).

Please be advised that these test results have been reviewed by our Technical Staff and that the fluoride and chloride levels have been found acceptable.

  
J.W. Marshall Jr.

JM/jm

cc:

T.C. Cooke  
A.W. DePatie  
C.E. Mahaney  
E. Carlson

To	M. J. BELL - NPGD, LYNCHBURG	File No. or Ref.	7571-01
From	W. E. ALLMON - CHEMISTRY & CORROSION, ARC	Date	OCTOBER 25, 1976
Cust.	CONSUMERS POWER COMPANY		
Subj.	WIPE SAMPLES FROM MAKE-UP TANKS		

This letter to cover one customer and one subject only

Seven filter paper wipe samples were analyzed for fluoride and chloride content. The fluoride and chloride content of a "BLANK" filter paper was subtracted from the data reported below. The "BLANK" contained <0.01 mg chloride and <0.001 mg fluoride.

Sample Point	Chloride* (mg)	Chloride (mg/ft <sup>2</sup> )	Fluoride* (mg)	Fluoride (mg/ft <sup>2</sup> )
#1	0.016	0.12	0.060	0.45
#2	0.015	0.11	0.060	0.45
#3	<BLANK	<BLANK	0.005	0.04
#4	<BLANK	<BLANK	<BLANK	<BLANK
#5	<0.005	<0.04	0.020	0.15
#6	<0.005	<0.04	0.020	0.15
#7	<BLANK	<BLANK	0.020	0.15

\*This is the quantity that was leached from the filter paper, after subtraction of the "BLANK".

Samples that contained less fluoride and chloride than the "BLANK" indicate that the low level of fluoride and chloride present cannot be detected with this sampling method.

*William E. Allmon*  
W. E. Allmon

WEA/dj

cc: ~~G. L. Dupriest~~ - NPGD, Lynchburg  
N. J. Mravich  
C. C. Stauffer  
C. R. Turner

BLCHTEL

NONCONFORMANCE REPORT

1. PAGE 1	14. NCR NO.
OF 24	429
25. DISPOSITION CONCURRENCY	
REJECT	REPAIR
USE AS IS	DOC.
PROJECT FIELD ENGINEER	DATE
PROJECT FIELD QC ENGINEER	DATE
AUTHORIZED INSPECTOR	DATE

2. DRAWING/PART NO. 7220-C-288	REV. 4	7. PROJECT NO. 7220	12. REPORTED BY [Signature]	DATE 6/2/76
3. ITEM DESCRIPTION Reinforcing Steel	8. ITEM LOCATION Aux. Bldg 'C' Line	13. VALIDATED BY [Signature]	DATE 6-3-76	
4. SERIAL NUMBER N/A	9. STARTUP SYSTEM NO. N/A	14. REPLACEMENT PART NO. N/A	REV.	
5. PURCHASE ORDER NO. N/A	10. QC FIELD INSPECTION PLAN NO. C-231-2-904	15. REPLACEMENT SERIAL NO. N/A	11. ASME CODE ITEM NO	17. SOURCE Construction
6. CONTRACTOR/LOCATION N/A	11. ASME CODE ITEM NO			
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR				

19. NONCONFORMING CONDITION: Four #6 slab dowels at the intersection of 'C' line wall and roof slab at Elev. 624'0" were broken off at the face of the 'C' line wall during form removal. Broken dowels at the bottom of the slab are located 21" to 40" east of 7.4 line wall. Top dowel broken off 20" east of 7.4 line wall. Nonconformance noted during QC Surveillance Inspection. Q List #1.203. One tag applied.

20.  FIELD DISPOSITION  FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING  
 Block 20 Revised on page 2  
 Rework as follows: Drill 1 1/2" Diam. holes, fill holes with non-shrink grout (Embeco 636) and set the missing dowels. Grouting of bars shall be in accordance with the manufacturer's instructions. Embedment lengths shall be in conformance with the prescribed table on Dwg. C-211, Rev. 4. Expected implementation date on or about 6/11/76.  
 [Signature] 6-4-76

21. FIELD DISPOSITION RESULTS:  
 STANDARD REPAIR COMPLETED  
 FOR BLOCK 20  
 NOTE 1/12/76

22. ENGINEERING DISPOSITION

23. ENGINEERING DISPOSITION RESULTS:  
 [Signature] 1/12/76  
 QC ENGINEER  
 AUTHORIZED INSPECTOR

24. IS DESIGN CHANGE REQUIRED  NO  YES. SEE ATTACHED:

DRAWING \_\_\_\_\_ REV. \_\_\_\_\_ DCN \_\_\_\_\_  
 SPEC. \_\_\_\_\_ REV. \_\_\_\_\_ ADD. \_\_\_\_\_

26. REJECTED MATERIAL DISPOSITION  RETURN TO SUPPLIER  SCRAP

REMARKS \_\_\_\_\_

- White Copy - Originator
- Canary Copy - Field Engineer
- Pink Copy - POAE
- Goldenrod Copy - QC

RECEIVED

NONCONFORMANCE REPORT (CONT'D)

2 OF 24 9:10 10/5/76

14. NCR NO. 429

BLOCK 20 Revision

*W. A. 12/31/76  
1/14/77*

Rework as follows: Drill 1 1/2" diam. holes, fill holes with non-shrink grout (Embeco 636) and set the missing bottom dowels. ~~For the single top bar core drill a 2 1/2" diameter hole, set the dowel through the bar with Embeco 636. During core drilling a max. of 4 #6 bars may be cut provided the top bars immediately under the opening are not cut. (See Resident Engineers' Memorandum C-189)~~ Grouting of bars shall be in accordance with the manufacturer's instructions. Embedment lengths shall be in conformance with the prescribed table on Dwg. C-211, Rev. 4. Expected implementation date on or about 6/11/76.

*James S. Desmond 6.9.76  
James S. Desmond 6-9-76*

Block 20 Revision: ( To replace second sentence above)

For the single top bar core drill a 2 1/2" diameter hole, set the dowel through the wall and pressure grout bar with Embeco 636. During core drilling a max. of 4 #6 bars may be cut provided the top bars immediately under the opening are not cut. (See Resident Engineers' Memorandum C-189)

*James S. Desmond 9.22.76  
Jul G. Jones 9/22/76  
J. Williams 9.22.76  
R. J. Kennedy 9.24.76*

RE- C-127

DATE 9-8-76

SUBJECT: REINF. AT OPENINGS  
AUX. BLDG.

REF: DWG. C-140 REV. 9

AAO COORDINATION: Date 8-24-76 / Time 2.0  
J. ARORA 9-8-76 1:30

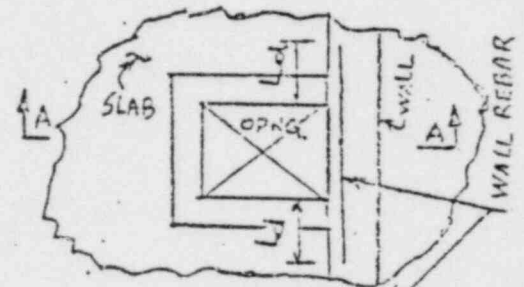
AAO Contact P. V. REGUPATHY  
V. VERMA  
J. ARORA

INTERIM APPROVAL IS GRANTED FOR THE FOLLOWING REQUIREMENTS OF REINF. AROUND THE OPENINGS UNLESS NOTED ON DESIGN DWG:

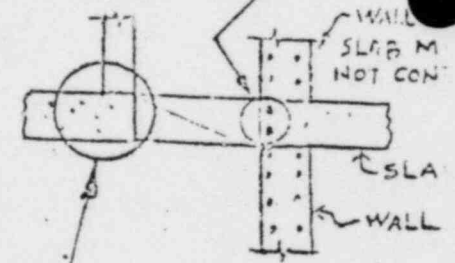
(1) OPENINGS IN SLABS

- a) WHEN CONC. WALL CONTINUES ABOVE AND BELOW THE SLAB
- b) WHEN WALL STOPS UNDERNEATH THE SLAB  
WALL HORIZ. REBARS SHALL CONTINUE IN THICKNESS OF SLAB IN FACE NEAR TO OPNG. THESE REBARS SHALL BE EXTENDED FOR DEVELOPMENT LENGTH ON EACH SIDE OF THE OPNG. AS SHOWN IN THE FIG.

(C) WHEN WALL SITS ON FLOOR, FIELD SHALL FOLLOW THE REINF. DETAIL AS CALLED OUT BY PROJECT ENGG.



PLAN



SECTION A-A

RESIDENT ENGINEER JNP

AAO Review: \_\_\_\_\_

Group Supervisor \_\_\_\_\_

Date: \_\_\_\_\_

**Uncontrolled**

RE- C-139

DATE 9-8-76

NCR 429 4 OF 4

SUBJECT: REINF. AT OPENINGS  
AUX. BLDG.

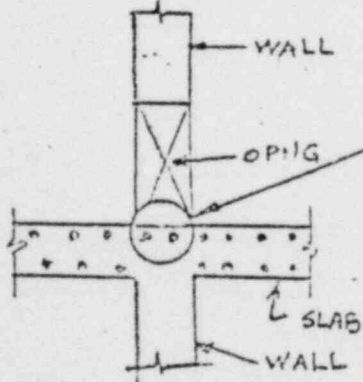
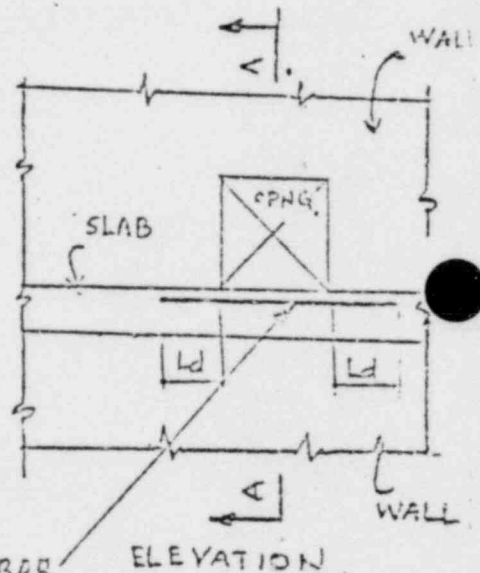
REF: DWG. C-140 REV. 9

AAO COORDINATION: Date 8-24-76 / Time 2.0 / AAO Contact P.V.R.  
J. ARORA 9-8-76 1.50 V.V.  
J. ARORA

(2) OPENINGS IN WALLS AT FLOOR LINE

- a) WHEN WALL CONTINUES ABOVE AND BELOW THE SLAB
- b) WHEN WALL STOPS UNDERNEATH THE SLAB
- c) WHEN WALL SITS ON THE SLAB

SLAB REBARS SHALL CONTINUE THROUGH THICKNESS OF WALL IN NEAR FACE TO OPNG. THESE SLAB REBARS SHALL BE EXTENDED FOR DEVELOPMENT LENGTH ON EACH SIDE OF THE OPNG. AS SHOWN IN THE FIG. (FIG. FOR CASE 'a' SHOWN)



SECTION A-A

RESIDENT ENGINEER [Signature]  
JNP

AAO Review: \_\_\_\_\_

Group Supervisor \_\_\_\_\_

Date: \_\_\_\_\_

*[Faint stamp or text]*



BECHTEL

ARORA

### NONCONFORMANCE REPORT

1 PAGE 1 OF 2	14. NCR NO. 433			
25. DISPOSITION CONCURRENCE				
REWORK	REJECT	REPAIR	USE AS IS	DOC.
		X		
PROJECT FIELD ENGINEER		DATE		
<i>[Signature]</i>		8-2-76		
PROJECT ENGINEER		DATE		
<i>[Signature]</i>		7-28-76		
PROJECT FIELD QC ENGINEER		DATE		
<i>[Signature]</i>		8-4-76		
AUTHORIZED INSPECTOR		DATE		

2. DRAWING/PART NO. Drawing 7220-C-288 (Q)	REV. 4	7. PROJECT NO. 7220	12. REPORTED BY <i>[Signature]</i>	DATE 6-11-76
3. ITEM DESCRIPTION Reinforcing Steel	8. ITEM LOCATION Auxiliary Building	13. AUTHORIZED BY <i>[Signature]</i>	DATE 6-11-76	
4. SERIAL NUMBER N/A	9. STARTUP SYSTEM NO. N/A	15. REPLACEMENT PART NO. N/A	REV.	
5. PURCHASE ORDER NO. N/A	10. QC FIELD INSPECTION PLAN NO. N/A	16. REPLACEMENT SERIAL NO. N/A	17. SOURCE Construction	
6. CONTRACTOR/LOCATION N/A	11. ASME CODE ITEM	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR				

19. NONCONFORMING CONDITION: Drawing 7220-C-140 (Q), Rev. 8 general note 16 states in part, "... in no case shall the tolerance on cover exceed minus one-third of the clear cover stipulated on the design drawings or in the specification." Contrary to the above bottom slab dowels along 5.6 line between C and D line, top of concrete Elev. 624'-0", exceed the allowable tolerance, see Page 2 for existing location. Nonconformance noted during routine QC surveillance. Q-List #1.203. 2 Hold Tags applied.

20. FIELD DISPOSITION:  FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING

Raise all dowels in question by bending to meet the required clear cover. 2" to 3" of concrete around each dowel shall be chipped out to allow proper bending. Bending shall be in accordance with Sec. 8.10 of Spec. C-231, Rev. 9. Implementation Date -- July 16, 1976. *[Signature]* 6/25/76

21. FIELD DISPOSITION RESULTS:

23. ENGINEERING DISPOSITION RESULTS:

22. ENGINEERING DISPOSITION: For the slab east of 7.4& South of lined repair the dowels as contained in field recommendation to obtain necessary cover. For the rest of the slab referenced in this NCR, increase the thickness of the slab by 1" as noted in the sketch (page 2 of 2). No safety implication is involved.

STANDARD REPAIR COMPLETED PER BLOCK 22. *[Signature]* 11/12/76

24. IS DESIGN CHANGE REQUIRED  NO  YES, SEE ATTACHED:

DRAWING C-288 REV. 5 DCN

SPEC \_\_\_\_\_ REV. \_\_\_\_\_ ADD \_\_\_\_\_

26. REJECTED MATERIAL DISPOSITION  RETURN TO SUPPLIER  SCRAP

REMARKS

27. QC ACCEPTANCE *[Signature]* 11-12-76

QC ENGINEER

AUTHORIZED INSPECTOR

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - POAE  
 Goldenrod Copy - QC

QC-G3-2

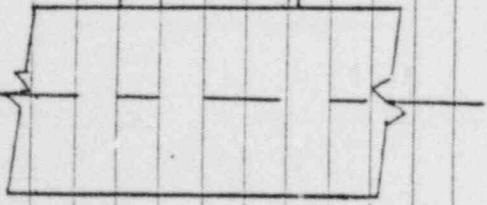
BECHTEL

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14 NCR NO. 433

(C)

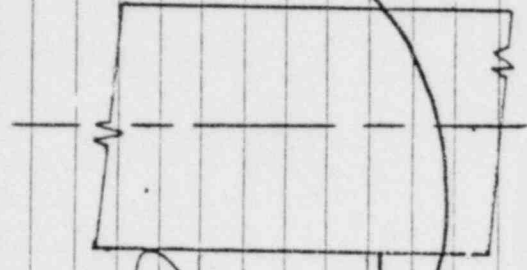


14 OF 18 DOWELS HAVE FROM 1/4" TO 0" COVER

INCREASE THICKNESS OF SLAB AT BOTTOM BY 1"

5.6 LINE WALL, WEST FACE (LOOKING EAST)

(D)



26 OF 31 DOWELS HAVE FROM 1/4" TO 0" COVER  
TOL. ER. 0.24'-0"

REPAIR AS PER FIELD'S RECOMMENDATION

INCREASE THICKNESS OF SLAB AT BOTTOM BY 1" UPTO (D) LINE

7.4 LINE WALL, EAST FACE (LOOKING WEST)

10098-2

QC-633

- White Copy - Originator
- Green Copy - Field Engineer
- Pink Copy - POAE
- Goldenrod Copy - QC

RECEIVED

NONCONFORMANCE REPORT

1 PAGE 1 OF 24 14. NCR NO. 435

2. DRAWING/PART NO. Drawing 7220-C-288 (Q)	REV. 4	7. PROJECT NO. 7220	12. REPORTED BY M. White	DATE 6-11-76
3. ITEM DESCRIPTION Reinforcing Steel	8. ITEM LOCATION Auxiliary Bldg	13. VALIDATED BY H. D. Foster	DATE 6-11-76	15. REPLACEMENT PART NO. N/A
4. SERIAL NUMBER N/A	9. STARTUP SYSTEM NO. N/A	16. REPLACEMENT SERIAL NO. N/A	17. SOURCE Construction	
5. PURCHASE ORDER NO. N/A	10. QC FIELD INSPECTION PLAN NO. N/A	11. ASME CODE ITEM <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
6. CONTRACTOR/LOCATION N/A				
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR				

25. DISPOSITION CONFERENCE

REWORK	REPAIR	USE AS IS	DOC.

APPROVED BY: T. Valeryano 9-30-76  
DATE: 6-24-76  
PROJECT FIELD ENGINEER: [Signature] DATE: 7-16-76  
PROJECT FIELD QC ENGINEER: [Signature] DATE: 9-2-76  
AUTHORIZED INSPECTOR: [Signature] DATE: 9-30-76

19. NONCONFORMING CONDITION: Drawing 7220-C-202 (Q) Rev 5, general note states: "Slab dowels to match slab reinforcing unless otherwise noted.", and drawing 7220-C-288 (Q) Rev 4 indicates 12" spacing for slab reinforcing. Contrary to the above, the first slab dowels top and bottem are located 18" from the face of the support. See page 2 for sketch of existing dowels. Non conformance noted during <sup>QC INSPECTION TAG</sup> routine QC surveillance. Q list number 1.203. One hold tag applied.

20.  FIELD DISPOSITION FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING

The above situation presented problems similar to those encountered when using curved rebar or "B" series cadwelds (both cases test only sister splices). We have #11 rebar to be cadwelded in the near future where production splices can be taken. It is recommended that two production splices be taken within the first 100 splices (plus one additional sister splice) to insure adequate testing.

21. FIELD DISPOSITION RESULTS:

22. ENGINEERING DISPOSITION

23. ENGINEERING DISPOSITION RESULTS:

See continuation sheet 5/8 [Signature] 3-1-76

Rebar was installed and encased in part # 624, etc. [Signature] 11/29/76

24. IS DESIGN CHANGE REQUIRED  NO  YES, SEE ATTACHED:

DRAWING \_\_\_\_\_ REV. \_\_\_\_\_ DCN \_\_\_\_\_

SPEC \_\_\_\_\_ REV. \_\_\_\_\_ ADD. \_\_\_\_\_

26. REJECTED MATERIAL DISPOSITION  RETURN TO SUPPLIER  SCRAP

REMARKS \_\_\_\_\_

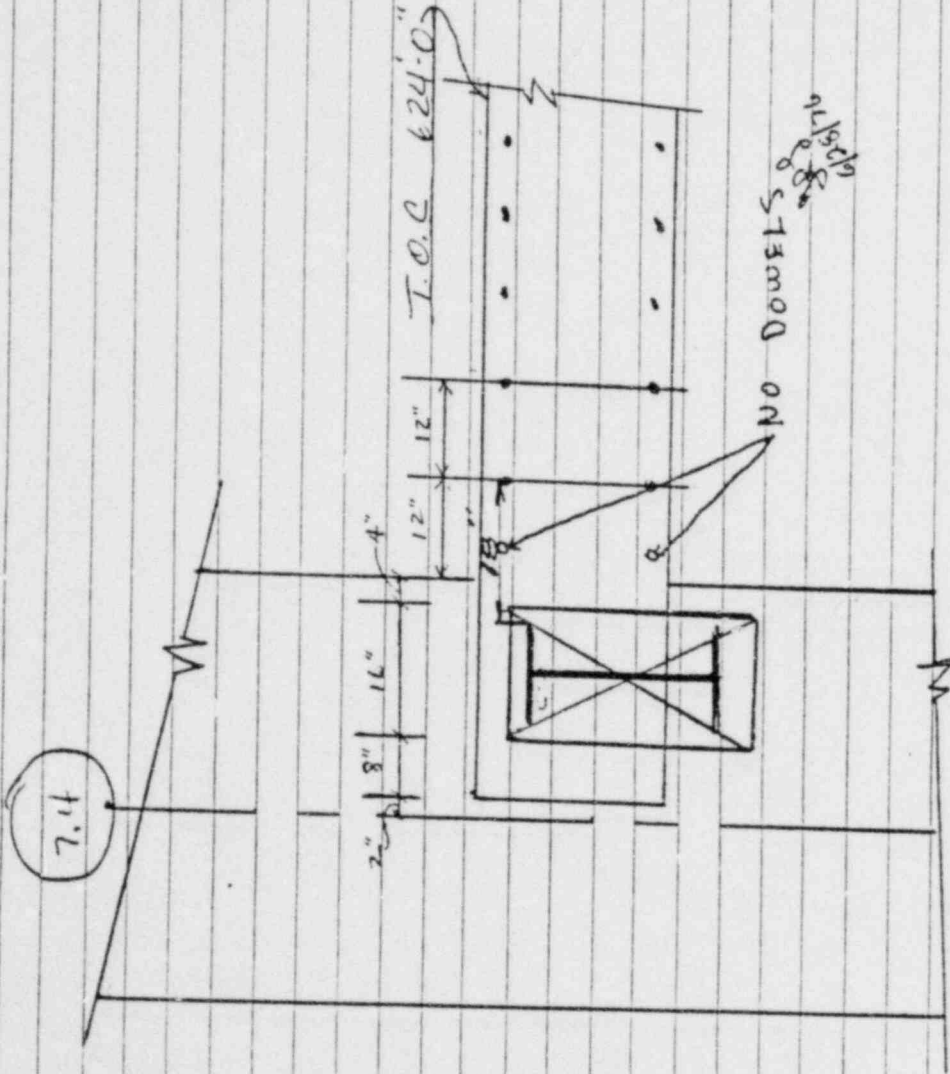
27. QC ACCEPTANCE

QC ENGINEER: [Signature] DATE: 11/29/76

AUTHORIZED INSPECTOR \_\_\_\_\_ DATE \_\_\_\_\_

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - POAE  
Goldenrod Copy - QC

QC-G32



B-LINE WALL @ 7A LINE, SOUTH FACE  
(LOOKING NORTH)

BLOCK 20 REVISED

Rework as follows: For the single bottom bar, drill 1 1/2" diam. hole, fill hole with non-shrink grout (Embeco 636) and set the missing bar. For the single top bar, drill 2 1/2" diam. hole thru the wall, set the bar thru the wall, and fill the hole with Embeco 636 by funneling thru a tube at the same time providing adequate vent to ensure proper grouting. Grouting of bars shall be in accordance with the manufacturer's instructions. Embedment lengths and lap splices of bars shall conform to the prescribed table on DWG. C-211, Rev. 4.

Expected implementation date - 7/16/76.

R. Rucina 8/23/76  
J.G. Jayne 8/23/76

BLOCK 20 REVISED

For the single bottom bar, drill 1 1/2" diameter hole, fill with non-shrink grout (Embeco 636) and set the missing bar. For the single top bar, instead of drilling a 2 1/2" diameter hole through wall, etc, remove concrete from 624'-0 approximately 6" deep through B line wall as shown on attached sketch. Drilling could not be accomplished due to additional rebar around opening above 624'-0". Place the bar and rework by concrete replacement. Grouting of bars shall be in accordance with the manufacturer's instructions. Embedment lengths and lap splices of bars shall conform to the prescribed table on Dwg. C-211, Rev. 4.

Expected implementation date - 7/16/76.

J. Masfandi 8-27-76  
J.G. Jayne 8/27/76



CALCULATION SHEET

0818 (3-71)

DESIGN BY G. M. HAMBLIN

DATE 8-25-76

CHECKED BY \_\_\_\_\_

DATE \_\_\_\_\_

SHEET NO. 4/4

PROJECT MIDLAND

JOB NO. 7220

SUBJECT ATTACHMENT TO NCR # 435

FILE NO. Aux B56

(4)

EDGE OF PLASTER

LOCATION OF PROPOSED  
CONCRETE REMOVAL  
(MIN COVER WILL BE SATISFIED)

ELEV. 629'-0"

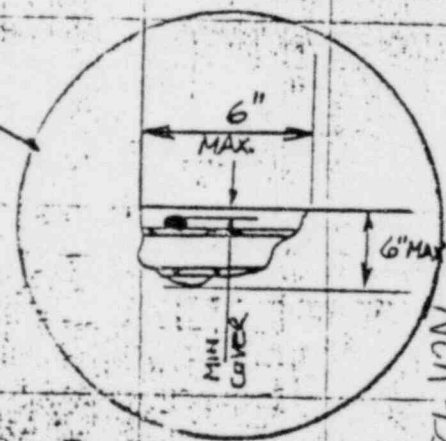
ELEV. 614'-0"

"B" LINE WALL (LOOKING NORTH)

(7)

6"

(B)



NCR 435 Page 4 of 4

BECHTEL

NONCONFORMANCE REPORT

2. DRAWING/PART NO. Spec. 7220-M-209	REV. 3	7. PROJECT NO. 7220	12. REPORTED BY Robert S. Mendenhall	DATE 4/27/76
3. ITEM DESCRIPTION Pipe Supports		8. ITEM LOCATION QC Hold	13. RECALLED BY A. R. ...	DATE 11/23/76
4. SERIAL NUMBER See Block 19		9. STARTUP SYSTEM NO. N/A	15. REPLACEMENT PART NO. N/A	REV.
5. PURCHASE ORDER NO. 7220-M-106AC Rev. 2		10. QC FIELD INSPECTION PLAN NO. IR/R-1.00-59	16. REPLACEMENT SERIAL NO. N/A	
6. CONTRACTOR/LOCATION ITT Grinnell, Warren, Ohio		11. ASME CODE ITEM YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	17. SOURCE Supplier	

1. PAGE 1 OF 2	14. NCR NO. 452
25. DISPOSITION CONCURRENCE	
REWORK XXXX	REJECT
REPAIR	USE AS IS
DOC.	
PROJECT FIELD ENGINEER H. G. ... 8/24/76	
PROJECT ENGINEER M. ... 8/19/76	
PROJECT FIELD QC ENGINEER J. ... 8/20/76	
AUTHORIZED INSPECTOR B. ... 8/20/76	

18. ROUTING INSTRUCTIONS:  ROUTE TO FIELD ENGINEERING  ROUTE TO MATERIAL SUPERVISOR

19. NONCONFORMING CONDITION: Purchase Order 7220-M-106AC Rev. 2, Documentation Submittal, Paragraph 2 states in part: "All engineering documents marked in column 5 of Form G-321-D must be submitted for Buyer approval. Those engineering documents marked Yes in column 5 require approval prior to commencement of fabrication." Contrary to the above, the Quality Documentation for Hanger 18-LHBC-133-H6 shows that it was fabricated to sketches that had a Bechtel approved Level 4 "Not approved-correct and resubmit."

20.  FIELD DISPOSITION  FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING

21. FIELD DISPOSITION RESULTS: Cont. pg 2

A review of the quality documentation shows that the previous revision of the drawing had been approved code 3. The drawing revision shown in Block 19 was simultaneously resubmitted for final Bechtel approval and issued for fabrication. The drawing was then disapproved after the vendor had initiated fabrication for this Hanger. The hanger is to be received in accordance with the hanger (continued)

22. ENGINEERING DISPOSITION: These hanger assemblies shall be reworked to conform to the requirements and engineering comments of Sketch 1-616-9-1 Rev. 2, Sub. 3. Upon completion of rework, all engineering requirements are met.

23. ENGINEERING DISPOSITION RESULTS:

HANGER REINSPECTED AND FOUND ACCEPTABLE TO SK 1-616-9-1 REV 2 SUB 3 PER PROJECT ENGINEERING DISPOSITION PMA Pitts 11-30-76

24. IS DESIGN CHANGE REQUIRED  NO  YES, SEE ATTACHED:

DRAWING \_\_\_\_\_ REV. \_\_\_\_\_ DCN \_\_\_\_\_

SPEC \_\_\_\_\_ REV. \_\_\_\_\_ ADD. \_\_\_\_\_

26. REJECTED MATERIAL DISPOSITION  RETURN TO SUPPLIER  SCRAP

REMARKS \_\_\_\_\_

27. ACCEPTANCE: PMA Pitts 11-30-76

PROJECT ENGINEER: B. ... 12-1-76

AUTHORIZED INSPECTOR: \_\_\_\_\_ DATE \_\_\_\_\_

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - PQAE  
Goldendrod Copy - QC

QC-G3-1

BECHTEL

NONCONFORMANCE REPORT (CONT'D)

1 PAGE 2 OF 2

14 NCR NO

452

Cont. Block 19

Hanger MK#

Drawing

Shop Order

18-1HBC-133-H6

1-616-9-1 Rev. 1

E-ME-085

Nonconformance noted during receipt inspection. 'Q' Number is 4.162.   /   Hold tags applied.

Block 20 Continued

drawing listed below:

Hanger Mark No.

Hanger Sketch No.

18-1HBC-133-H6

1-616-9-1 Rev. 0 (Sub. 1)

Project engineering shall instruct the vendor to provide the field with additional hanger material as required, to install the hanger in accordance with the latest approved drawings. The latest drawing should indicate specific modifications to be performed in the field. *8-4-76*

*1.87.05 8/2/79  
A. M. ... 8-3-76*

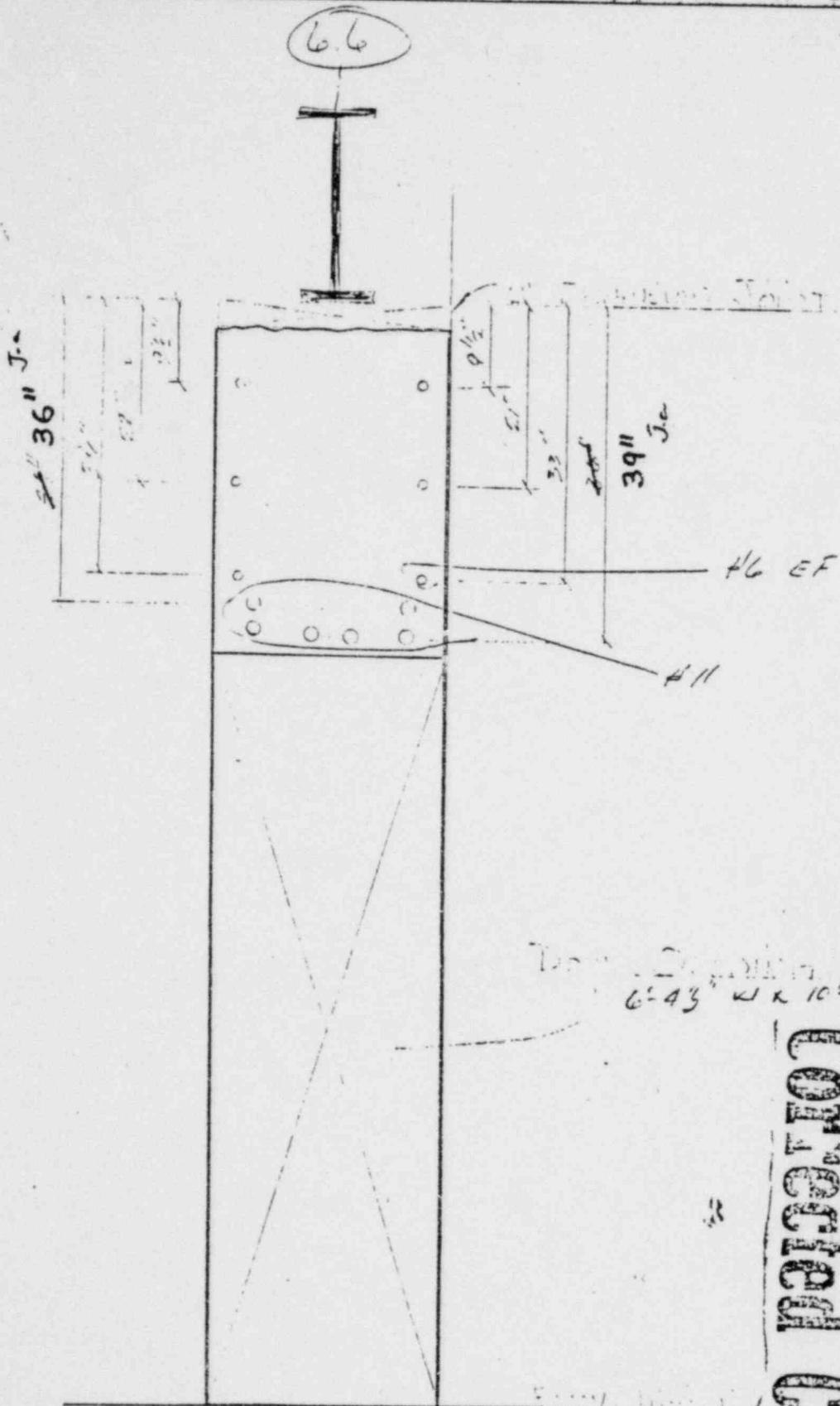


# Corrected Copy

## NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 07220		19. No. 470	20. Page 1 of 2								
2. Unit(s) 1 & 2	3. Drawing/Sheet No. C-282 C-284	6 3 Rev	4. Item Description Reinforcing Steel	5. Item Location Auxiliary Building									
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N _____ REV _____	9. Source Construction	10. Contractor/Supplier N/A									
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1.22-11 NO. C-282 Rev. 6	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD							
16. Nonconforming Condition: Drawing 7220-C-284, Revision 3, requires that wall 53 be reinforced with horizontal #6 bars at 12" spacing. Contrary to the above, two dowels are missing at Elev. 625'± at intersection of wall 53 with H line. 'Q' List No. 1.203. One Hold Tag Applied. <b>NO WORK MAY PROCEED PRIOR TO RECEIPT OF ENGINEERING DISPOSITION.</b> 7/21/76			24. Disposition Concurrence <table border="1"><thead><tr><th>REWORK</th><th>REJECT</th><th>REPAIR</th><th>USE AS IS</th></tr></thead><tbody><tr><td></td><td></td><td></td><td><input checked="" type="checkbox"/></td></tr></tbody></table> 1. J.C. Valenzuela 9-20-76 PROJECT FIELD ENGINEER DATE 2. J. J. Annally 9-16-76 PROJECT ENGINEER DATE 3. J. J. Annally 9-23-76 PROJECT CONSTR QC ENGINEER DATE AUTHORIZED INSPECTOR DATE			REWORK	REJECT	REPAIR	USE AS IS				<input checked="" type="checkbox"/>
REWORK	REJECT	REPAIR	USE AS IS										
			<input checked="" type="checkbox"/>										
17. Reported By M. E. Cook	Date 8-4-76	18. Validated By J. J. Annally	Date 7-21-76	25. Disposition Results									
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING	<input type="checkbox"/> TO OTHERS (SPECIFY)												
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING The area of steel provided by the 6-#11 replacement bars is greater than required to replace the 10 #6 cut horizontals and the missing 2 #6 dowels. Since the replacement bars are the same configuration as the 2 #6 dowels missing, accept as is. J.C. Valenzuela 8/14/76													
23. Project Engineering Disposition 6-#11 replacement bars provided (sheet 2 of 2) meet the design requirements as noted on the design drawings and hence existing rebar configuration does not constitute a "Non conformance". Engineering concurs with the field recommendation to "use as is". J.C. Valenzuela 9/16/76													
				26. QC Acceptance J.C. Valenzuela 11/5/76 QC ENGINEER DATE AUTHORIZED INSPECTOR DATE									

Corrected Copy



Corrected Copy

VIEW 53  
SECTION LOOKING NORTH @ A-LINE

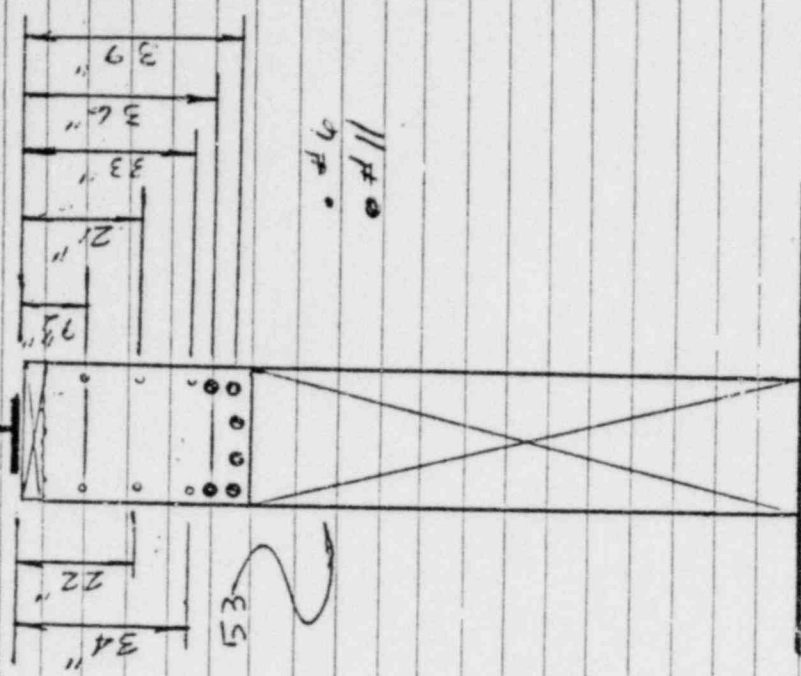
REVISED 8.1.76 NF

10088-2

BECHTEL

Revised Drawing.  
Replaces previous Page 2.

66



SECTION WALL 53

FLEV. H LINE WALL  
(LOOKING NORTH)

White Copy - Originator  
 Green Copy - Field Engineer  
 Pink Copy - PDAE  
 Goldenrod Copy - QC

QC-033  
MF 9.2.76

BECHTEL

NONCONFORMANCE REPORT

1. PAGE 1 OF 37	14. NCR NO. 479			
25. DISPOSITION CONCURRENCE				
REWORK	REJECT	REPAIR	USE AS IS	DOC.
PROJECT FIELD ENGINEER		DATE		
<i>[Signature]</i>		8-11-76		
PROJECT FIELD QC ENGINEER		DATE		
<i>[Signature]</i>		8-12-76		
AUTHORIZED INSPECTOR		DATE		
<i>[Signature]</i>		11/15/76		

2. DRAWING/PART NO. M-506 sh 1	REV. 0	7. PROJECT NO. 07220	12. REPORTED BY W. K. Bohra	DATE 8/6/76
3. ITEM DESCRIPTION SS HVAC SPOOL		8. ITEM LOCATION Combo. Shop	13. VALIDATED BY D. Alexinsky	DATE 8-6-76
4. SERIAL NUMBER OHCC-152-S-506-1-2		9. START-UP SYSTEM NO. N/A	15. REPLACEMENT PART NO. N/A	REV.
5. PURCHASE ORDER NO. 7220-M104-AC		10. QC FIELD INSPECTION PLAN NO. M-204-2-M506-1 Rev 0	16. REPLACEMENT SERIAL NO. N/A	
6. CONTRACTOR/LOCATION ITE Grinnell-Kernersville, N.C.		11. ASME CODE ITEM YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	17. SOURCE Supplier	

19. NONCONFORMING CONDITION:  
 Spool OHCC-152-S506-1-2 was furnished with NDE documentation for welds A,B,C. Closure weld #D (Pipe to Plate) was made, but no reference of NDE was recorded on Grinnell's Liquid Penetrant Examination Report nor on Operations Record Sheet 2 of 2. Note: See sheet # 2 of 2 for location of weld #D. Discrepancy found during review of Q.C. verification documentation. (one hold tag applied).

20.  FIELD DISPOSITION  FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING

Route to Procurement Supervisor to obtain Grinnell's liquid penetrant examination report for weld #D. Field shop fabrication May continue to the point of installation.

Conditional release on page 3.

*G. Butler 8-11-76*  
*K. Dougherty 8-11-76*

21. FIELD DISPOSITION RESULTS:

22. ENGINEERING DISPOSITION

23. ENGINEERING'S DISPOSITION RESULTS:

*NDE WAS CONDUCTED PER THE REQUIREMENTS OF FORM 84 MECHANICAL AND BLUE 20 SH 3 (NCR 479) RESULTS WERE ACCEPTABLE*

24. IS DESIGN CHANGE REQUIRED  NO  YES. SEE ATTACHED:

DRAWING REV. \_\_\_\_\_ DCN \_\_\_\_\_

SPEC REV. \_\_\_\_\_ ADD \_\_\_\_\_

26. REJECTED MATERIAL DISPOSITION  RETURN TO SUPPLIER  SCRAP

REMARKS

27. QC ACCEPTANCE

QC ENGINEER *[Signature]* 11-18-76

AUTHORIZED INSPECTOR *[Signature]* 11/19/76

White Copy - Originator  
 Green Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC



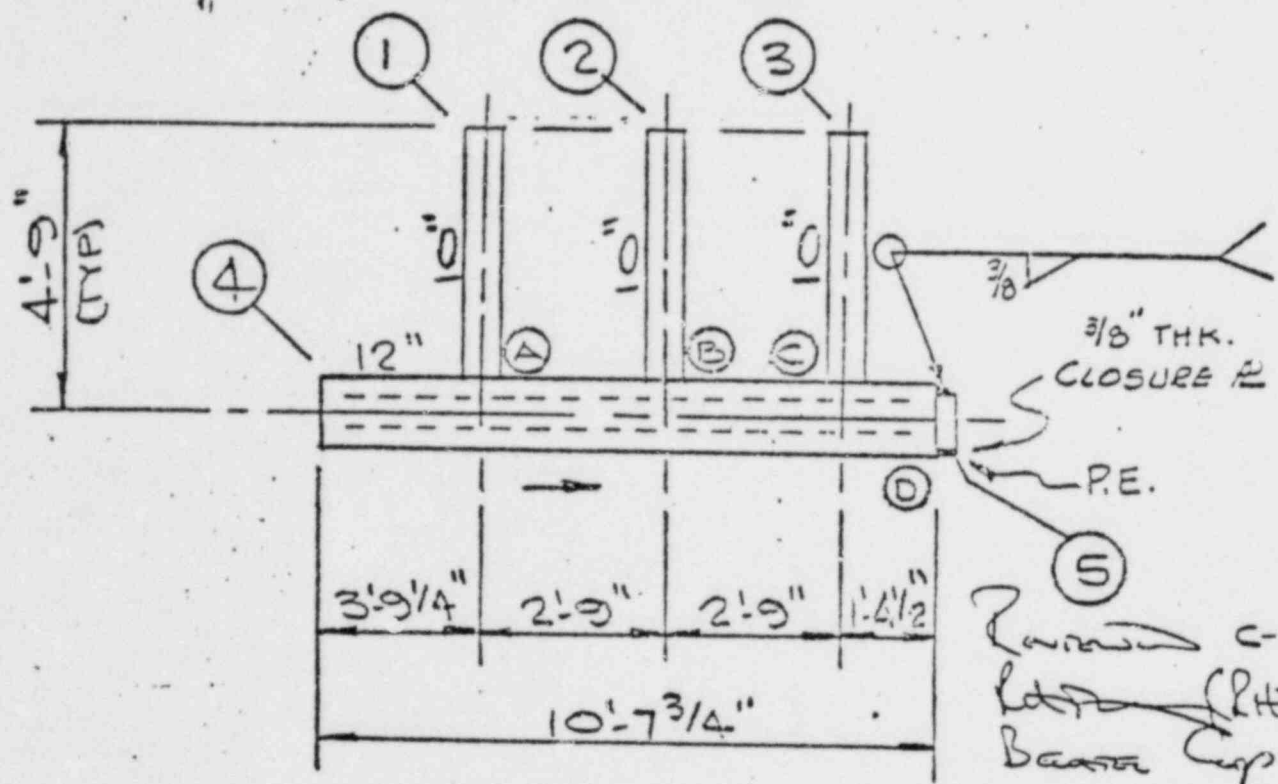
NONCONFORMANCE REPORT

W. Irell

1. Project Name Midland		Job No. 7220		19. No. 496	20. Page 1 of 1																																
2. Unit(s) Aux Bldg	3. Drawing/Part No. 7220-E-535	Rev 10	4. Item Description PVC Conduit	5. Item Location Elev. 584'0" Slab																																	
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	9. Source Construction	10. Contractor/Supplier N/A																																	
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-111-11	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input checked="" type="checkbox"/> FLD																															
16. Nonconforming Condition: Conduit IBC008 has been damaged by drilling the concrete in the Aux Bldg slab at Elev. 584'0", (4') south of D Line and (10') east of 5.6 Line. Q List #3.006 I QC Hold Tag applied. 7'-0" 8'-0" <i>8-29-76</i> Hold drilling in the areas where conduits are embedded near the heat exchangers along 5.6 and 7.4 Lines.			24. Disposition Concurrence																																		
			<table border="1"> <tr> <th>REWORK</th> <th>REJECT</th> <th>REPAIR</th> <th>USE AS IS</th> </tr> <tr> <td></td> <td></td> <td><i>10-1-76</i></td> <td></td> </tr> <tr> <td colspan="2"></td> <td>PROJECT FIELD ENGINEER</td> <td>DATE</td> </tr> <tr> <td colspan="2"></td> <td><i>9-24-76</i></td> <td></td> </tr> <tr> <td colspan="2"></td> <td>PROJECT ENGINEER</td> <td>DATE</td> </tr> <tr> <td colspan="2"></td> <td><i>10-1-76</i></td> <td></td> </tr> <tr> <td colspan="2"></td> <td>PROJECT CONSTR QC ENGINEER</td> <td>DATE</td> </tr> <tr> <td colspan="2"></td> <td>AUTHORIZED INSPECTOR</td> <td>DATE</td> </tr> </table>			REWORK	REJECT	REPAIR	USE AS IS			<i>10-1-76</i>				PROJECT FIELD ENGINEER	DATE			<i>9-24-76</i>				PROJECT ENGINEER	DATE			<i>10-1-76</i>				PROJECT CONSTR QC ENGINEER	DATE			AUTHORIZED INSPECTOR	DATE
REWORK	REJECT	REPAIR	USE AS IS																																		
		<i>10-1-76</i>																																			
		PROJECT FIELD ENGINEER	DATE																																		
		<i>9-24-76</i>																																			
		PROJECT ENGINEER	DATE																																		
		<i>10-1-76</i>																																			
		PROJECT CONSTR QC ENGINEER	DATE																																		
		AUTHORIZED INSPECTOR	DATE																																		
17. Reported By <i>8-17-76</i>	Date	18. Validated By <i>8/19/76</i>	Date	25. Disposition Results CONDUIT REPAIRED PER DISPOSITION <i>10-7-76</i>																																	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)																																			
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING																																			
Field Engineering recommends removal of concrete necessary for repair of damaged PVC Conduit 1 BC008. Repair Conduit IBC008 by applying an external patch.																																					
<i>8/10/76</i>		<i>8/20/76</i>		<i>8/20/76</i>																																	
				<i>8-20-76</i>																																	
23. Project Engineering Disposition			26. QC Acceptance																																		
Remove concrete to expose an area of 1 1/2" min around the hole. Chamfer inside edge of hole to clean up and eliminate to create smooth edge inside the conduit. Clean up outside of conduit and apply a section of PVC coupling as a patch using PVC cement. Repair Concrete per section 17 of civil specification C-231. This will maintain the integrity of the conduit and the concrete.			Completed per I.P. C-140-5004 <i>11-4-76</i>																																		
			A.T. Davis DATE		<i>11/4/76</i>																																
			A.T. Davis QC ENGINEER																																		
			AUTHORIZED INSPECTOR		DATE																																

#163  
ORDER OR CONT. No. 7093  
CONSUMERS POWER CO. PLANT  
MIDDLETOWN, MICHIGAN

DEPT. KERNERSVILLE IPD  
DRAWN. DAN CHK'D. G2-1-2-75  
DRAWN. NOWELL 2/10/77 CHK'D. DGA  
DRAWN. \_\_\_\_\_ CHK'D. \_\_\_\_\_



5  
Round C-24-26  
letting (letting)  
Base Cup

PIPE: STD. WT.  
SA 312 TP 304.

R - 3/8" THK. SA-240 TP 304.

37 1/2° BEVEL ENDS  
(EXCEPT AS NOTED)

ASME CODE APPROVED

S/STL.

CLASS NUC. CL. 3 LINE SPEC. OHCC APP. CODE ASME SEC. II NO. REQ'D. 1

GRAPHY (RT) <input checked="" type="checkbox"/>	SPECIAL MARKING	PREHEAT	CERT. OF COMPLIANCE
NON-ARTICLE (MT) <input checked="" type="checkbox"/>	SPECIAL CLEANING <input checked="" type="checkbox"/>	HEAT TREAT	MILL TEST REPORTS <input checked="" type="checkbox"/>
FLUOROPENETRANT (PT) <input checked="" type="checkbox"/>	PAINTING	CODE STAMP <input checked="" type="checkbox"/>	DATA REPORTS <input checked="" type="checkbox"/>
SYSTEM <u>HTGR</u>	FAB. SPECS. <u>ES-350N</u>	<u>ES-12V-19</u>	

REF. DRWG. No. M-500-SHT. 1(S)A PRESS. 0 PSI. TEMP. 125 °F. WT. 1160 lbs.  
REGISTER MR-93-2 OHCC-152-S-506-1-2 PC. NK. SK. NO. MR-93-2 PREP. 2 OF 19

PR. 2 OF 2  
NCR 479  
1152

BECHTEL

Block 20 continued.

Conditional Release: Field shop fabrication may continue to the point of installation.

PFE J. C. [unclear] 10-15-76  
 PFQCE [unclear] 10-15-76  
 LQAE [unclear] 10/15/76  
 AI [unclear] 10/15/76

Block 20 continued

Vendor cannot provide NDE Report for closure weld #D (Pipe to Plate). Field personnel shall perform the NDE in accordance with the requirements of the form 34-Mechanical for the applicable pipe class.

J. A. Brown 11-13-76  
S. Williams 11-11-76  
G. Pulito 11-10-76



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 494	20. Page 1 of 2
2. Units 0	3. Drawing/Part No. 3-820 & 1-855	Rev N/A	4. Item Description NNI System Cabinets		5. Item Location Class A Storage
6. P.O. Or Spec No. 7220-ML.35	7. Serial No. N/A	8. Replacement Part P/N N/A REV	9. Source Supplier	10. Contractor/Supplier Babcock & Wilcox	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. FIM G-5		12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		14. Discovered During <input checked="" type="checkbox"/> REC G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input checked="" type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: FIM G-5 Para. 3.3.6 states in part: "A review shall be made to assure that a correlation exists between the item received and its supporting documentation." Contrary to the above, a correlation can not be made between the submitted documentation for 4 Non-Nuclear Instrumentation System Cabinets and the 4 Cabinets. Hold pending disposition. Noted during receipt inspection. "Q" No. 5.0118. 4 Hold tags applied.			24. Disposition Concurrence N/A		
			REWORK REJECT REPAIR USE AS IS		
			PROJECT FIELD ENGINEER DATE		
			PROJECT ENGINEER DATE 11-15-76		
			PROJECT CONSTR QC ENGINEER DATE		
			AUTHORIZED INSPECTOR DATE		
17. Reported By Helen Bolan		Date 8-19-76	18. Validated By J. M. Mally		Date 8-19-76
21. Routing <input type="checkbox"/> TO FIELD ENGINEERING		<input checked="" type="checkbox"/> TO OTHERS (SPECIFY) Babcock & Wilcox			
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
23. Project Engineering Disposition					
26. QC Acceptance J. M. Mally					11-11-76
QC ENGINEER					DATE
AUTHORIZED INSPECTOR					

11-15-76



**BECHTEL**

NONCONFORMANCE REPORT (CONT'D)

1 PAGE 2 OF 2

18 NCR NO. 494

Block 16 Cont.

Further research reveals that the three (3) 820 system cabinets belong to the Integrated Control System (non "Q"), and the 855 system cabinet belong to the Plant Computer System (non "Q"). No disposition required per Quality Control program.

*WPA 11-15-76*  
*WPA 11-15-76*  
*WPA 11-15-76*

1000002

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - POAE  
Goldenrod Copy - QC

QC-G-3

BECHTEL

# Corrected Copy

## NONCONFORMANCE REPORT

*JS 11/17/76 PMP 52476*

2. DRAWING/PART NO. See Block 19		REV.	7. PROJECT NO. 7220	12. REPORTED BY <i>PMPlette</i>	DATE 8-23-76	14. NCR NO. 497
3. ITEM DESCRIPTION PIPE Hangers		8. ITEM LOCATION Auxiliary Bldg. Elev. 568		13. VALIDATED BY <i>J.P. Kowalsky</i>	DATE 8-23-76	25. DISPOSITION CONCURRENCE
4. SERIAL NUMBER N/A		9. STARTUP SYSTEM NO. N/A		15. REPLACEMENT PART NO. N/A	REV.	REWORK <input type="checkbox"/> REJECT <input type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS <input checked="" type="checkbox"/> DOC. <input type="checkbox"/>
5. PURCHASE ORDER NO. 7220-M106-AG <i>COPE 2276</i>		10. QC FIELD INSPECTION PLAN NO. See Block 19		16. REPLACEMENT SERIAL NO. N/A		PROJECT FIELD ENGINEER <i>M. J. Threlwell</i> DATE 11/16/76
6. CONTRACTOR/LOCATION ITT Grinnell, Warren, Ohio		11. ASME CODE ITEM <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		17. SOURCE Supplier		PROJECT ENGINEER <i>J.P. Kowalsky</i> DATE 11-17-76
18. ROUTING INSTRUCTIONS: <input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR						

19. NONCONFORMING CONDITION: Specification 7220-M209 Rev 4, paragraph 8.1 states in part "hanger detail sketches for fabrication of hanger systems classified as hanger critical by the buyer shall be submitted to the buyer for review, approval and release." Specification 7220 M209, Rev 4, paragraph 4.5 states in part "The design of pipe support systems shall include the following items which shall be subject to approval in accordance with article 8 of these specifications: . . . K) Detail sketches for each support or hanger shall be prepared showing . . . 2) assembly arrangement, 3) exact bill of material, . . . 6) weld details. . . ."

20.  FIELD DISPOSITION  FIELD RECOMMENDATION/ROUTE TO PROJECT ENGINEERING

Route to Project engineering for resolution. Field suggests a "use as is" disposition provided a revised drawing and the necessary NDE results are submitted to the field. If NDE results are required but have not been performed by the vendor, Project Engineering shall instruct the field to perform the applicable NDE.

(con't on sheet 2)

*CONTINUED ON PAGE 2*

22. ENGINEERING DISPOSITION

Engineering considers these pipe clamps to be standard components and recommends that the field use "as is." Grinnell is currently revising their sketches to incorporate this clamp assembly as a standard component. Visual inspection is the only NDE required; therefore additional NDE is unnecessary. 11/16/76 *J.P. Kowalsky*

23. ENGINEERING DISPOSITION RESULTS:  
*Concur with Project. Concession in disposition. P.M. Plette 11-22-76*

24. IS DESIGN CHANGE REQUIRED <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES, SEE ATTACHED:		26. REJECTED MATERIAL DISPOSITION <input type="checkbox"/> RETURN TO SUPPLIER <input type="checkbox"/> SCRAP		27. QC ACCEPTANCE
DRAWING _____ REV. _____ DCN _____	SPEC. _____ REV. _____ ADD. _____	REMARKS		<i>P.M. Plette</i> 11-22-76 <i>Krombalat</i> 11/27/76

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

QC-G1-2

BECHTEL

Block 19 CONTINUED

# Corrected Copy

NONCONFORMANCE REPORT (CONT'D)

PMP 8-24-76  
S JLB 8/24/76  
PAGE 2 OF 7  
14 NCR NO. 497

Specification 7220-M209, Rev 4, paragraph 6.6 states in part "The design of special pipe clamps shall be submitted for review and substantiated, if requested, by physical test data (e.g., deflection and/or strain gage tests)."

Contrary to the above cited references hanger mark numbers 3-2FCB-28-H6, 2 1/2-2FCC1-H2 and 3-2FCB-28-H4 AND 3-1FCB-28-H4 have been furnished with pipe clamps which are:

1. Not in agreement with the configurations or material descriptions previously approved by Bechtel Engineering.
2. Contain welded connections for which details are not provided and NDE documentation and criteria have not been furnished.

Note: The configuration of the clamps furnished does not agree with any of the clamps described in the 1976 catalogue (PH-76) nor does it appear in Figure 1 of the current revision of Manufacturers Standardization Society SP-58 Pipe Hangers and Supports (1975 Edition) therefore it cannot be classified as a "Component Standard Support" as defined in article NF 1214 of ASME Section III.

NOTED DURING INSTALLATION INSPECTION PMP 8-23-76  
 Q NUMBER 4.112 PMP 8-23-76  
 THREE (3) Q.C. HOLD TAGS APPLIED PMP 8-23-76  
 FOUR (4)  
 PMP 8-24-76  
 SJS 8/24/76  
 JLB 8-24-76

Block 20 con't.  
The sketch numbers of the nonconforming hangers are as follows:

3-2FCB-28-H6	2-611-4-34
2 1/2-2FCC1-H2	2-611-4-35
3-2FCB-28-H4	2-611-4-32
3-1FCB-28-H6	1-610-4-34
(Hanger Mark No.)	(Sketch No.)

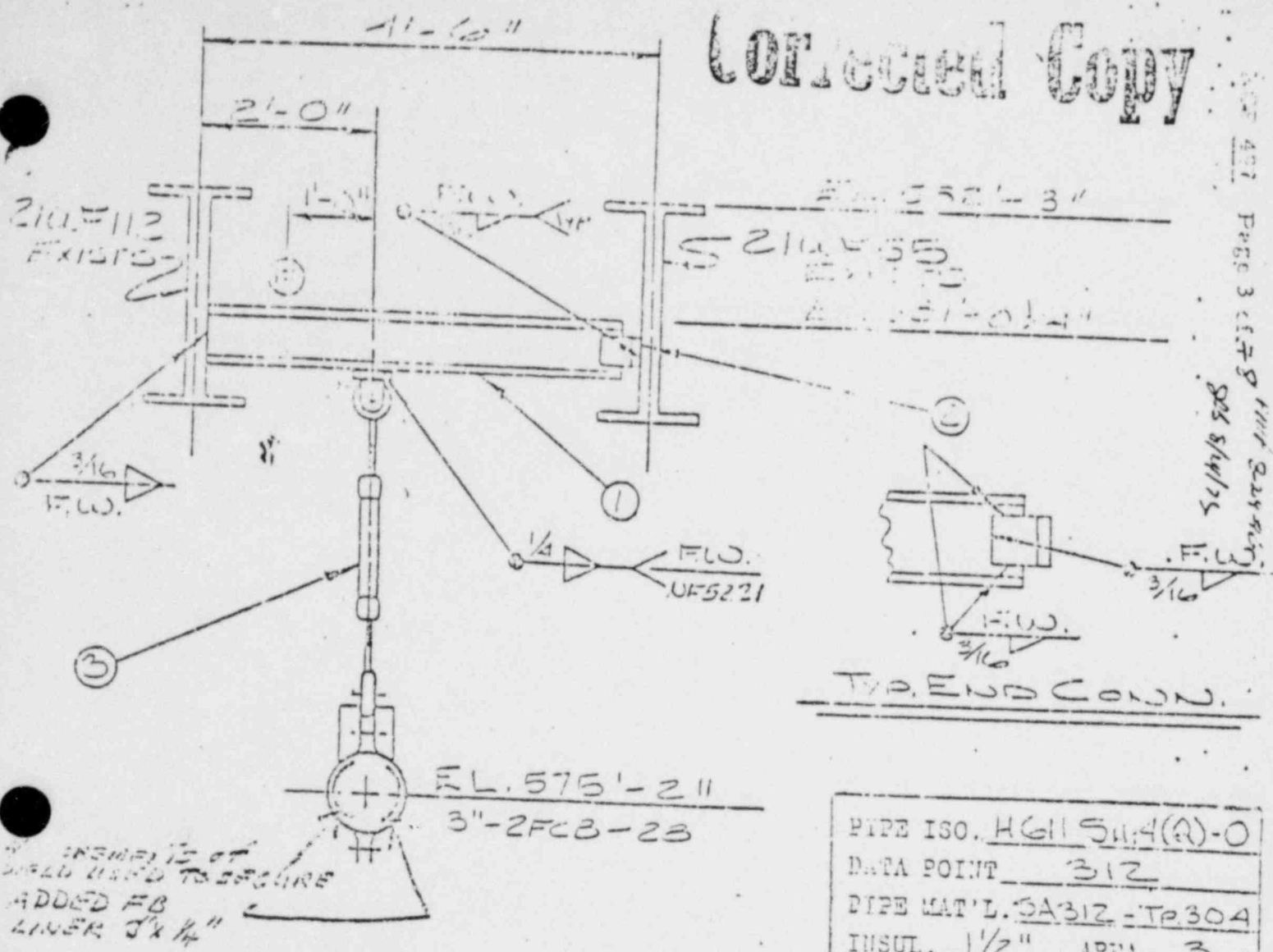
C.E. Frost 9/29/76 R.E. Pulito 9-29-76

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

QC-G-13

Corrected Copy

Page 3 of 8



INSURE IS OF  
WELD USED TO SECURE  
ADDED FB  
LINER 3/4"

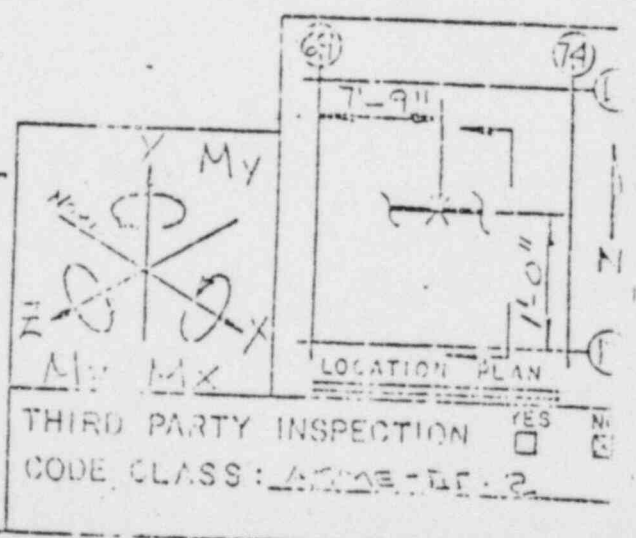
PIPE ISO.	HG115114(A)-0
DATA POINT	312
PIPE MAT'L.	SA312-TP.304
INSUL.	1/2" ARMA 3

NOTES

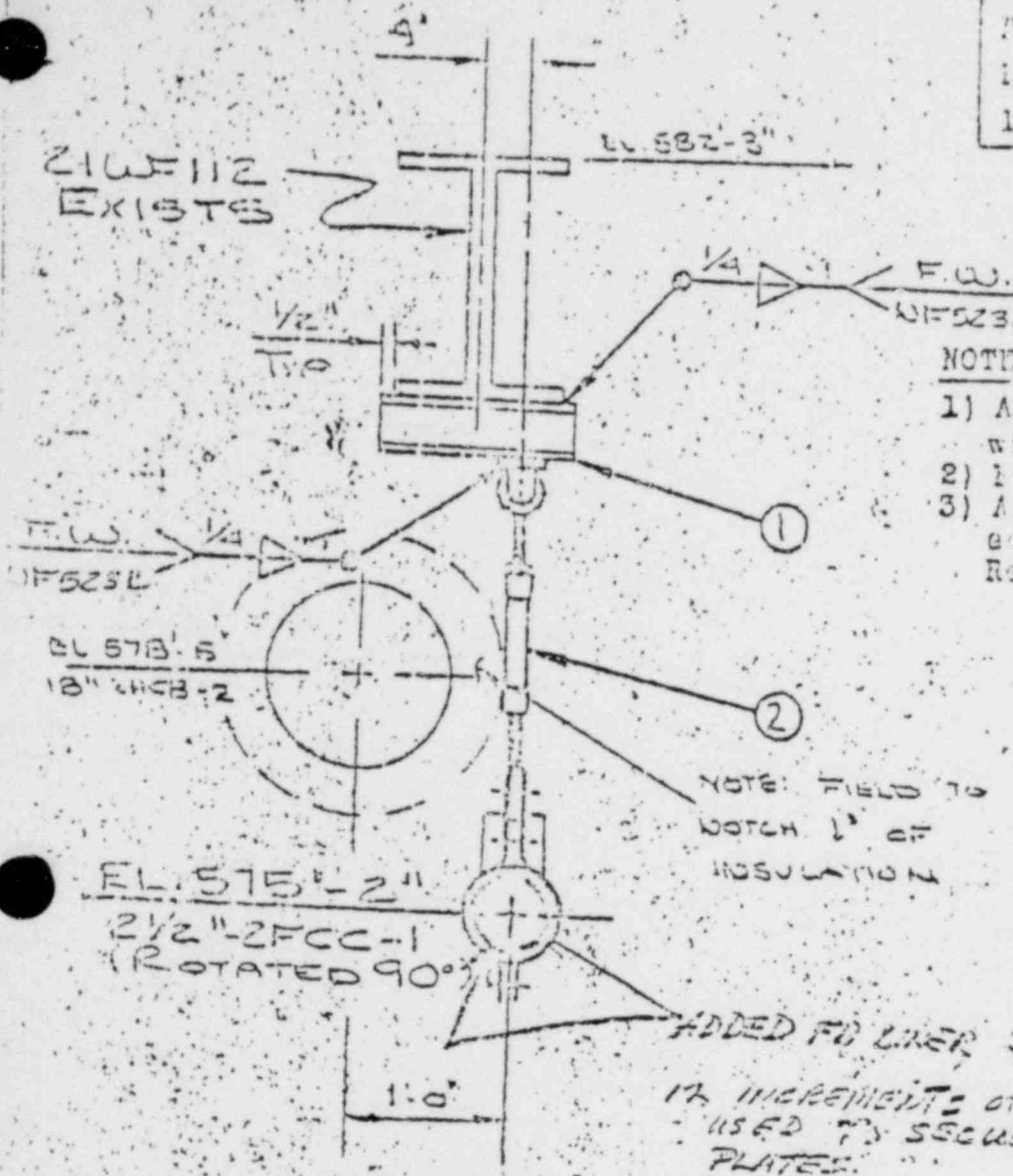
- 1) All tolerances in accordance with QCP #2A001 U.N.O.
- 2) Fab. Procedure is FH-101-10
- 3) All products designed in accordance with EPL File No. 1 Rev. 1

3"-2FCB-28-H6

DESIGN SK 2-11-4-34 REV 1  
 VENDOR DRAWING REVIEW APPROVAL  
 LEVEL 1  
 S. AMP 82476  
 CLAMPS USED ARE MODIFIED 3" DIA  
 FIG. 295 WITH FLAT BAR LINERS  
 SKETCH INDICATES 3" DIA FIG 295  
 FOR USE ON BILL OF MATERIALS  
 ITEM 3, FIG. 211. 1 SWAY STRUT



PIPE ISO. HGH-SHA(Q)-C  
 DATA POINT 262  
 PIPE MAT'L. SABSZ-Tp 304  
 INSUL. 1" AREA 3



WELD ONLY ON LONGITUDINAL  
 AXIS OF BEAM

NOTES

- 1) All tolerances in accordance with CCP #8AC01 U.N.O.
- 2) W.P. Procedure to FH-101-10
- 3) All products designed in accordance with EPL File No. 1 Rev. 1

NOTE: FIELD TO NOTCH 1" OF INSULATION

ADDED FO LINER 3x 1/2"  
 IN INCREMENTS OF WELD USED TO SECURE LINER PLATES

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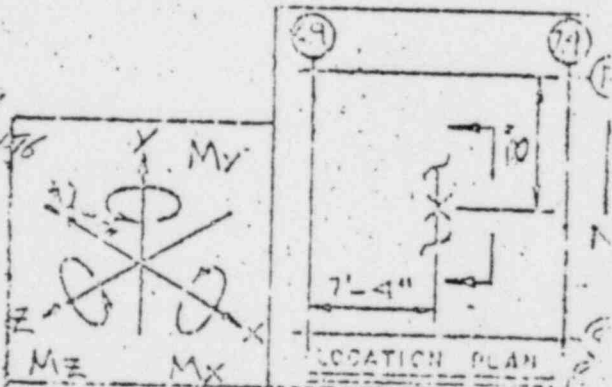
NCR 497 Page 4 of 7

PMP 82476  
 8/24/76

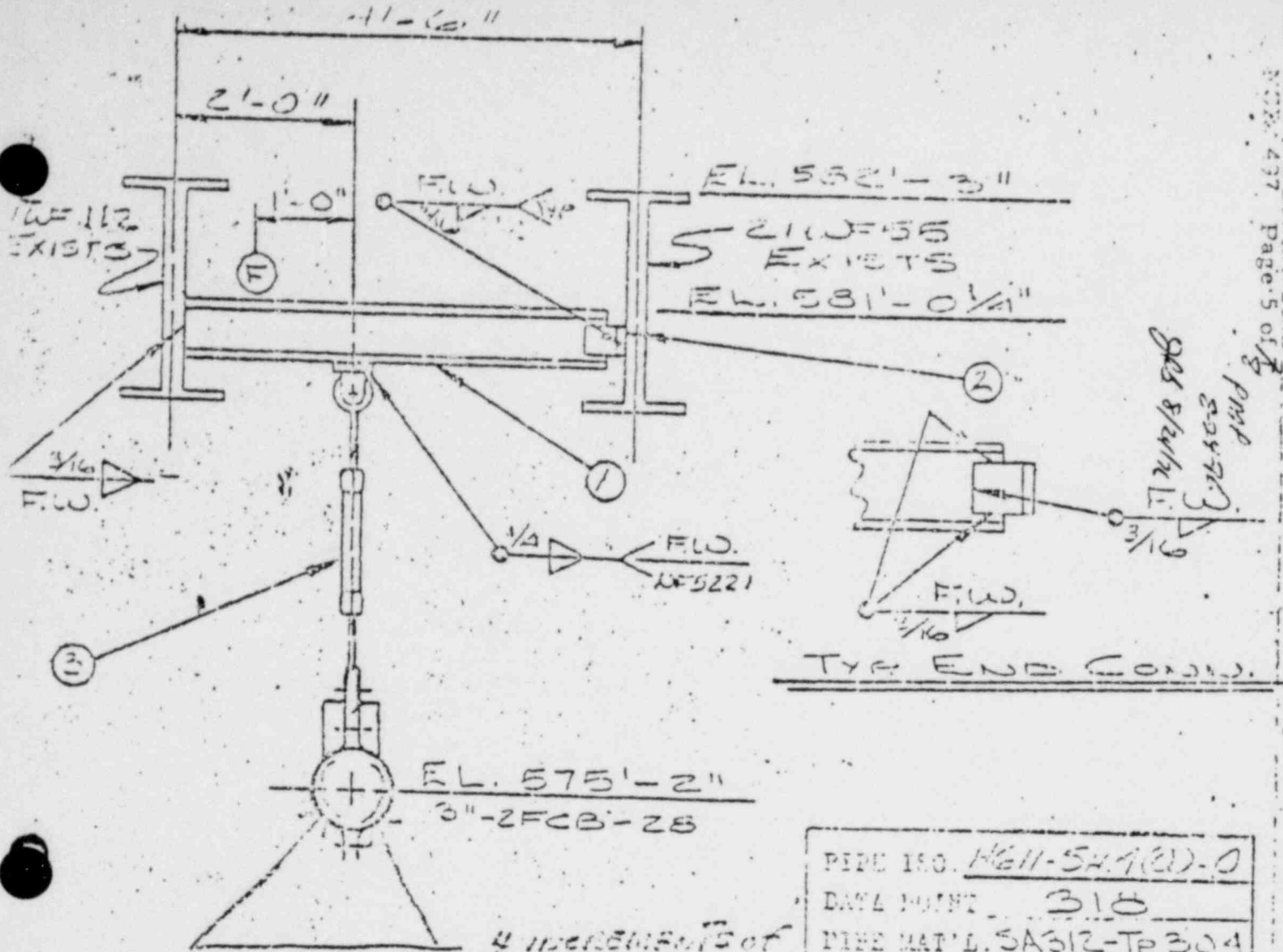
DESIGN SK 2-611-4-35 REV 1  
 (ENDOR. DRAWING APPROVAL LEVEL 1)

CLAMPS USED ARE MODIFIED 3" DIA  
 FIG 295 WITH FLAT BAR LINERS

SKETCH INDICATES 2 1/2" DIA  
 FOR USE ON  
 BILL OF MATERIALS ITEM 2  
 FIGURE 211 #1 SWAY STRUT



THIRD PARTY INSPECTION  
 CODE CLASS: ASME-XX-3



PIPE ISO.	WELL-5H-1(2)-0
DATA POINT	318
PIPE MAT'L.	SABIZ-TP 304
THICK.	1/2" AREA 3

4 INCREMENTS OF  
WELD USED TO  
SECURE FB LINER  
3"x1/4"

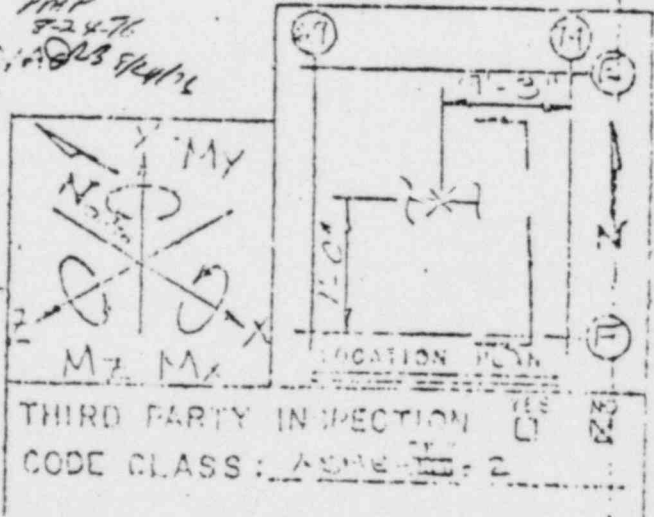
**Corrected Copy**

3-2FCB-28-H4

DETAIL SKETCH 3-S11-4-32 REV 1  
VENDOR DRAWING APPROVAL LEVEL 1

CLAMPS USED ARE MODIFIED 5" <sup>PMP 82476</sup> <sub>3/8" DIA</sub> <sup>3/8" DIA</sup> <sub>3/8" DIA</sub>  
FIG 295 WITH FLAT BAR LINERS.

SKETCH INDICATES 3" DIA FIG 295  
FOR USE WITH BILL OF MATERIALS  
ITEM 3, FIG 211 #1 SWAY STRUT

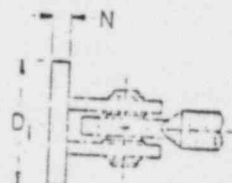
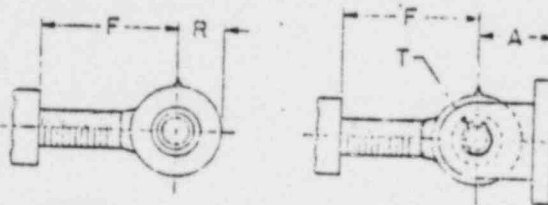
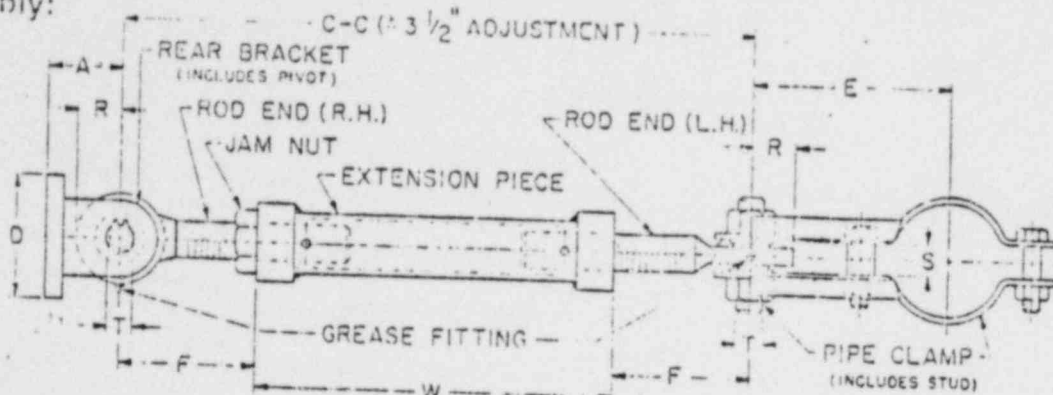


THIRD PARTY INSPECTION YES   
CODE CLASS: ASME III-2

# Corrected Copy

## sway strut

sway strut assembly:  
fig. 211



**MAXIMUM RECOMMENDED LOAD: 33,500 lbs.**  
**SERVICE:** Used to restrain movement of piping in one direction while providing for movement due to thermal expansion or contraction in another direction.

**HOW TO SIZE:**

1. Select size consistent with max. load to be restrained.
2. Determine distance from structural steel to center of pipe and subtract from it, pipe clamp take out (dim E) for pipe size being restrained and rear bracket (dim A) for size selected. This will give required C to C dimension. Check to be within limits of min. and max. C-C dimension listed for size selected.
3. Determine W dimension by subtracting (2 times dimension F) from C-C dimension.

**INSTALLATION:** Shipped assembled. Securely fasten bracket to structure, make necessary adjustment in overall length, and fasten clamp to pipe.

**MAINTENANCE:** Ball bushings should be greased semi-annually through fittings provided.

**FEATURES:**

- Effective under either tensile or compressive force.
- Provides 3 1/2 inches of field adjustment in either direction.

**ORDERING:** Specify figure number, assembly size, name, option number if other than standard configuration is required or nominal pipe size or special O.D., clamp material (alloy or carbon steel) and "W" dimension.

load (lbs) • dimensions (inches)

pipe size O.D.	E take-out			
	1 1/4" & 1 1/2" rod end dia.	1 1/2" & 2" rod end dia.	2 1/4" rod end dia.	2 1/2" rod end dia.
UP TO 4 1/16	7	7 7/8	—	—
4 1/8 - 4 9/16	7 1/4	8 1/4	—	—
4 3/8 - 5 1/8	7 3/4	8 7/8	—	—
5 11/16 - 6 11/16	8 3/8	10	10	11 1/8
6 3/4 - 8 11/16	9 3/8	11 1/4	11 1/4	12 1/8
8 3/8 - 10 13/16	10 3/8	12 3/4	12 3/4	14 1/4
10 7/8 - 12 13/16	11 7/8	13 3/8	13 3/8	15 3/8
12 7/8 - 14 1/16	12 5/8	14 1/2	14 1/2	16
14 1/4 - 16 1/16	13 3/8	15 1/4	15 1/4	17 1/8
16 1/8 - 18 1/16	14 5/8	16 1/8	16 3/8	18 1/4
18 1/8 - 20 1/16	15 5/8	17 1/4	17 3/4	19 1/4
20 1/8 - 24 1/16	18 1/8	19	19 3/8	21 1/4
24 1/8 - 30 1/16	21 1/4	23	23	25
30 1/8 - 36 1/16	24	26 1/2	26 1/2	29 1/8

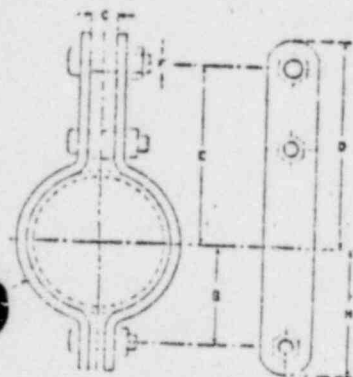
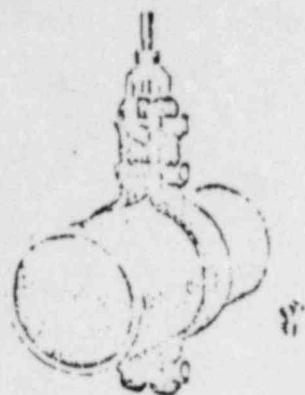
assembly size	max load	rod end diam	A	min C-C	D	D <sub>1</sub>	F	N	R	S	T
1	8,000	1 1/4	2 1/2	20 7/8	4 1/2	2 7/8	5	3/4	1 1/2	1 3/8	998
2	11,530	1 1/2		21 1/8							996
3	15,700	1 3/4	3 1/4	23 1/4	5 3/8	3 3/16	6 1/4	1	2	1 11/16	1,247
4	20,700	2		24 1/4							1,245
5	27,200	2 1/4	4	26 1/4	6 1/8	4 1/4	7	1 1/4	2 1/2	2	1,498
6	33,500	2 1/2	5	29	7 7/8	5 3/8	8 1/4	1 3/4	3	2 3/8	1,496
											1,743
											1,746

MAX. C-C = 120"

*Handwritten notes:*  
 PMP 52476  
 JGS/SLM/74

# steel pipe clamps

double bolt pipe clamp  
fig. 295



# Corrected Copy

SIZE RANGE: 3/4 through 24 inch.

MATERIAL: Carbon steel.

FINISH: Black or galvanized; furnished black unless otherwise specified.

SERVICE: Recommended for suspension of pipe requiring up to 4 inches of insulation and where flexibility of the clamp is desirable — within the limitation of temperature and loads shown below.

MAXIMUM TEMPERATURE: 750°F.

APPROVALS: Complies with Federal Specification WW-H-171D (Type 3) and Manufacturers Standardization Society SP-69 (Type 3).

INSTALLATION: Attachment to the clamp may be made with a welded eye rod fig. 278, page ph-44, or the weldless eye nut fig. 290, page ph-49.

### FEATURES:

- Load bolt and attachment will extend outside of 4 inch thick pipe covering.
- Load ratings meet ANSI code requirements and are substantiated by laboratory test.
- Rounded corners on clamp ends provide greater safety for personnel.

ORDERING: Specify pipe size, figure number, name.

loads • weights • dimensions (inches)

pipe size	max recom load, lb* for service temp		wgt (approx) lb per 100	B	C	D	E	F	G	H
	650°F	750 F								
3/4	950	950	70							
1	950	850	76	1 5/16	5/8	2 7/8	2 7/16	3/8	3/16 x 1	1 3/8
1 1/4	950	850	81	1 1/2	5/8	3	2 9/16	2/8	3/16 x 1	1 1/2
1 1/2	1545	1300	234	1 12/16	1 1/16	3 1/8	2 11/16	2/8	3/16 x 1	1 11/16
2	1545	1380	258	2 1/8	1 1/16	4 1/8	4 1/8	3/8	1/4 x 1 1/4	2 1/8
2 1/2	1545	1390	272	2 5/16	1 1/16	5 1/8	5 1/8	3/8	1/4 x 1 1/4	2 11/16
3	1545	1380	304	2 3/4	1 1/16	6 11/16	5 11/16	3/8	1/4 x 1 1/4	2 15/16
4	2500	2230	666	3 3/8	1 1/16	7 5/8	6 1/2	3/4	5/16 x 2	4 1/2
5	2500	2230	699	3 15/16	1 1/16	8 1/8	7	3/4	5/16 x 2	5
6	2865	2555	1145	4 1/4	1 7/16	9 11/16	8 9/16	3/8	3/8 x 2 1/2	6 1/8
8	2065	2555	1315	5 3/8	1 7/16	10 15/16	9 7/16	7/8	3/8 x 2 1/2	7 1/8
10	3240	2890	1981	6 7/8	1 7/16	12	10 7/16	1	1/2 x 2 1/2	8 1/4
12	3240	2890	2225	7 3/8	1 7/16	13	11 7/16	1	1/2 x 2 1/2	9 1/4
14	4300	3835	3763	9 1/16	2	14 5/16	12 11/16	1 1/4	5/8 x 3	10 11/16
16	4300	3835	4137	10 1/16	2	15 3/16	13 11/16	1 1/2	5/8 x 3	11 11/16
18	4300	3835	4487	11 1/16	2	16 1/16	14 11/16	1 3/4	5/8 x 3	12 11/16
20	5190	4900	5725	12 3/8	2	17 1/2	15 7/8	1 7/8	3/4 x 3	14
24	4500	4015	6590	14 3/8	2	19 1/2	17 7/8	1 3/4	3/4 x 3	16

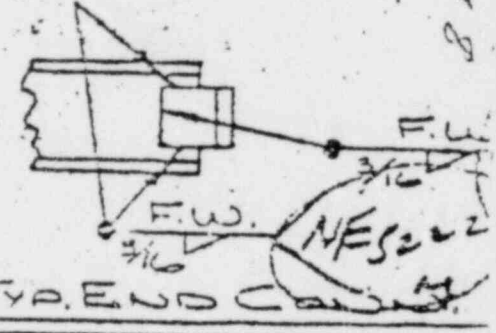
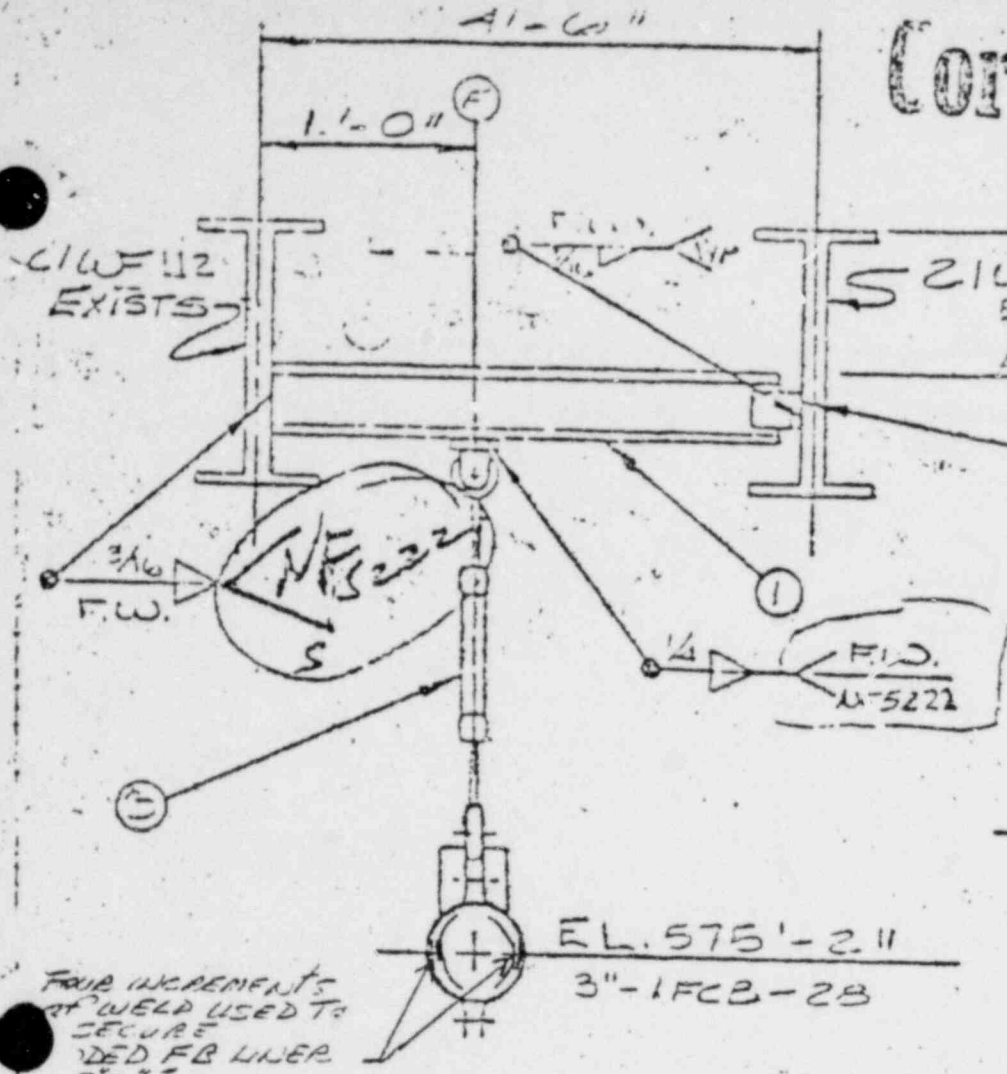
\*Based on the allowable stresses shown in the ANSI Code for Pressure Piping.

NCR 497 Page 7 of 8



Corrected Copy

ALBERT HALL 801 8  
 MMS 975



EL. 575'-2" 3"-1FCB-28

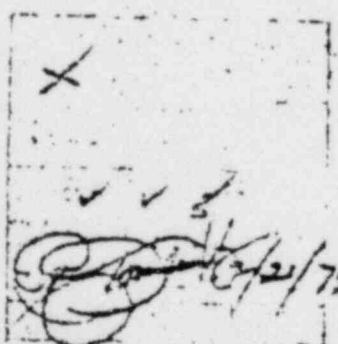
FOUR INCREMENTS OF WELD USED TO SECURE MODIFIED FB LINER 3"x4"

PIPE ISO.	H610-SHA(2)
DATA POINT	312
PIPE MAT'L.	SA312-TP30-
INSUL.	1/2" AREA 3

NOTES

- 1) All tolerances in accordance with QCP #2A001 U.S.O.
- 2) Fab. Procedure is PH-101-1
- 3) All products designed in accordance with EPL File No Rev. 1

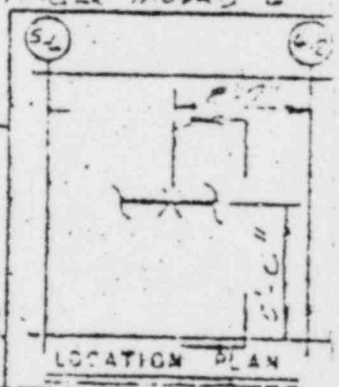
JLB  
8/24/76



FLANGES	CODE 2
DIST.	

FLANGER MOUNT 6

Sub 2



3-1FCB-28-H6  
 DESIGN SK 1-11-4-34 REV. 1  
 VENDOR DRAWING APPROVAL LEVEL 1  
 CLAMPS USED ARE MODIFIED 5" DIA. FIG 295 WITH FLAT BAR LINERS  
 SKETCH INDICATES 3" DIAMETER  
 FIG 295 FOR USE ON BILL OF MATERIALS ITEM 3 FIG 211 #1 SWAY STRUT

THIRD PARTY INSPECTION YES  
 CODE CLASS: 2

PMP Att 8-24-76



### NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 500	20. Page 1 of 2
2. Unit(s) 1	3. Drawing/Part No. 7220-ML.35-336	Rev 2	4. Item Description Pressure Gauges		5. Item Location QC Hold
6. P.O. Or Spec. No. 7220-ML.35	7. Serial No. See Block 16	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier	10. Contractor/Supplier Babcock & Wilcox
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input checked="" type="checkbox"/> OTHER NO. LNA-18619		MPI No. M-87	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
16. Nonconforming Condition: 1 gauge for the Lithium Hydroxide pump discharge pressure is marked 620-0013/1CA-PI-14B-LPI-0524B; the packing list is marked 620-0013/1CA-PI4-LPI-0503. 1 gauge for the Boric Acid pump discharge pressure is marked 620-0013/1CA-PI4-LPI-0503; the packing list is marked 620-0013/1CA-PI-14B-LPI-0524B. 1 gauge for the Boric Acid pump discharge pressure is marked 620-0013/1CA-PI6-LPI-0505; the packing list is marked 620-0013/1CA-PI14A-LPI-0524A.			14. Discovered During <input checked="" type="checkbox"/> REC:G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input checked="" type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD		15. Equip Furnished By
			24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS		N/A
			PROJECT FIELD ENGINEER DATE		ES JC
			PROJECT ENGINEER DATE		W. K. Moxley 8-24-76
			PROJECT CONSTR QC ENGINEER DATE		
			AUTHORIZED INSPECTOR DATE		
17. Reported By Allen Bolan	Date 8-24-76	18. Validated By W. K. Moxley	Date 8-24-76	25. Disposition Results	
21. Routing <input type="checkbox"/> TO FIELD ENGINEERING		<input checked="" type="checkbox"/> TO OTHERS (SPECIFY) Babcock & Wilcox			
22. <input type="checkbox"/> Field Engineering Disposition		<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
23. Project Engineering Disposition					
26. QC Inspector W. K. Moxley QC ENGINEER 11-4-76 DATE AUTHORIZED INSPECTOR					

REC-TEL

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14 NCR NO. 500

Block 16 Cont.

1 gauge for the Hydrozine pump discharge pressure is marked 620-0013/1CA-P114A-LPI-0524A; the packing list is marked 620-0013/1CA-P16-LPI-0505. It is indeterminate in each case which mark number is correct. Noted during receipt inspection. "Q" No. 5.0118. 9 Hold tags applied. Hold pending final resolution.

Block 16 continued

Further research reveals all items listed on this NCR are non-"Q". No disposition required per Quality Control program.

*Handwritten signature and date: M. J. [unclear] 11/25/76*

Terrell



NONCONFORMANCE REPORT

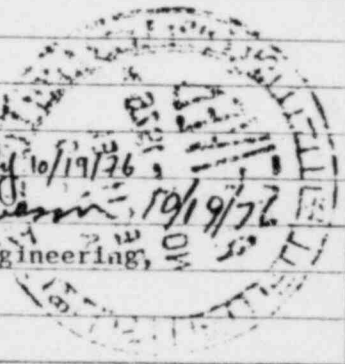
1. Project Name Midland		Job No. 7220		19. No. 502	20. Page 1 of 1	
2. Unit(s) Aux Bldg	3. Drawing/Part No. 7220-E-535	Rev 10	4. Item Description PVC Conduit	5. Item Location Slab @ 584'0"		
6. P.O. Or Spec No. N/A	7. Serial No. IBC007	8. Replacement Part P/N N/A REV	SER NO. N/A	9. Source Construction	10. Contractor/Supplier N/A	
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1, 11-11 NO. 7220-E-42	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input checked="" type="checkbox"/> FLD
16. Nonconforming Condition: During the chipping of concrete in Aux Bldg 584'0" slab to expose conduit IBC008 for repair, conduit IBC007 was also damaged. See NCR 496. Q List #3.006 I QC Hold Tag applied. Work has been stopped pending disposition.			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS
					X	
			PROJECT FIELD ENGINEER <i>J. Williams</i> 10-11-76		DATE	
			PROJECT ENGINEER <i>[Signature]</i> 10-6-76		DATE	
			PROJECT CONSTR QC ENGINEER <i>[Signature]</i> 10-11-76		DATE	
			AUTHORIZED INSPECTOR		DATE	
17. Reported By <i>E.C. Thompson</i>	Date 8-26-76	18. Validated By <i>[Signature]</i>	Date 8-26-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)		CONDUIT REPAIRED PER DISPOSITION		
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		10-12-76 <i>Thom Schuch</i> 10-12-76		
Field Engineering recommends removal of concrete necessary for repair of damaged PVC conduit IBC007 per repair procedure as dispositioned on NCR 496.				10-9-76 <i>Thom Schuch</i> 10-9-76		
23. Project Engineering Disposition				completed per I.R. 6-1465009 <i>D.T. Davis</i> 11-4-76		
Use repair procedure dispositioned on NCR 496				26. QC Acceptance		
T. Dupree 10-4-76				N.T. Davis		11-4-76
				QC ENGINEER		DATE
				AUTHORIZED INSPECTOR		DATE



J. CONNOLLY

NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 505	20. Page 1 of 2
2. Unit(s) #2	3. Drawing/Part No. 7220-C-615	Rev 8	4. Item Description Containment Nozzle 2Z-86		5. Item Location Az 207 <sup>0</sup> , Elev. 668'6"
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV _____	SER NO. _____	9. Source Construction	10. Contractor/Supplier N/A
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. _____ NO. 7220-C-111	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST
16. Nonconforming Condition: In the As-Built condition, nozzle 2Z-86 is located at Az 207 <sup>0</sup> 08' instead of Az 207 <sup>0</sup> . The As-Built location is 5/8" beyond the +1" tolerance allowed by Specification 7220-C-111, Rev. 9, Paragraph 8.2.3. Work may proceed, up to concrete embedment. 2 X QC Hold Tags applied. AMT 10/20/76					15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
17. Reported By C.F. Clark Date 8-26-76					24. Disposition Concurrence
18. Validated By J. Connolly Date 8-26-76					REWORK <input type="checkbox"/> REJECT <input type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS <input checked="" type="checkbox"/>
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)					PROJECT FIELD ENGINEER DATE 10-28-76 PROJECT ENGINEER DATE 10-19-76 PROJECT CONSTR QC ENGINEER DATE 11-29-76
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					AUTHORIZED INSPECTOR DATE
Use as is-Field will make adjustments. This is the hydrogen exhaust nozzle sleeve. The hydrogen exhaust nozzle is 4" diameter. C.F. Clark 9-30-76 Mont 8/30/76 Jo Foy 8/30/76					25. Disposition Results
23. Project Engineering Disposition					RECEIVED
Accept as is, field to adjust hydrogen exhaust line to suit.					REVISED TO
Rationale to support the "Use-As-Is" disposition by Project Engineering, requested in QCFM-2528 is provided on Sheet. 2					10-19-76 10-19-76
26. <input checked="" type="checkbox"/> Acceptance					QC ENGINEER DATE 11/29/76
AUTHORIZED INSPECTOR					D



**SECRET**

Block 22 continued.

Conditional Release: Work may proceed up to concrete embedment.

PFE *M. Adams* 10-15-76

PFOCE *M. Adams* 10-15-76

LQAE *G. F. Richardson* 11/1/76

Block 23: Continued

The pipe passing through this penetration will be adjusted to meet the as built location of the nozzle. The change of stress in pipe due to this adjustment is acceptable.

Engineering requirements for field adjustment will be defined in the Piping System Erection Fit-up Control Specification, M-214.

*P. L. ...* 11/19/76

*J. H. ...* 11/19/76

*J. B. ...* 11/19/76

*J. L. ...* 11/19/76

Cont



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 506	20. Page 1 of 1								
2. Unit(s) 1 & 2	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Expansion Type Concrete Anchors	5. Item Location Aux. Bldg.									
6. P.O. Or Spec No. 7220-C-305 Rev.1	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO. N/A	9. Source Construction	10. Contractor/Supplier N/A								
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. NO. 7220-C-305 Rev. 1	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> DECG <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD							
16. Nonconforming Condition: Specification 7220-C-305, Rev. 1, Section 4.5 states in part, "... In the event it is necessary to cut more than one rebar per connection, prior approval must be obtained from the project engineer..." Contrary to the above, two rebar have been cut at Hanger 18-2HBC-133-H6 without prior Project Engineering approval. Nonconformance noted during QC surveillance. "Q" list No. 1.202. One Hold tag applied.			24. Disposition Concurrence										
			<table border="1"> <tr> <td>REWORK</td> <td>REJECT</td> <td>REPAIR</td> <td>USE AS IS</td> </tr> <tr> <td></td> <td></td> <td></td> <td>X</td> </tr> </table>			REWORK	REJECT	REPAIR	USE AS IS				X
REWORK	REJECT	REPAIR	USE AS IS										
			X										
17. Reported By <i>M. K. Kote</i>			18. Validated By <i>R. Kennolly</i>										
Date 8-27-76			Date 8-27-76										
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING			<input type="checkbox"/> TO OTHERS (SPECIFY)										
22. <input type="checkbox"/> Field Engineering Disposition			<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING										
Use as is. Field investigation shows that the bars cut appear to be one horizontal and one diagonal trim bar which were placed around the opening for pipe penetrations. <i>James Bonrad 9.17.76 JG page 2/17/76</i>													
23. Project Engineering Disposition													
The subject cut bars are located along col. line C between col. lines 7.4 and 7.9. There are five penetrations and a construction opening in this area. The diagonal trim bars and additional horizontal bars around these openings are overlapping in this area. Cutting of one diagonal trim bar and one additional horizontal bar will not affect the structural integrity of the wall. Based on above, Engineering concurs with the Field recommendation on Hanger 18-2HBC-133-H6 to "use as is".													
26. QC Acceptance QC ENGINEER			DATE 11/2/76										
AUTHORIZED INSPECTOR			DATE										

ALD 10/25/76



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 507	20. Page 1 of 2	
2. Unit(s) Common	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Concrete Mortar Sand	5. Item Location On-Site Batch Plant		
6. P.O.-Or Spec No. C-230, Rev. 7	7. Serial No. N/A	8. Replacement Part P/N N/A REV	9. Source Subcontractor	10. Contractor/Supplier Champion, Inc.		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input checked="" type="checkbox"/> TEST	15. Equip Furnished By Subcontractor <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Specification 7220-C-230, Rev. 7 Paragraph 10.4 states: "Dry pack mortar shall be .... well graded concrete sand conforming with ASTM C-33-71a or ASTM C-144-70." Contrary to the above, the mortar sand on-site has a water demand, ratio by weight of 0.667. ASTM C-144-70 requires a maximum water demand, ratio by weight of 0.65. It should be noted that the majority of the non-conforming sand remains stockpiled at the on-site Batch Plant, however, a small portion of this sand has been used for minor repair. This nonconformance was noted during acceptance			24. Disposition Concurrence REWORK <input checked="" type="checkbox"/> REJECT <input checked="" type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS <input checked="" type="checkbox"/> <i>[Signatures]</i> PROJECT FIELD ENGINEER DATE 11-8-76 PROJECT ENGINEER DATE 11-3-76 PROJECT CONSTR QC ENGINEER DATE 11-16-76 AUTHORIZED INSPECTOR DATE			
17. Reported By <i>[Signature]</i>	Date 8/30/76	18. Verified By <i>[Signature]</i>	Date 8-30-76	25. Disposition Results Material was removed from Champion Stockpile and placed in the contained "Reject Area" in concrete <i>[Signature]</i>		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Change the specification requirements of 7220-C-230 Rev. 7 paragraph 10.4 to read "2-1/2 parts of sand. The sand shall be well graded and from a source approved for use on the site". This change will allow "Accept as is" resolution for this NCR. <i>[Signature]</i> 7/1/76						
23. Project Engineering Disposition						
See page 2 for Project Engineering Disposition.						
				26. QC Acceptance <i>[Signature]</i>	Date 11/16/76	
				QC ENGINEER	DATE	
				AUTHORIZED INSPECTOR	DATE	



BECHTEL

Block #16 Continued:

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

NCR NO. 507

testing of the mortar sand. One hold tag has been applied. Q-List is 1.105.

Block # 23: Project Engineering Disposition

The gradation of the subject non-conforming mortar sand is as follows:

SIEVE SIZE	% PASSING
No. 4	100
No. 8	99.5
No. 16	97
No. 30	86
No. 50	27
No. 100	4
No. 200	1

Since the mortar sand fails to meet the gradation requirements of ASTM C-33-71a and the water demand requirement of ASTM C-144-70, the non-conforming sand stockpiled on-site shall be rejected.

Minor repairs which were previously made with the sand may be "used as is" provided they are non-structural.

*L. M. ... 10-20-76*  
*A. L. D. ... 10-20-76*  
*S. K. ... 10-20-76*



NONCONFORMANCE REPORT

1. Project Name Midland Plant		Job No. 7220		19. No. 510	20. Page 1 of 2	
2. Unit(s) Common	3. Drawing/Part No. Varies	Rev	4. Item Description Inplace Soil Density Tests	5. Item Location Structural Backfill Area		
6. P.O. or Spec No. C-208, Rev. 7	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Subcontractor	10. Contractor/Supplier United States Testing Company	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A NO. C-208, Rev. 7	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC.G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip. Furnished By N/A <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Specification C-208, Rev. 7 Para. 9.1c states: "Field density tests for sands and fine material in accordance with ASTM D-1556...." ASTM D-1556, 3.5 states: "The minimum test hole volumes suggested in determining the in-place density of soil mixtures are given in table 1."			24. Disposition Concurrence			
TABLE 1 Maximum Particle Size			Minimum Test Hole Volume Ft <sup>3</sup>			
#4 Sieve			0.025			
1/2 Inch			0.050			
17. Reported By Sam Sub		Date 9/1/76	18. Validated By W. Gonzalez		Date 9-2-76	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING			<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition			<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
Field recommends use as is. Gradation tests on material placed 6/28/76 through 7/14/76 show 3.4% to 17.0% material retained on #4 sieve. Therefore, material is borderline between 1/2" max. particle and #4 sieve sizes. Note: Field soil technicians visually examine soil test sample to determine volume of test hole. Volume is increased proportionately to coarseness of material. Since material is borderline,						
23. Project Engineering Disposition The average percentage of material retained on the (con't on 2) #4 sieve is 9.3% or approximately 6.0 in <sup>3</sup> from an average sample volume of 64 in <sup>3</sup> (0.037 ft <sup>3</sup> ). ASTM D 1556 gives only suggested minimum test hole volumes based on the maximum size of particle. For the 43 density tests, an average of 6.0 in. <sup>3</sup> of material retained on #4 sieve will not significantly affect the results of an in place density test performed on an average test hole volume of 64 in. <sup>3</sup> Therefore Project Engineering concurs with the Field recommended disposition to "use as is."						
25. Disposition Results			26. (QC Acceptance) QC ENGINEER			
24. Disposition Concurrence			DATE			
REWORK			REJECT			
REPAIR			USE AS IS			
AUTHORIZED INSPECTOR			DATE			
AUTHORIZED INSPECTOR			DATE			

J.C. Valenzuela 11/15/76  
 PROJECT FIELD ENGINEER DATE  
 R.L. Castellon 11/5/76  
 PROJECT ENGINEER DATE  
 M. J. Foster 11/23/76  
 PROJECT CONSTR QC ENGINEER DATE

[Signature] 11/23/76  
 QC ENGINEER DATE  
 AUTHORIZED INSPECTOR DATE

[Signature] 11/5/76  
 [Signature] 11-5-76  
 [Signature] 11/5/76

BECHTEL

Block #16 Continued

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

NCR NO. 510

Contrary to the above, a trend of coarser structural sand was experienced from 6-28-76 thru 7-14-76. This was documented by 6 incoming structural sand gradations during this period. The results were respectively 6.9%, 16.6%, 17.0%, 3.4%, 7.0%, 5.1% retained on the #4 sieve. During this period, the material should have been classified as 1/2 inch maximum particle size instead of #4 sieve maximum particle size as was used previously to this coarse trend. However, the test hole volume was not increased, subsequently 43 density tests failed to meet the minimum volume of 0.050 ft<sup>3</sup>. These nonconforming test are identified as MDR 403 thru MDR 445. The volumes range from 0.030 -- 0.046 with an average volume of 0.037.

Nonconformance was noted by Bechtel QA during audit number 18-2-4. No hold tags applied. Q-List is 6.101.

Block 22 con't.

the avg. volume of 0.037 ft. 3 is sufficient to produce acceptable and representative results for the material tested.

*Gary S. Carter 10-11-76*  
*C. H. Nelson 10/11/76*  
*J. G. Jones 10/11/76*



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 519	20. Page 1 of 11	
2. Unit(s) Common	3. Drawing/Part No. 7220-C-288 (Q)	Rev 4	4. Item Description Clear Cover for Slab Reinforcing		5. Item Location Aux. Bldg. 624'-6" Slabs	
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Construction	10. Contractor/Supplier N/A	
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A NO. 7220-C-288	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> BLDG <input type="checkbox"/> FLD
16. Nonconforming Condition: Clear Cover for the Top Dowels in the 624'-0" Slab, Located South of "C" Line Along 5.6 and 7.4 Line, Varies between 2 and 3-1/2 inches. 62 Dowels are affected. 3/4" (+ Tolerances) is the Normal cover specified. 'Q' List No. 1.203 <sup>2</sup> <sup>IF 9/13/76</sup> Hold tags applied.			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS X
			T.C. Valenzano 11-15-76		PROJECT FIELD ENGINEER DATE	
			[Signature]		PROJECT ENGINEER DATE	11-5-76
			[Signature]		PROJECT CONSTR QC ENGINEER DATE	11-16-76
			AUTHORIZED INSPECTOR		DATE	
17. Reported By [Signature]	Date 9-13-76	18. Validated By [Signature]	Date 9-13-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Field Engineering recommends "Use As Is". Route to Project Engineering for disposition concurrence. [Signature] 9/14/76 [Signature] 9/16/76						
23. Project Engineering Disposition						
For top dowels in the slab increased clear cover of 3 1/2" is acceptable. There are no safety implications involved so Project Engineering recommends "to use as is". V.V. Ga Juvenon 11/9/76						
				26. QC Acceptance [Signature]	11/16-76	
				QC ENGINEER	DATE	
				AUTHORIZED INSPECTOR	DATE	



NONCONFORMANCE REPORT

*Ford*

1. Project Name Midland		Job No. 7220		19. No. 522	20. Page 1 of 3	
2. Unit(s) Units 1 & 2	3. Drawing/Part No. See Block 16	Rev N/A	4. Item Description Pipe Hanger Assemblies	5. Item Location QC Hold Area		
6. P.O. Or Spec No. 7220-M-106AC	7. Serial No. See Block 16	8. Replacement Part P/N _____ REV _____	9. Source Supplier	10. Contractor/Supplier ITT Grinnell, Warren, Ohio		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A NO. M-209 Rev. 5	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Purchase Order 7220-M-106AC, Rev. 2, Item A states in part: "Parts lists required shall contain the name and number of every part for the equipment and its auxiliaries including drawings in sufficient detail to locate and identify each part." Contrary to the above, the following figure 211 pipe clamps were delivered to the jobsite and do not conform to the applicable sketches Bill of Material. These clamps were delivered as Figure 211 pipe clamps and the clamps				24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS		
17. Reported By <i>Robert S. Monow</i> Date <i>9/10/76</i>				18. Validated By <i>J. Kinnally</i> Date <i>9-13-76</i>		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)				25. Disposition Results <i>Concur with Engineering disposition. Robert S. Monow 11/22/76</i>		
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING Route to Project Engineering for resolution. Field suggests a "use as is" disposition provided a revised drawing and the necessary NDE results are submitted to the field. If NDE results are required but have not been performed by the vendor, Project Engineering shall instruct the field to perform the applicable NDE. <i>A.G. Pugh 9-29-76 J.E. Feor 9/29/76</i>						
23. Project Engineering Disposition Engineering considers these pipe clamps to be standard components and recommends that the field use "as is." Grinnell is currently revising their sketches to incorporate this clamp assembly as a standard component. Visual inspection is the only NDE required; therefore additional NDE is unnecessary. <i>11/4/76 J.H. Foy</i>						
26. QC Occurrence <i>Robert S. Monow</i> Date <i>11/22/76</i>				27. AUTHORIZED INSPECTOR <i>Robert S. Monow</i> Date <i>11-22-76</i>		

BECAUSE

NONCONFORMANCE REPORT (CONT'D)

Block 16 continued

delivered were Figure 211 clamps with flat bar liners welded inside the clamp to conform with O. D. requirements of the applicable sketch. See attachment A.

Hanger Mk	Sketch	Shop Order
2 1/2 -2FCC-1-H3	2-611-4-36 Rev. 1	E-ME-036
3-1FCCB-28-H3	1-610-4-31 Rev. 1	E-ME-167
2 1/2 -1FCC-1-H3	1-610-4-36 Rev. 0	E-ME-032

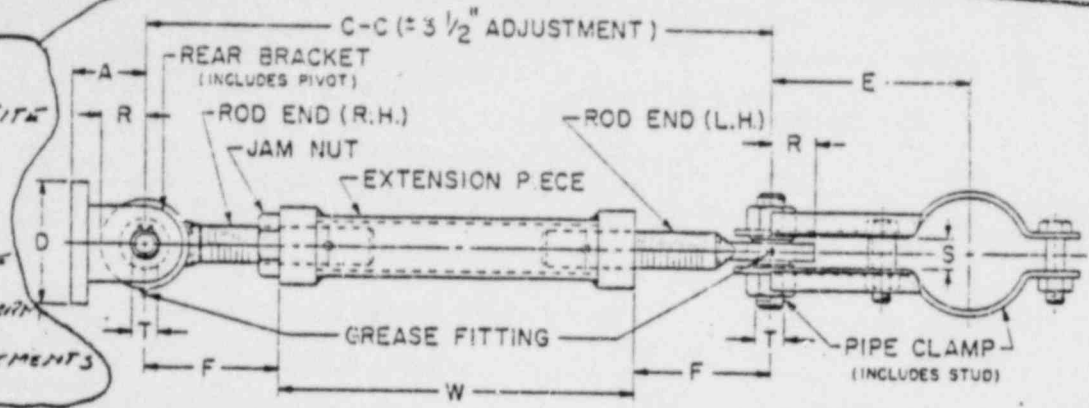
Nonconformance noted during routine Q. C. inspection of hanger storage facility. Hold items pending final disposition. "Q" numbers are 4.102 & 4.112. 3 hold tags applied.

White Copy - Originator  
 Ca. Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

sway strut assembly:

fig. 211

DELIVERED TO JOBSITE  
FIGURE 211 CLAMP  
WITH FLAT BAR  
LINER WELDED INSIDE  
THE CLAMP TO CONFORM  
TO THE O.D. REQUIREMENTS



maximum recommended load: 33,500 lbs.

service: Used to restrain movement of piping in one direction while providing for movement due to thermal expansion or contraction in another direction.

how to size:

1. Select size consistent with max. load to be restrained.
2. Determine distance from structural steel to center of pipe and subtract from it, pipe clamp take out (dim E) for pipe size being restrained and rear bracket (dim A) for size selected. This will give required C to C dimension. Check to be within limits of min. and max. C-C dimension listed for size selected.
3. Determine W dimension by subtracting (2 times dimension F) from C-C dimension.

installation: Shipped assembled. Securely fasten bracket to structure, make necessary adjustment in overall length, and fasten clamp to pipe.

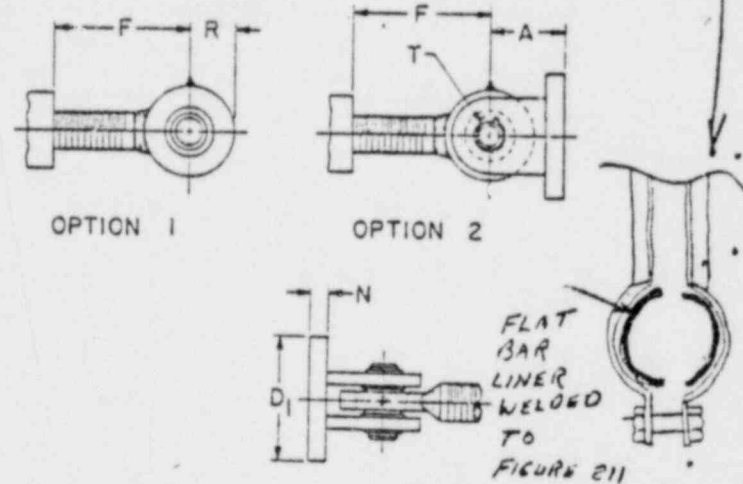
maintenance: Ball bushings should be greased semi-annually through fittings provided.

features:

- Effective under either tensile or compressive force.
- Provides 3 1/2 inches of field adjustment in either direction.

ordering: Specify figure number, assembly size, name, option number if other than standard configuration is required on nominal pipe size or special O.D., clamp material (alloy or carbon steel) and "W" dimension.

dimensions (inches) — load (lbs)



pipe size O.D.	E take-out			
	1 1/4" & 1 1/2" rod end dia.	1 3/4" & 2" rod end dia.	2 1/4" rod end dia.	2 1/2" rod end dia.
UP TO 4 1/8"	7	7 1/4	—	—
4 1/8" - 4 3/8"	7 1/4	8 1/4	—	—
4 3/8" - 5 1/8"	7 3/4	8 3/8	—	—
5 1/8" - 6 1/8"	8 3/8	10	10	11 1/4
6 1/8" - 8 1/8"	9 3/8	11 1/4	11 1/4	12 3/4
8 1/8" - 10 1/8"	10 3/8	12 3/4	12 3/4	14 1/4
10 1/8" - 12 1/8"	11 3/8	13 3/4	13 3/4	15 3/4
12 1/8" - 14 1/8"	12 3/8	14 3/4	14 3/4	16
14 1/8" - 16 1/8"	13 3/8	15 3/4	15 3/4	17 1/4
16 1/8" - 18 1/8"	14 3/8	16 3/4	16 3/4	18 1/4
18 1/8" - 20 1/8"	15 3/8	17 3/4	17 3/4	19 1/4
20 1/8" - 24 1/8"	18 3/8	19 3/4	19 3/4	21 3/4
24 1/8" - 30 1/8"	21 3/8	23	23	25
30 1/8" - 36 1/8"	24	26 1/2	26 1/2	28 1/4

assembly size	max. load	rod end diam.	A	min. C-C	D	D <sub>1</sub>	F	N	R	S	T
1	8000	1 1/4"	2 1/2"	20 3/8"	4 1/2"	2 3/8"	5		1 1/2"	1 3/4"	.993
2	11,630	1 1/2"	2 3/4"	21 3/8"	4 3/4"	2 3/8"	5 3/8"	3/4"	1 1/2"	1 3/4"	.995
3	15,700	1 3/4"	3 1/4"	23 1/4"	5 3/8"	3 3/8"	6 1/4"		2	1 1/4"	1.247
4	20,700	2"	3 3/4"	24 3/4"	5 3/8"	3 3/8"	6 1/4"	1	2	1 1/4"	1.245
5	27,200	2 1/4"	4"	26 1/4"	6 1/4"	4 1/4"	7	1 1/4"	2 1/2"	2	1.499
6	33,500	2 1/2"	5"	29"	7 1/4"	5 1/4"	8 1/4"	1 3/4"	3"	2 1/4"	1.748
											1.745

MAX. C-C = 120"



- NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 524	20. Page 1 of 6	
2. Unit(s) Units 1 & 2	3. Drawing/Part No. See Page 2-6	Rev N/A	4. Item Description Non-Nuclear Instrumentation	5. Item Location QC Hold Area		
6. P.O. Or Spec No. M-1.35	7. Serial No. See Pg. 2-6	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier	10. Contractor/Supplier Babcock & Wilcox	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. ESP 14		MRI FR NO. M-93	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input checked="" type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Quality Control Notices Manual PSP 1 <sup>h</sup> , Para. 3.3.2 states in part: "Review Material Certificate of Conformance and Code Data Sheets (if applicable) for availability, legibility and traceability." Contrary to the above, equipment listed on page 2 does not have a Material Certificate of Conformance available. Hold pending disposition. Nonconformance noted during receipt inspection. "Q" number 5.0118. <u>4</u> hold tags applied. Further research reveals all items listed on this NCR are non-"Q". No disposition required per Quality Control program.			24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS N/A			
17. Reported By <i>Keith Bala</i> Date 9-10-76			18. Validated By <i>J. Connelly</i> Date 9-13-76			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)			25. Disposition Results <i>11-29-76</i>			
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING						
23. Project Engineering Disposition						
26. QC Acceptance <i>Keith Bala</i> DATE 11-4-76 QC ENGINEER AUTHORIZED INSPECTOR						



**PACKING LIST**

FORM E 1085 - 1073

**BAILEY METER COMPANY**

WICKLIFFE, OHIO 44092

S.O. NO.

S-88042165

Page 1 of 2

NEW

For: Consumers Power Company  
Midland Unit 2

CUST. ORDER 020049LJ/620-0012-22

CUST. REQ.

11 PERIODIC

	DELIVERED	PACKED
Strip Charts for 771 Recorders		
12 Chart No.: RA110	✓	✓
Chart Range: 0-110		
12 Charts-Unit #2 Item No.:		
620-0012/2BC-FR1/2FR-0201		
12 Chart No.: RA2500B	✓	✓
Chart Range: 1500-2500		
12 Charts - Unit #2 Item No.:		
620-0012/2BC-PR2-1/2PRS-0203-6		
24 Chart No.: RA620A	✓	✓
Chart Range: 520-620		
12 Charts for each Unit #2 Item No.:		
620-0012/2PC-TR3/2TR-0203		
620-0012/2PC-TR7/2TR-0207		
12 Chart No.: RA320	✓	✓
Chart Range: 0-320		
12 Chart Unit #2 Item No.:		
620-0012/2BC-LR14/2LR-0214		
16 CUSTOMER INSPECTION REQUIRED		
18		
19		
20		
21 JDCourtwright/JKA		

SCHEDULE	3-25-75	P/L DATE	2-24-75	P/L BY	HK:KG	P/L FILLED BY	
		DATE FILLED		INSPECTED BY		PACKED BY	
TYPED	2/11/76	CHECKED BY		DATE CHECKED		DATE SHIPPED	
SHIPPED VIA				WEIGHT PKG.		PREPAID CHARGES	
	DE-LY-SF			21-94		21-264	

Page 2 of 2  
NCR # 524

REV. A

B

C

S.O. NO.

S-88042165

If this unit is received in damaged condition, report MUST be made AT ONCE to Transportation Company delivering it.

**PACKING LIST**

FORM E 085-1073

**BAILEY METER COMPANY**

WICKLIFFE, OHIO 44092

S.O. NO.

S-880x2165

Page 2 of 2

CUST. ORDER 020049LJ/620-0012-22

For: Consumers Power Company  
Midland Unit 2

CUST. REQ.

QUANTITY	DESCRIPTION	DELIVERED	PACKED
24	Chart No.: RA5 Chart Range: 0-6.0 x 10 <sup>6</sup>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	12 Charts for each Unit #2 Item No.: 620-0012/2SP-FR4A/2FR-3986A 620-0012/2SP-FR4B/2FR-3986B		
36	Chart No.: RA100 Chart Range: 0-100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	12 Charts for each Unit #2 Item No.: 620-0012/2SP-LR9A/2LRS-3980A 620-0012/2SP-LR9B/2LRS-3980B 620-0012/2SU-LR25/2LRS-0425		
12	Chart No.: RA1200A Chart Range: 600-1200	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	12 Charts Unit #2 Item No.: 620-0012/2SP-PR16/2PRS-3212		
60	Chart No.: RA2500 Chart Range: 0-2500	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	12 Charts for each Unit #2 Item No.: 620-0012/2RC-UR22A1/ 620-0012/2RC-UR22A2/ 620-0012/2RC-UR22B1/ 620-0012/2RC-UR22B2/ 620-0012/2RC-PR2-2/2PR0202-2		

CUSTOMER INSPECTION REQUIRED

*B & W*  
VENDOR P.O. NO. *11-135* MRI NO. *8/10/76*  
DATE RECD. *8/10/76*  
MRR NO. *REC-1701* NO. *01-82122*  
CHECKED BY *[Signature]*  
FIELD INSPECTION  COMPLETE   
PARTIAL  STORAGE   
*B & W acts - use #1*

JDCourtwright/JKK

SCHEDULE	3-25-76	P/L DATE	2-24-76	P/L BY	HK:KG	P/L FILLED BY	
TYPED	ES 2/11/76	DATE FILLED		INSPECTED BY		PACKED BY	
SHIPPED VIA		DATE CHECKED		DATE SHIPPED		WEIGHT PKG.	
		CHECKED BY		PREPAID CHARGES			

DISTRICT OFFICES  
DE-LY-SF

101-34

26-26Y

S-880x2165

PACKING LIST

FORM 4 10-65 1073

BAILEY METER COMPANY

WICKLIFFE, OHIO 44092

S.O. NO.

5-580X2001

CUST. ORDER

02004513/620-0712-22

CUST. REQ.

M-1.35

For: Consumers Power Company  
Midland Unit 2  
Nuclear Station

QUANTITY

DELIVERED/PACKED

37	1945869A1 Connector P.O. 29351 For Cabinet End of RZ (qt. 1), T Station (qt. 12), 77 Recorder (qt. 16) and Interconnecting (qt. 4 NHI to ICS qt. 4 NHI to NHIY)		
60	1945487A1 Connector For Cabinet end of HY Indicators		
61	6629640A1 Connector Equipment end of cable for HY (qt. 60) and RZ (qt. 1)		
62	6629640A2 Connector Equipment End of The Dual T Station Configuration		
12	6629640A3 Connector Equipment End of the Single T Station Configuration		
1932	1945501A1 Crimp Type Contacts for use with connectors 1945869A1 and 1945487A1 above.		
13			
14			
15			
16	COMMERCIAL NUCLEAR		
17	CUSTOMER INSPECTION REQUIRED		
18			
19			
20			
21	DJC JDCourtwright/EMH		

SCHEDULE	P/L DATE	P/L BY	P/L FILLED BY
12-26-75	10-29-75	MRD-CJ	-F-
DATE FILLED	INSPECTED BY	PACKED BY	

30° 10/2/75	CHECKED BY	DATE CHECKED	DATE SHIPPED	WEIGHT PKG.	PREPAID CHARGES
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SHIPPED VIA	21	25-26Y
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Page 4 of 6  
NCR # 524

S.O. NO. 5-580X2001

received in damaged condition, report MUST be made AT ONCE to Transportation Comp

**BAILEY METER COMPANY**

WICKLIFFE, OHIO 44092

S.O. NO.

S-881M2165

Page 2 of 2

For: Consumers Power Company  
Midland Unit 1

CUST. ORDER 020050LJ/620-0013

CUST. REQ.

QTY	DESCRIPTION	DELIVERED	PACKED
24	Chart No.: RA6 Chart Range: 0-6.0 x 10 <sup>0</sup>	✓	✓
	12 Charts for each Unit #1 Item No.: 620-0013/1SP-FR4A/1FR-3886A 620-0013/1SP-FR4B/1FR-3886B		
36	Chart No.: KAL00 Chart Range: 0-100	✓	✓
	12 Charts for each Unit #1 Item No.: 620-0013/1SP-LR9A/1LRS-3880A 620-0013/1SP-LR9B/1LRS-3880B 620-0013/1MU-LR25/1LRS-0325		
12	Chart No.: RA1200A Chart Range: 600-1200	✓	✓
	12 Charts Unit #1 Item No.: 620-0013/1SP-PH16/1PRS-3112		
30	Chart No.: RA2500 Chart Range: 0-2500	✓	✓
	12 Charts for each Unit #1 Item No.: 620-0013/1RC-UR22A1 620-0013/1RC-UR22A2 620-0013/1RC-UR22B1 620-0013/1RC-UR22B2 620-0013/1RC-PR2-2/1PR-0102-2		
	P.O. 0050 Graphic Controls 2/1/76		
	<b>CUSTOMER INSPECTION REQUIRED</b>		
	<b>COMMERCIAL NUCLEAR</b> - JDCourtwright/JKK		

SCHEDULE	3-19-76	P/L DATE	2-23-76	P/L BY	HK:CJ	P/L FILLED BY	
		DATE FILLED		INSPECTED BY		PACKED BY	
WEIGHT	5 1/23/76	CHECKED BY	DATE CHECKED	DATE SHIPPED	WEIGHT PKG.	PREPAID CHARGES	

SHIPPED VIA  
DISTRICT OFFICES  
DE-17-SF

Page 6 of 6  
NOV # 524

S-881M2165

S.O. NO.

If this shipment is received in damaged condition, report MUST be made AT ONCE to Transportation Company delivering it.

CUSTOMER'S COPY

**PACKING LIST**

FORM #1085-1073

**BAILEY METER COMPANY**

WICKLIFFE, OHIO 44092

S.O. NO.

S-881W2165

Page 1 of 2

CUST. ORDER 020050LJ/620-0013-22

CUSTOMER

For: Consumers Power Company  
Midland Unit 1

CUST. REQ.

QUANTITY

DELIVERED PACKED

12	Strip Charts for 771 Recorders		
12	Chart No.: RA110 Chart Range: 0-110	✓	✓
	12 Charts - Unit #1 Item No.: 620-0013/LRC-FR1/LFR-0101		
12	Chart No.: RA2500B Chart Range: 1500-2500	✓	✓
	12 Charts - Unit #1 Item No.: 620-0013/LRC-PR2-1/LPRS-0102-1		
24	Chart No.: RA620A Chart Range: 520-620	✓	✓
	12 Charts for each Unit #1 Item No.: 620-0013/LRC-TR3/LFR-0103 620-0013/LRC-TR7/LTR-0107		
12	Chart No.: RA320 Chart Range: 0-320	✓	✓
	12 Chart - Unit #1 Item No.: 620-0013/LRC-LR1A/LLR-011A		
	CUSTOMER INSPECTION REQUIRED		
	COMMERCIAL NUCLEAR		
	JDCourtwright/JAK		

SCHEDULE	3-19-76	P/L DATE	2-23-76	P/L BY	HK:CJ	P/L FILLED BY	
		DATE FILLED	12/1/76	INSPECTED BY		PACKED BY	
SHIPPED 1/23/76	CHECKED BY	DATE CHECKED	DATE SHIPPED	WEIGHT PKG.	PREPAID CHARGES		

SHIPPED VIA	DE-LY-SP	25-26Y
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NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 525	20. Page 1 of 3	
2. Unit(s) Units 1 & 2	3. Drawing/Part No. See Block 16	Rev N/A	4. Item Description Thermocouple Assemblies	5. Item Location QC Hold Area		
6. P.O. or Spec. No. M-1.35	7. Serial No. See Block 16	8. Replacement Part P/N N/A REV	9. Source Supplier	10. Contractor/Supplier Babcock & Wilcox		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. PSP 14		MRI NO. M-77	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> SCG <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input checked="" type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Quality Control Notices Manual PSP 14, Para. 3.3.2 states in part: "Review the Material Certificate of Conformance and Code Data Sheets (if applicable) for availability, legibility and traceability." Contrary to the above 10 thermocouple assemblies listed below are not traceable back to the Certificate of Conformance.			24. Disposition Concurrence N/A			
			REWORK	REJECT	REPAIR	
			PROJECT FIELD ENGINEER	DATE		
			PROJECT ENGINEER	DATE		
			PROJECT CONSTR QC ENGINEER	DATE		
			AUTHORIZED INSPECTOR	DATE		
17. Reported By Walter Bolon		Date 9-10-76	18. Verified By K. Kennedy	Date 9-13-76	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition		<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
23. Project Engineering Disposition						
				26. QC Acceptance K. Kennedy	11-15-76	
				QC ENGINEER	DATE	
				AUTHORIZED INSPECTOR	DATE	

Con't Pg. 2

Block 16 continued

- 620-0012/2MJ/TE27/2TE-0427
- 620-0012/2SP/TE10A1/2TE3982A
- 620-0012/2SP/TE10B1/2TE-3982B
- 620-0012/2SP/TE10B1/2TE-3984
- 620-0012/2SP/TE10B2/2TE-3984B
- 620-0013/1MJ/TE27/1TE-0327
- 620-0013/1SP/TE10A1/1TE-3882A
- 620-0013/1SP/TE10A2/1TE-3884A
- 620-0013/1SP/TE10B1/1TE-3882B
- 620-0013/1SP/TE10B2/1TE-3884B

Hold pending disposition. Nonconformance noted during receipt inspection. "Q" number 5.0118. | hold tags applied.

Block 16 continued:

Further research reveals that the ten (10) Instruments are Non 'Q'.

No disposition required per QC Program.

*Handwritten signatures and dates:*  
 11/15/76  
 11/15/76

CONAX CORPORATION  
2300 WALDEN AVENUE  
BUFFALO, NEW YORK 14225

QUALITY ASSURANCE DEPARTMENT

BAILEY METER COMPANY  
ATT: ACCOUNTS PAYABLE  
P.O. BOX 600  
WICKLIFFE, OHIO 44092

CERTIFICATE OF CONFORMANCE

Customer P.O. # B-0042 DATE 4/21/76  
Conax W.O. # 3-47320 Item No. (s) A  
Quantity 10 Part No. (s) DWG: 2510-8891  
Serial No. (s) N/A

Conax certifies that:

1. The materials, processes, and equipment furnished on this purchase order were produced in conformance with all contractually applicable specifications as referenced in, or furnished with the above purchase order.
2. The materials and equipment furnished under this purchase order were produced either from materials furnished by the customer for the production of such parts or from materials for which Conax has available for examination, chemical and/or physical test reports or other evidence of conformance to applicable specifications.

CONAX CORPORATION

By: Ronald E. Farchini  
Title: Quality Assurance Engineer

Form #0002A

Page 3 of 3  
NCR #525





NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 526	20. Page 1 of 2
2. Unit(s) Units 1 & 2	3. Drawing/Part No. 1MU-PS10 620-0012/2MU-PS10	Rev N/A	4. Item Description Pressure Switches		5. Item Location QC Hold Area
6. P.O. 'Dt-Spec No. M-1.35	7. Serial No. PS-0310 2PS-0410	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier	10. Contractor/Supplier Babcock & Wilcox
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. PSP14		MRI NO. M92	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input checked="" type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Quality Control Notices Manual PSP 14 states in part: "Review the Material Certificates of Conformance and Code Data sheets (if applicable) for availability, legibility and traceability." Contrary to the above, we did not receive a documentation package for the above 2 pressure switches. Hold pending disposition. Nonconformance noted during receipt inspection. "Q" number 5.0118. 1 hold tags applied.			24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS PROJECT FIELD ENGINEER DATE PROJECT ENGINEER DATE 11-15-76 PROJECT CONSTR QC ENGINEER DATE AUTHORIZED INSPECTOR DATE		
17. Reported By H. Baker	Date 9-10-76	18. Validated By R. Connolly	Date 9-13-76	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition		<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
23. Project Engineering Disposition					
				26. Acceptance R. Connolly 11-15-76 QC ENGINEER DATE AUTHORIZED INSPECTOR	

RECEIVED

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14 NCR NO 526

Block 16 Continued

Further research reveals that the 2 pressure switches are Non-'Q'. No disposition required per Quality Control Program.

*MSM*  
*11-15-76*

*J. Kennedy*  
*11-15-76*

10088-2

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - POAE  
Goldferrod Copy - DC

QC 633



Civil

NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 527	20. Page 1 of 2	
2. Unit(s) C-230, Rev. 7	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Air content of concrete.	5. Item Location Auxiliary Building		
6. P.O. Or Spec No.	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Subcontractor	10. Contractor/Supplier Champion, Inc.	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1.30-47 NO. C-230, Rev. 7	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input checked="" type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD	15. Equip. Furnished By N/A
16. Nonconforming Condition: Spec. C-230, Rev. 7 Section 9.1.5 states in part, "The amount of entrained air in the concrete shall not be less than, three percent and not more than six percent of the total volume at point of placement." Contrary to the above, Batch Plant Ticket #10302 had a measured air content of 6.8% and 6.4% respectively, using air meter #U.S.T. 6 and a measured air content of 5.2 using air meter #U.S.T. 7. Six yards of this concrete was placed in Auxiliary Bldg. Pour A(629.5)a on 9-15-76, and six compressive strength cylinders (Set 1053F) were cast for backup data. It <sup>2</sup>			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS
			 PROJECT FIELD ENGINEER DATE 11-2-76			
			 PROJECT ENGINEER DATE 10/26/76			
			 PROJECT CONSTR. ENGINEER DATE 11-2-76			
			AUTHORIZED INSPECTOR		DATE	
17. Reported By Thomas R. Sub	Date 9/17/76	18. Validated By 	Date 9-17-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)						
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING						
This batch of concrete was tested at 7.3% air content at the batch plant and at 5.6% air content at the truck discharge. This is consistent with the amount of entrained air lost in transit at this jobsite. Referencing 3 examples of the same mix design:  (continued on page 2)						
23. Project Engineering Disposition						
High air content would tend to reduce concrete strength while increasing the durability of the concrete. Required 90 day strength for this D-1 mix is 5,000 psi. Based on the fact that 28 day strengths for batch ticket No. 10302 averaged 4,990 psi on cylinder set 1,052 and 5,445 psi on cylinder set 1053F, the subject concrete in pour A(629.5)a may be "used as is".						
AED 10/27/76			E-Mail 10-27-76			
			26. QC Acceptance 		DATE 11/2/76	
			QC ENGINEER		DATE	
			AUTHORIZED INSPECTOR		DATE	

BECHTEL

It should be noted that the aforementioned concrete was the first load placed after the line was grouted and the possibility of grout and concrete being mixed exists. U. S. Testing was directed to recalibrate both air meters and advise Bechtel of the as found condition. This was done and the as found was acceptable on both meters. Q-List is 1.205. One hold tag applied.

Block 22 continued

Air Content

Cyl. Set	Batch Plant	Truck Discharge
858/859 F	8.0%	6.3%
860	7.4%	6.0%
861/862 F	7.3%	5.9%
For this pour:	7.3%	5.6%

Increasing air content from the truck discharge to the end of the pump line indicate the tests of 6.8% and 6.4% are not valid results. Field set 1053F will serve to verify acceptable concrete strength. Field Engineering considers the above referenced concrete to be in conformance with specification requirements as placed.

*K. L. Laha 9-21-76*  
*JG Jager 9-21-76*



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 535	20. Page 1 of 1
2. Unit(s) N/A	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Concrete	5. Item Location Pour Y(623.0)a	
6. XXXXr Spec No. 7220-C-230	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Subcontractor	10. Contractor/Supplier Champion Inc., Midland, MI
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. G-1.30-35 NO. 7220-C-230 Rev 7	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'D <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Section 9.2.1 of Specification 7220-C-230, Rev. 7 requires that all concrete materials be measured in accordance with ASTM C-94-72. ASTM C-94-72 states in paragraph 7.4 that powdered admixture weighing accuracy shall be within +3 percent of the design weight. Contrary to the above, Batch Ticket 10388 representing lcy of grout placed in Pour Y(623.0)a on 9-16-76 shows flyash content to be 2 1/2 pounds below the minimum allowable weight of 110.58 pounds. Nonconformance noted during QC review of Batch Tickets. Q# 1.205. One Hold Tag.			24. Disposition Concurrence		
			REWORK	REJECT	REPAIR
			PROJECT FIELD ENGINEER		DATE
			PROJECT ENGINEER		DATE
			PROJECT CONSTR QC ENGINEER		DATE
			AUTHORIZED INSPECTOR		DATE
17. Reported By Edwin Dutton			Date 9-23-76	18. Validated By K. Connolly	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING			<input type="checkbox"/> TO OTHERS (SPECIFY)		
22. <input checked="" type="checkbox"/> Field Engineering Disposition			<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		
Use as is. This pour is the sanitary sewer line encasement and is Non-Q. This determination was made from Drawing C-45Q. Therefore, this does not represent a nonconforming condition per QCNM SF/PSP G-3.2.					
23. Project Engineering Disposition					
25. Disposition Results					
26. QC Acceptance B. J. Chat					
QC ENGINEER					
DATE					
AUTHORIZED INSPECTOR					
DATE					

B. J. Chat 11/8/76  
 QC ENGINEER DATE  
 AUTHORIZED INSPECTOR DATE



*Fisher*

NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 537	20. Page 1 of 3	
2. Unit(s) Unit 1	3. Drawing/Part No. See Block 16	Rev N/A	4. Item Description Pipe Hanger Assemblies	5. Item Location QC Hold Area		
6. P.O. Or Spec No. 7220-M-106AC	7. Serial No. See Block 16	8. Replacement Part P/N _____ REV _____	9. Source Supplier	10. Contractor/Supplier ITT Grinnell, Warren, Ohio		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. <u>R-1,00-294</u> NO. <u>M-209 Rev. 5</u>	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Purchase Order 7220-M-106AC, Rev. 3, Item A states in part: "Parts lists required shall contain the name and number of every part for the equipment and its auxiliaries including drawings in sufficient detail to locate and identify each part". Contrary to the above, the following figure 211 pipe clamp was delivered to the jobsite and does not conform to the sketches Bill of Material. This clamp was delivered as a figure 211 pipe clamp and the clamp delivered was a				24. Disposition Concurrence REWORK   REJECT   REPAIR   USE AS IS <input type="checkbox"/>   <input type="checkbox"/>   <input type="checkbox"/>   <input checked="" type="checkbox"/>		
17. Reported By <i>Robert S. Monow</i> 9/17/76				18. Validated By <i>J. Kozolby</i> 9-24-76		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)				25. Disposition Results <i>Concur with Engineering disposition Robert S. Monow 11/22/76</i>		
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING Route to Project Engineering for resolution. Field suggests a "use as is" disposition provided a revised drawing and the necessary NDE results are submitted to the field. If NDE results are required but have not been performed by the vendor, Project Engineering shall instruct the field to perform the applicable NDE. <i>Ken Rodushko 10-1-76</i>						
23. Project Engineering Disposition Engineering considers these pipe clamps to be standard components and recommends that the field use "as is." Grinnell is currently revising their sketches to incorporate this clamp assembly as a standard component. Visual inspection is the only NDE required; therefore additional NDE is unnecessary. <i>J. Kozolby 11/4/76</i>						
26. QC Acceptance <i>Robert S. Monow</i> 11/22/76				27. AUTHORIZED INSPECTOR <i>Robert S. Monow</i> 11/22/76		

RECEIVED

NONCONFORMANCE REPORT (CONT'D)

Block 16 continued

Figure 211 clamp with flat bar liners welded inside the clamp to conform with O.D. requirements of the applicable sketch. See Attachment A.

Hanger MK	Sketch	Shop Order
-----------	--------	------------

2 1/2-1CCB-10-114	1-603-9-19	E-ME-225
-------------------	------------	----------

Nonconformance noted during receipt inspection. "Q" number is 4,035. Hold pending final disposition.  
/ hold tag(s) applied.

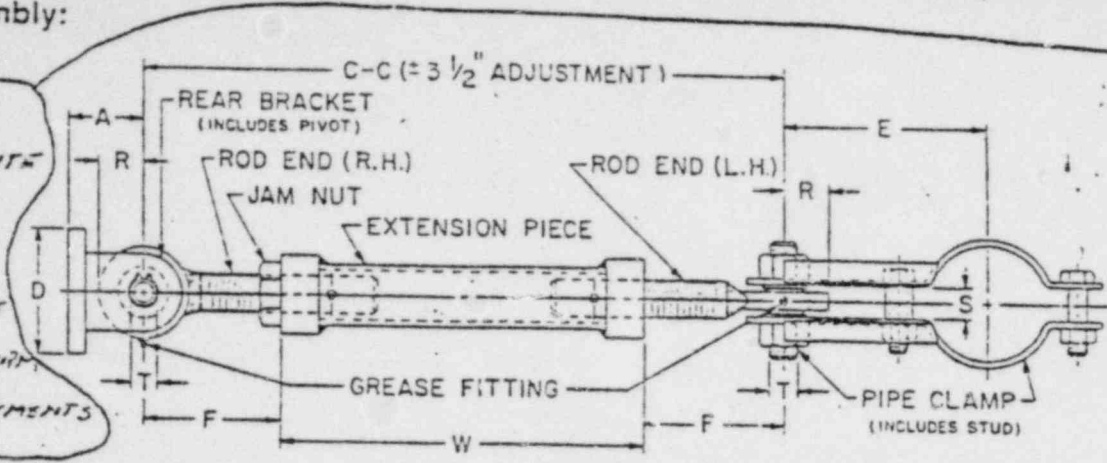
1000002

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - FOAE  
 Goldenrod Copy - QC

QC-G-3

sway strut assembly:  
**ATTACHMENT A**  
 fig. 211

*DELIVERED TO JOBSITE  
 FIGURE 211 CLAMP  
 WITH FLAT BAR  
 LINER WELDED INSIDE  
 THE CLAMP TO CONFORM  
 TO THE O.D. REQUIREMENTS*



maximum recommended load: 33,500 lbs.

service: Used to restrain movement of piping in one direction while providing for movement due to thermal expansion or contraction in another direction.

how to size:

1. Select size consistent with max. load to be restrained.
2. Determine distance from structural steel to center of pipe and subtract from it, pipe clamp take out (dim E) for pipe size being restrained and rear bracket (dim A) for size selected. This will give required C to C dimension. Check to be within limits of min. and max. C-C dimension listed for size selected.
3. Determine W dimension by subtracting (2 times dimension F) from C-C dimension.

installation: Shipped assembled. Securely fasten bracket to structure, make necessary adjustment in overall length, and fasten clamp to pipe.

maintenance: Ball bushings should be greased semi-annually through fittings provided.

features:

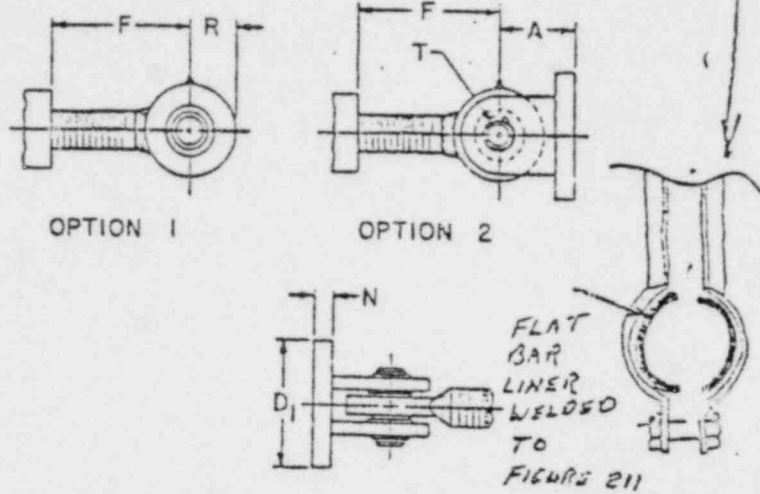
- Effective under either tensile or compressive force.
- Provides 3 1/2 inches of field adjustment in either direction.

ordering: Specify figure number, assembly size, name, option number if other than standard configuration is required on nominal pipe size or special O.D., clamp material (alloy or carbon steel) and "W" dimension.

dimensions (inches) — load (lbs)

assembly size	max. load	rod end diam.	A	min. C-C	D	D <sub>1</sub>	F	E take-out				T
								1 1/4" & 1 1/2" rod end dia.	1 3/4" & 2" rod end dia.	2 1/4" rod end dia.	2 1/2" rod end dia.	
1	8000	1 1/4	2 1/2	20 3/8	4 1/2	2 3/8	5	3/4	1 1/2	1 3/8	.983	
2	11,630	1 1/2	2 1/2	21 3/8	4 1/2	2 3/8	5 3/8	3/4	1 1/2	1 3/8	.985	
3	15,700	1 3/4	3 3/4	23 3/8	5 3/8	3 3/8	6 1/2	1	2	1 1/2	1.247	
4	20,700	2	3 3/4	24 3/8	5 3/8	3 3/8	6 1/2	1	2	1 1/2	1.245	
5	27,200	2 1/4	4	26 3/8	6 3/8	4 3/8	7	1 1/4	2 1/2	2	1.499 1.496	
6	33,500	2 3/4	5	29	7 3/8	5 3/8	8 1/4	1 1/4	3	2 1/4	1.748 1.745	

MAX. C-C = 120"







NONCONFORMANCE REPORT

ARCPA

1. Project Name Midland		Job No 7220		19. No. 539	20. Page 1 of 3
2. Unit(s) Units 1 & 2	3. Drawing/Part No. 7220-C233A-F14430-HB-4	Rev 6	4. Item Description G4, J4 & K4 Beams		5. Item Location QC Hold Area
6. P.O. Or Spec No. F-14430	7. Serial No. G4, J4, K4	8. Replacement Part P/N N/A REV	SER NO.	9. Source Supplier	10. Contractor/Supplier Haven Bush
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. R-1.00-310 NO. AWS D1.1.72	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST
16. Nonconforming Condition: AWS D1.1.72, Section 3, Para. 3.2.4 states in part: "Reentrant corners, except for the corners of weld access cope holes adjacent to a flange shall be filleted to a radius of not less than 1/2 in." Contrary to the above, two G4, two J4 and two K4 beams do not have at least a 1/2" radius. Nonconformance noted during receipt inspection. Hold pending disposition. "Q" number is 1.201. 6 hold tag(s) applied.					15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
17. Reported By H. Bolen 9-27-76					18. Validated By M. J. Connolly 9-27-76
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)					24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS C. Valenzano 11/5/76 R. L. Castiblanco 11/5/76 M. J. Connolly 11-17-76
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					25. Disposition Results Concern with engineering disposition H. Bolen 11-18-76 J. Desmond 10-8-76 J. G. J. 10/8/76
23. Project Engineering Disposition It is a good practice to have all reentrant corners filleted with a 1/2 inches radius. The beams ( Two G4, Two J4 and Two K4) are not highly stressed in the location of the reentrant corners. Therefore, Project Engineering recommends "use as is". M. J. Connolly 11/14/76					26. QC Acceptance H. Bolen 11-18-76 QC ENGINEER DATE AUTHORIZED INSPECTOR DATE

Bechtel Associates Professional Corporation

Inter-office Memorandum

TELECOPY

BEBC-1243

To J. F. Newgen

Subject Midland Plant Units 1 & 2  
Job 7220  
C-38 Work - Auxiliary Bldg.  
Structural Steel

Copies to File: 0274, C-2300, C-38 PR

Date October 6, 1976

From R. L. Castleberry

Of Engineering

At Ann Arbor

RECEIVED

J. Connolly  
V. Verma  
A. Desai

Reference: TWX from J. Newgen to R. L. Castleberry dated 9-30-76.

Requirement of at least 1/2" radius at re-entrant corners per Section 1.23.2 of AISC specifications, is primarily to avoid concentration of stresses at corners which are subjected to substantial stresses. Flange or web copes provided at the ends of simply supported beams, without the minimum 1/2" radius, will not result in overstressing of beam or the end connection. Also please see the attached copy of Ingalls' telegram regarding the above subject.

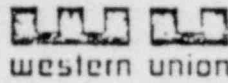
Engineering asserts that the reported variation in radius, at the beam copes, is acceptable.

*J. E. Hinde*  
for R. L. Castleberry

JA/sg

Attachment

NEW CITY STEEL CORP GJF  
5415 SOUTH CLAREMONT  
CHICAGO IL 60604



Mailgram



C-034533E278002 10/04/76 ICS IMPRNGZ CSP DETH  
2 3124345400 MGM TOWN CHICAGO IL 10-04 0303P EST

FILE:- C-2300  
XC:- C-38 PR

JACK ARONA  
RECHTEL POWER CORP REPORT DELIVERY BY MAILGRAM  
PO BOX 1000  
ANN ARBOR MI 48106

THIS IS A CONFIRMATION COPY OF A PREVIOUSLY PHONE-DELIVERED TELEGRAM  
REFERENCE CONSUMERS POWER COMPANY MIDLAND MICHIGAN PROJECT  
#7220-C-30-4C

REPORTED VARIATIONS IN RADII FOR BEAM WEB COPIES DO NOT EFFECT THE  
STRENGTH OF THE END CONNECTION OF BEAM WEBS DUE TO AMPLE BEAM WEB  
THICKNESSES

NEW CITY STEEL CORP H H PAVLAK JR (5415 SOUTH CLAREMONT CHICAGO  
IL 60604)

15:03 EST

MGM CORP MGM



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 540	20. Page 1 of 24	
2. Unit(s) Unit 2	3. Drawing/Part No. See Block 16	Rev	4. Item Description Reinforcing Steel	5. Item Location QC Hold Area		
6. P.O. Order No. C-39	7. Serial No. See Block 16	8. Replacement Part P/N N/A REV	9. Source Supplier	10. Contractor/Supplier Inland Ryerson Company		
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. R-1.00-282 NO. See Block 16	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC-G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD	15. Equip Furnished By
16. Nonconforming Condition: Bechtel approved Inland Ryerson Dwg's with Bechtel comments indicates reinforcing steel to be fabricated as shown in left column of pages 2 & 3 of this NCR. Contrary to the above, the reinforcing steel was fabricated and received as shown in the right column of pages 2 & 3 of this NCR.				24. Disposition Concurrence REWORK <input checked="" type="checkbox"/> REJECT <input checked="" type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS <input type="checkbox"/> PROJECT FIELD ENGINEER DATE 10/20/76 PROJECT CONSTR/QC ENGINEER DATE 10-22-76 AUTHORIZED INSPECTOR DATE		
17. Reported By John R. Slifer 9-27-76		18. Validated By J. K. ... 9-28-76		25. Disposition Results Reinforcing steel Part No. 823 Mark No 20916 were reworked and the excess and rejected rebar were placed in rebar stock. 11-5-76		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input checked="" type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING <del>Deliver material to Field Fabrication Shop for corrective bending or refabrication as required by field.</del> See attached sheet -- Revision page 3.				
23. Project Engineering Disposition		26. QC Acceptance John R. Slifer 11-5-76 QC ENGINEER DATE AUTHORIZED INSPECTOR DATE				

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NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 34

14 NCR NO. 540

Block 16 Continued  
Inland Ryerson Dwg C-39-E73B-X 2

Inland Ryerson Part No. 823  
Load Sheet 823  
10-21-76  
14B 16-21-76

MK	Type	A	B	C	D	E	HL HR	KL KR	DEG	MK	Type	A	B	C	D	E	HL HR	KL KR	DEG
19	12			2-0	4-5	11-7			45	19	17	2-0	12-0						
31				Delete						31	17	2-0	14-3						
20	17	0-0	30-3							20	17	2-0	30-3						
16	17	2-0	39-9	0-0						16	17	2-0	39-9	2-0					
2	34	7-6	4-0	3-7	7-1		3-11	3-11	45	2	34	7-6	4-0	3-7	5-6		3-11	3-11	45

Inland Ryerson Dwg ~~C-39-E74B-2~~ ~~6-39-348-2~~ ~~10-21-76~~ ~~10-21-76~~

Part No. 824  
Load Sheet 824  
10-21-76  
14B 10-21-76

MK	Type	A	B	C	D	O	HL HR	KL KR	DEG	MK	Type	A	B	C	D	O	HL HR	KL KR	DEG
15				Delete						15	17		2-0	3-6					
7				Delete						7	17		2-0	2-0	2-0				
27				Not Listed on Print						27	17		3-7	8-0	3-7				
2	T3			10-0		4-3 $\frac{1}{2}$				2	T3			12-6		4-0			
16				Delete						16	17		2-0	16-0					
12				Delete						12	17		2-0	24-4					
20				Delete						20	17		2-0	24-10					
6				Delete						6	17		2-0	35-0					
21				Delete						21	17		2-0	35-6					
1	34	8-0	2-0	3-7	8-0		1-5	1-5	45	1	34	8-0	2-0	3-7	8-0		1-4	1-4	45

Con't Pg. 3

10088-2

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

QC-G-13

BECHTEL

NONCONFORMANCE REPORT (CONT'D)

PAGE 3 OF 34

14. NEN NO. 540

Page 2 continued - Block 16

Inland Ryerson Dwg ~~C-39-273B-2~~ ~~E-39-346-2~~ <sup>702 10-21-76</sup> <sub>48 10-21-76</sub> Part No. ~~825~~ <sup>702 10-21-76</sup> <sub>48 10-21-76</sub>

MK	Type	A	B	C	D	HL HR	KL KR	DEG	MK	Type	A	B	C	D	HL HR	KL KR	DEG
4	17		5-0	3-9	7-9				4	17		5-0	3-9	5-0			
3	36	5-2	3-9	2-3	8-0	5-8	5-8	45	3	36	4-5	3-9	2-3	8-0	5-8	5-8	45

Nonconformance noted during receipt inspection. Hold pending final disposition. "Q" number is 1.103.  
17 hold tag(s) applied.

Block 22 continued, Field Engineering Disposition

All bars are to be released from hold to accomplish the following:

The following bar marks will be reworked by cutting to conform to design requirements.

DWG. NO.	BAR MARKS	PART NO.
E73B-2	#20, #16	823

The following bar marks are to be rejected due to short lengths and will be field fabricated.

DWG. NO.	BAR MARKS	PART NO.
E73B-2	#19, #2 <sup>Agreed 10/21/76</sup>	823
E74B-2	#34, #2, #1	824
E75B-2	#4, #3	825

The following bar marks are excess.

DWG. NO.	BAR MARKS	PART NO.
E73B-2	#31	823
E74B-2	#15, #7, #27, #16	824
E74B-2	#12, #20, #6, #21	824

CONT'D Page 4

10098-2

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

QC-G33

**BECHTEL**

NONCONFORMANCE REPORT (CONT'D)

PAGE 4 OF 4

14 NCR NO. 540

Page 3 continued Block 22

Rejected and excess bars will be placed in stock. Final acceptance of these bars will be in place rebar inspection.

*Final 6 bars 10/21/76*

*Brent 10/21/76*

10089-2

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - PQAE  
Goldenrod Copy - QC

QC G-3





NONCONFORMANCE REPORT

1. Project Name Midland Nuclear Power Plant		Job No. 7220		19. No. 541	20. Page 1 of 2
2. Unit(s) Common	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Compressive Strength Cylinders	5. Item Location On-Site Test Lab	
6. P.O. Or Spec No. C-208, Rev. 7	7. Serial No. N/A	8. Replacement Part P/N N/A REV	9. Source Subcontractor	10. Contractor/Supplier U.S. Testing Company	
11. Inspection Criteria <input type="checkbox"/> DWG <input type="checkbox"/> SPEC <input checked="" type="checkbox"/> OTHER NO. ASTM C-31-69		12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
14. Discovered During 11/21/76		15. Equip Furnished By N/A		16. Nonconforming Condition: ASTM C-31-69, Paragraph 7.3, states in part, "Remove test specimens made for checking the adequacy of the laboratory mixture proportions for strength, or as the basis for acceptance, from the molds at the end of 20+ 4 hr. and store in a moist condition at 73.4+ 3F until the moment of test." Contrary to the above, compressive strength cylinders listed below were found to have a curing temperature of 78°F on 9/22/76, therefore exceeding the 76.4°F maximum temperature allowable.	
17. Reported By C. J. Jaisley		Date 9/28/76		18. Validated By H. J. ...	
19. Date 9-28-76		20. Date 9-28-76		21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING	
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
23. Project Engineering Disposition Concrete cylinders stored in a moist condition for a period of less than 24 hours at 78°F in lieu of the 76.4°F maximum allowable will have an insignificant effect upon the concrete cylinder strength results. Project Engineering therefore concurs with the Field recommended disposition to "use as is".					
24. Disposition Concurrence		25. Disposition Results			
REWORK		REJECT		REPAIR	
USE AS IS					
PROJECT FIELD ENGINEER		DATE			
PROJECT ENGINEER		DATE			
PROJECT CONSTR QC ENGINEER		DATE			
AUTHORIZED INSPECTOR		DATE			
26. QC Acceptance		DATE			
QC ENGINEER		DATE			
AUTHORIZED INSPECTOR		DATE			

Block 16 Continued on Page 2.

K. J. ... 10-7-76  
J. ... 10/7/76

ALD 11/8/76  
J. ... 11/8/76

J. ... 11/25/76  
QC ENGINEER DATE



BECHTEL

BLOCK #16 CONTINUED:

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14. NCR NO. 541

SET NO.	CYLINDER NUMBER	SET NO.	CYLINDER NUMBER
931	7457, 7458	1005	7901, 7902
983	7769, 7770	1006F	7907, 7908
984	7775, 7776	1007	7913, 7914
985	7781, 7782	Sp 260	1852, 1853
986F	7787, 7788	Sp 259	1846, 1847
987	7793, 7794	1067	8283, 8284
988	7799, 7800	1065F	8269, 8270
989	7805, 7806	1065F	8271, 8272
990F	7811, 7812	1066	8277, 8278
992F	7823, 7824	1066	8279, 8280
994	7835, 7836	1064	8261
995F	7841, 7842	1064	8263, 8264
991	7817, 7818	1063	8253, 8254
993	7829, 7830	1063	8255, 8256
996F	7847, 7848	1062F	8247, 8248
997F	7853, 7854	1062F	8249, 8250
998	7859, 7860	1061	8241, 8242
999	7865, 7866	1061	8243, 8244
1000	7871, 7872	Sp 240	1743, 1744
1004	7895, 7896	932	7463, 7464
1003	7889, 7890	933	7469, 7470
1002	7883, 7884	934F	7475, 7476
1001	7877, 7878	Sp 241	1749, 1750

Nonconformance noted during routine QC surveillance of the on-site test lab. Q-List is 6.101. No hold tags applied.



telecomin

NONCONFORMANCE REPORT

10-18-76

1. Project Name Midland		Job No. 7220		19. No. 548	20. Page 1 of 5	
2. Unit(s) Aux Bldg	3. Drawing/Part No. F-7220-C233A-13614-MV-6-3	Rev	4. Item Description Pipe Restraint Embeds	5. Item Location -QC Hold Area- see p 10/10/76		
6. P.O. Or Spec No. 7220-F-13614	7. Serial No. Type P14	8. Replacement Part P/N N/A REV	SER NO.	9. Source Vendor	10. Contractor/Supplier Mississippi Valley Structural Steel	
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. R-1,00-298 NO. See Block 16	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input checked="" type="checkbox"/> FLD
16. Nonconforming Condition: 1. Bechtel approved Mississippi Valley Structural Steel drawing F-7220-C233A-13614-MV-6-3 requires 5/8" fillet welds for some joints at type P14 Embeds. Contrary to the above, various welds on eleven type P14 Embeds were found to have insufficient leg and/or throat dimensions. See attached sketch for locations of joints requiring 5/8" fillet welds.			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS
			W.C. Bosworth Talonys 10/18/76 PROJECT FIELD ENGINEER DATE J. Hinkley RLC 10/13/76 PROJECT ENGINEER DATE M. D. Forten 10/19/76 PROJECT CONSTR QC ENGINEER DATE AUTHORIZED INSPECTOR DATE			
17. Reported By John R. [Signature] Date 9-30-76		18. Validated By M. D. Forten Date 10-1-76		25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		Eight type P14 embeds returned from vendor were found to have 3/8" minimum fillet welds for "use as is" disposition. John R. [Signature] 11-5-76		
1. Add weld as required to obtain a 5/8" fillet.		not required based on Project Engineering evaluation JH		Continued on Page 3		
2. Add weld as shown on attached sketch.				three (3) P14 embeds acceptable per disposition in block #23. RW latter 11-5-76		
Conditional Release: Continued on Page 5, N. Shand 10-4-76 for [Signature] 10/4/76		23. Project Engineering Disposition		26. QC Acceptance John R. [Signature] 11-5-76 QC ENGINEER DATE		
Engineering has evaluated the design of the pipe restraint embed P-14, as delivered at the job site, according to latest NRC criteria for postulating the high energy pipe breaks. The analysis shows that the embeds are structurally adequate. Engineering recommends "use as is". The design evaluation substantiating "use as is" is contained in Vol. V, Aux. Bldg. Calcs. found in Engineering files.		Note Engineering Comments VV [Signature] 10/13/76 on Pages 1 & 3. JH		AUTHORIZED INSPECTOR DATE		

BECHTEL

10-15-16

NONCONFORMANCE REPORT (CONT'D)

Block 16 continued.

2. Insufficient leg dimensions are, in some cases, caused by lack of proper offset at the joints between 2" x 3 1/2" bars and 2" x 14" x 1'10" plates. See attached sketch.

Nonconformance noted during receipt inspection. Hold pending final disposition. Q List #1.202.

11 QC Hold Tags applied.

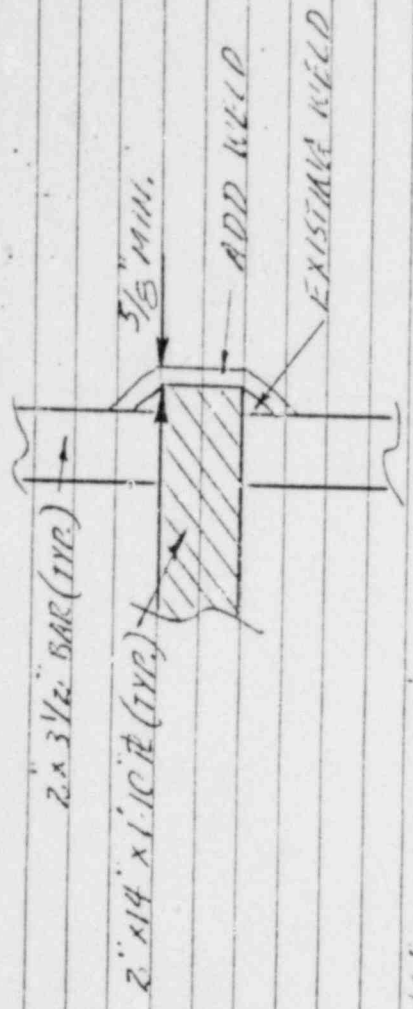
Sketch on page 3.

White Copy	-	Originator
Canary Copy	-	Field Engineer
Pink Copy	-	PGAE
Goldenrod Copy	-	QC

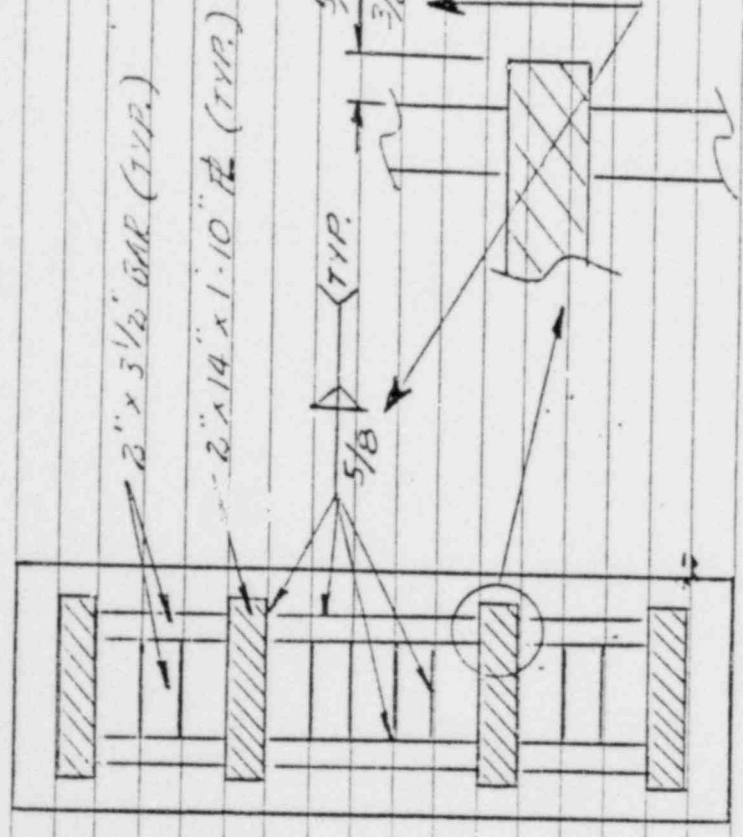
ESRI

10-18-16

BLOCK 22 Continued



Block 16 continued.



5/8 REQ'D  
3/8 TO 1/2 ACTUAL

ENGINEERING COMMENT:

Review of NCR 548 and subsequent  
 recommendation to "use-as-is"  
 is based on a minimum 3/8"  
 weld as being provided;  
 Field to verify this dimension  
 if embeds are "use-as-is."

10098-2

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - POAE  
 Goldenrod Copy - QC

JCH  
QC 033



FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. \_\_\_\_\_

FILE NO. \_\_\_\_\_

1 PROJECT NO. Midland 7220 2 DATE 10/14/76

PAGE 1 OF 1

4. ITEM INSPECTED

(3) P14 embeds as described on NCR 548

5. LOCATION

Combination Shop

6. TYPE OF INSPECTION

3/8

FAW'S

Visual inspection to verify required

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION

Disposition to NCR 548

8. INSPECTION EQUIPMENT USED

Weld Fillet Gauge

9. RESULTS OF INSPECTION:

SATISFACTORY

UNSATISFACTORY

10. ACTION TAKEN IF UNSATISFACTORY

Concurrence of FWE: Jack P. [Signature] 10/14/76

Distribution  
White - QC Files  
Canary - Originator

11. ENGINEER

Paul W. [Signature]

NCR 548 Page 4 of 15  
10-18-76

NONCOMPLIANCE REPORT (CONT'D)

PAGE 2 OF 3

14 NOV 1976 548

515  
10/18/76

Block 16 continued.

2. Insufficient leg dimensions are, in some cases, caused by lack of proper offset at the joints between 2" x 3 1/4" bars and 2' x 14' x 110" plates. See attached sketch.

Manufacture and fielding receipt inspection. Hold pending final disposition. O I 101-1,202.

CC Hold tag applied.

Sketch on page 3.

Block 22 continued.

Eight pieces to be returned to the supplier for repair in accordance with approved repair procedures.

PFE M. S. L... 10-11-76 M. S. L... 10-11-76

PFQCE H. D. Foster 10/11/76 J. P. Payne 10/11/76

LQAE G. L. Richards

Block 5 continued:

Eight embeds returned to vendor 10-11-76 on SN 7220-2207. Three embeds moved to the combination shop.

[Signature] 10-12-76

White Copy - Operator  
 Green Copy - Field Engineer  
 Pink Copy - POAE  
 Colored Copy - QC



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 551	20. Page 1 of 1	
2. Unit(s) #1	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Concrete		5. Item Location Pour #C(593.5)a	
6. P.O. Or Spec No. C-230	7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A	SER NO. N/A	9. Source Subcontractor	10. Contractor/Supplier Champion, Inc.	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1.30-2 NO. C-230, Rev. 7	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input checked="" type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Section 7.4.2 of Specification C-230, Rev. 7 states that the air entrained in concrete shall be between 3 - 6 percent. Contrary to the above, 2 tests performed on a sample from 8 yds. of concrete placed in pour #C(593.5)a, Batch Ticket No. 10559, showed an air content of 2.6 & 2.7 percent. Nonconformance noted during test of concrete. One hold tag applied.			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS
			<i>[Signature]</i> 11/19/76 PROJECT FIELD ENGINEER DATE			
			<i>[Signature]</i> 11-15-76 PROJECT ENGINEER DATE			
			<i>[Signature]</i> 11-22-76 PROJECT CONSTR QC ENGINEER DATE			
			AUTHORIZED INSPECTOR		DATE	
17. Reported By <i>[Signature]</i>	Date 10/4/76	18. Validated By <i>[Signature]</i>	Date 10-4-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Use as is. Pour C(593.5)a is interior concrete in the Containment 1 cover slab. Concrete represented by tickets #10560, 10561 & 10562 were discharged prior to completion of the failing air tests. Concrete represented by ticket #10563 was tested and the air content was 3.2%(E.O.L.). Total concrete placed was 230 c.y. Cylinders were cast for ticket 10559 at both the batch plant and the point of placement.						
23. Project Engineering Disposition						
Lower air content tends to increase strength while decreasing durability to freeze-thaw cycles. Project Engineering concurs with the field recommended disposition to "use as is" based on the following:						
1) Pour # c(593.5)a is an interior cover slab pour and not subject to freeze-thaw cycles.						
2) 28 day cylinder strengths for batch ticket 10559 averaged 5615 psi. Required strength is 5000 psi at 90 days.						
				28. OC Acceptance <i>[Signature]</i>	11/23/76	
				QC ENGINEER	DATE	
				AUTHORIZED INSPECTOR	DATE	
ALD 11/2/76		E. Muel 11-12-76		<i>[Signature]</i> 11/2/76		



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 554	20. Page 1 of 2	
2. Unit(s) Common	3. Drawing Part No. 7220-C-202	Rev 5	4. Item Description Reinforcing Steel	5. Item Location Aux Bldg 624'0" Slab		
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	9. Source Construction	10. Contractor/Supplier N/A		
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. 7220-C-202	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Note #3 on Drawing 7220-C-202, Rev. 5 states: "Slab dowels to match slab reinforcing unless noted otherwise."  Contrary to the above, 1 #6 dowel at Elev. 624'0", 12'0" west of 6.2 on "A" line wall is missing.  Hold pending final disposition. Q list #1.203. 1 QC Hold Tags applied.			24. Disposition Concurrence REWORK <input type="checkbox"/> REJECT <input type="checkbox"/> REPAIR <input checked="" type="checkbox"/> USE AS IS <input type="checkbox"/>  E.S. Valenzano 11/15/76 PROJECT FIELD ENGINEER DATE J.A. [Signature] 11-5-76 PROJECT ENGINEER DATE J.P. [Signature] 11-16-76 PROJECT CONSTR QC ENGINEER DATE  AUTHORIZED INSPECTOR DATE			
17. Reported By [Signature]	Date 11-5-76	18. Validated By [Signature]	Date 10-6-76	25. Disposition Results REPAIR COMPLETED PER BLOCK 23 NOTE 11/19/76		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
4 #6 diagonal dowels (1T&B E.S.) are existing for the temporary opening. Note #4 of Detail 7 on C-140 specifies that the diagonals are not required. Repair as follows, use diagonal dowel for a replacement dowel by straightening the diagonal dowel so that a 6" non-contact lap splice can be maintained with the replacement bar as required by Detail 7 on C-140. J.D. Desmond 10-8-76 [Signature]						
23. Project Engineering Disposition  Project Engineering concurs with field to bend 1-76 bottom layer diagonal dowel around the floor opening & use it as a dowel forming a non contact splice with the north south replacement rebar around the opening. The diagonal dowel should be bent so that it is min. of 3" from the face of the opening. The rebar to be bent according to sec. 8 of specification 7220-C-231Q, Rev. 11. No safety implications are involved since missing dowel is for splicing temperature reinforcement.						
26. QC Acceptance M. [Signature] QC ENGINEER				DATE 11/19/76		
AUTHORIZED INSPECTOR				DATE		

(Continued)



TECHTEL

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14. NCR NO. 554

23. Project Engineering Disposition (Continued)

The first paragraph of Block # 16 should refer to note # 5 on Dwg. 7220-C-202, Rev. 5 rather than note # 3.

VV *[Handwritten signature]* 11/5/76

ORIGINAL



NONCONFORMANCE REPORT

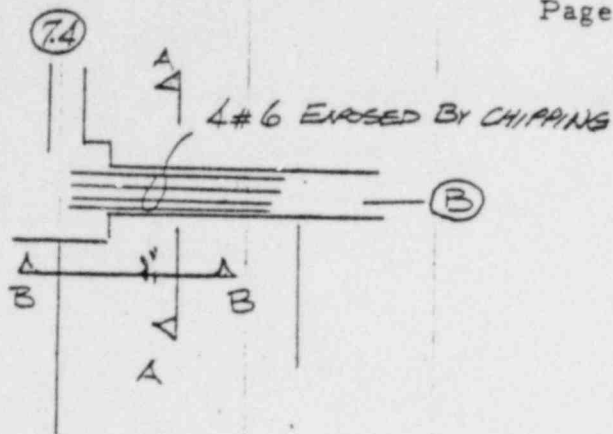
ARORA

1. Project Name Midland		Job No. 7220		19. No. 555	20. Page 1 of 2	
2. Unit(s) Common	3. <del>XXXXXXXXXXXX</del> Spec. 7220-C-231	Rev 9	4. Item Description Damaged Reinforcing Steel		5. Item Location Aux. Bldg 624'0" Slab	
6. <del>Spec No.</del> 7220-C-231	7. Serial No. N/A	8. Replacement Part P/N N/A Rev	SER NO.	9. Source Construction	10. Contractor/Supp' er N/A	
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. NO. 7220-C-231	12. ASME AUTHORIZED INSPECTION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Specification 7220-C-231 Rev. 9 Section 8 references ACI-301-72. ACI-301-72, Paragraph 7.2.2 requires minimum dimensions for rebar as specified by ASTM. During concrete drilling at Elev. 624'0" @ "B" line wall, 2 #6 bars were damaged. The damage reduces the cross-sectional area of each bar by approximately 25% over a 1 1/2" length. See attached sketch. Hold pending final disposition. QC Hold tags applied.			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	USE AS IS
			<i>not done for</i> <i>T.C. Valenzano 11/15/76</i> PROJECT FIELD ENGINEER DATE <i>J.R.L. Castiblanco 11/5/76</i> PROJECT ENGINEER DATE <i>J. Valenzano 11-16-76</i> PROJECT CONSTR QC ENGINEER DATE AUTHORIZED INSPECTOR DATE			
17. Rejected By <i>[Signature]</i>		Date 10-5-76	18. Validated By <i>[Signature]</i>	Date 10-6-76	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Since 6 #6 additional bars are installed beneath the opening and only 2 #6 additional bars are required, (per REM C-189) Field Engineering recommends "use as is". Project Engineering to evaluate. <i>J. Desmar 10-8-76</i> <i>J.C. [Signature] 10/8/76</i>						
23. Project Engineering Disposition						
Paragraph 1 of block # 16 is not applicable. Rebars in the slab beneath the wall opening are for crack control. The undamaged rebars are more than adequate for crack control. There are no safety implications involved, therefore, Project Engineering recommends "use as is". <i>[Signature] 11/4/76</i>						
26. QC Acceptance <i>[Signature]</i>				DATE 11.16.76		
QC ENGINEER				DATE		
AUTHORIZED INSPECTOR				DATE		

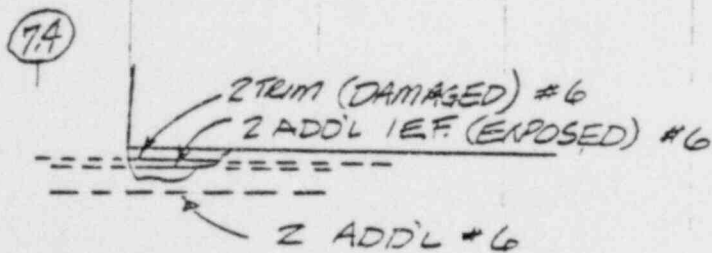
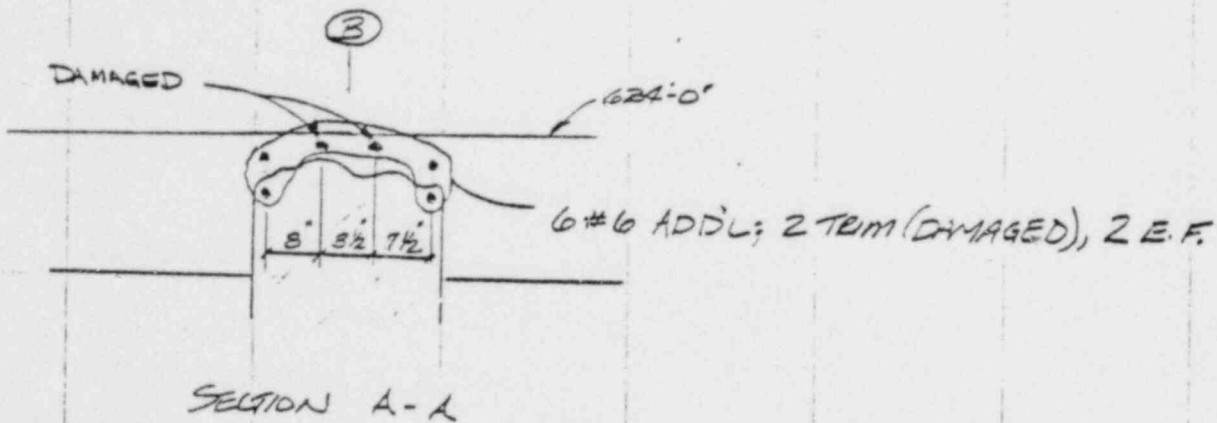


DESIGN BY G.M.H. DATE 10-5-76 CHECKED BY \_\_\_\_\_ SHEET NO. \_\_\_\_\_  
 PROJECT MIDLAND JOB NO. 7220  
 SUBJECT ATTACHMENT TO NCR # 555 FILE NO. \_\_\_\_\_

Page 2 of 2



PLAN AT ELEV. 624.0"



SECTION B-B



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 564	20. Page 1 of 1	
2. Unit(s) Aux Bldg	3. Drawing Part No. 7220-C-259	Rev 4	4. Item Description Reinforcing Steel		5. Item Location Aux Bldg	
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV NO.	9. Source Construction	10. Contractor/Supplier N/A		
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. 7220-C-259		IR NO. N/A	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Drawing 7220-C-259, Rev. 4, Sections D, E, and F shows 3 vertical #11 rebars located on the north and south sides of the elevator opening at approximately 6.9 and "F". These #11 rebars are shown as outside the horizontal rebar. Contrary to this, the existing field condition has the vertical #11 rebars located inside the horizontal rebar. Q List #1,203. / QC Hold Tags applied.			24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS X			
17. Reported By Steven Johnson 10/7/76		18. Validated By W. J. Rosnelly 10-13-76		25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)				
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING				
Route to Project Engineering for disposition. S R Johnson 10/19/76 James Marshall 10-19-76 10/19/76						
23. Project Engineering Disposition Project Engineering approves the placement of 3-#11 vertical rebars, each at north and south sides of the elevator opening, inside the horizontal rebars. There are no safety implications involved, therefore, "use as is". S R Johnson 11/3/76						
				26. QC Acceptance QC ENGINEER DATE 11/8/76		
				AUTHORIZED INSPECTOR DATE		



*Decomposed*

### NONCONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>903570</b>	20. Page <b>1</b> of <b>1</b>
2. Unit(s) <b>#2</b>	3. Drawing/Reel-No. <b>C-429</b>	Rev <b>0</b>	4. Item Description <b>Feedwater Isolation Valve Chamber Reinforcing</b>		5. Item Location <b>South Cont. #2</b>
6. P.O. Or Spec No. <b>N/A</b>	7. Serial No. <b>N/A</b>	8. Replacement Part P/N <b>N/A</b> REV _____	SER NO. _____	9. Source <b>Construction</b>	10. Contractor/Supplier <b>N/A</b>
11. Inspection Criteria <input checked="" type="checkbox"/> DOWG <input type="checkbox"/> SPEC <input checked="" type="checkbox"/> OTHER		IR NO. <b>C-1, 20A-70</b> NO. <b>C-429</b>	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input checked="" type="checkbox"/> REC. <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input checked="" type="checkbox"/> FLD
16. Nonconforming Condition: <b>3" clear cover is required for rebar on the feedwater isolation valve walls.</b>			24. Disposition Concurrence		
Contrary to the above, the south wall of the Cont. #2 feedwater chamber has 5" to 5 3/4" clear cover on the interior face of the wall. This condition was noted during installation of wall reinforcement. The Q number is 1.103.			REWORK <input type="checkbox"/> REJECT <input type="checkbox"/> REPAIR <input type="checkbox"/> USE AS IS <input checked="" type="checkbox"/>		
<b>1</b> Hold Tags Applied.			<i>Hold for E.O. disposition</i>		
			<i>E.O. for rebar</i> <b>11-15-76</b>		
17. Reported By <i>J.P. Betts</i>	Date <b>10-18-76</b>	18. Validated By <i>J.P. Betts</i>	Date <b>10-19-76</b>	25. Disposition Results	
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
The field recommends gradually bending the vertical dowels back to the proper clearance as expeditiously as possible. The vertical wall splice bars will then be placed at the proper clearance so that there will be approximately 2" to 2 3/4" maximum distance between the dowels and the wall bars at the base slab only.					
<i>J.P. Betts 10-19-76</i> <i>10-19-76</i>					
23. Project Engineering Disposition					
Project Engineering concurs, since the transverse lap spacing does not exceed 1/5 the splice length nor 6 inches (ACI 318-71, 7.5.4). Moreover Engineering accepts the fact that the cover of a few horizontal bars near the base slab exceeds the allowable since this is not a high stress area in the horizontal direction.					
				26. QC Acceptance <i>J.P. Betts</i>	<b>11/19/76</b>
				QC ENGINEER	DATE
				<i>J.P. Betts</i>	<b>10/19/76</b>
				AUTHORIZED INSPECTOR	DATE



Don

NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 573	20. Page 1 of 2	
2. Unit(s) 1 & 2	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Liquid Penetrant Materials	5. Item Location Warehouse & QC		
6. P.O. or Spec No. PT-SR-1,2 Rev. 1	7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A	9. Source Construction	10. Contractor/Supplier N/A		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A NO. PT-SR-1,2 Rev. 1	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input checked="" type="checkbox"/> FLD
16. Nonconforming Condition: Paragraph 3.1.2 of NDE Procedure PT-SR-1,2 Rev. 1 requires that certification records for liquid penetrant materials supply information that the materials do not exceed 200 PPM inorganic halogen content and that chlorides do not exceed 200 PPM.  Contrary to the above, all liquid penetrant materials used on our project were purchased to PT-SR-1,2 Rev. 0 certification requirements and do not show compliance with the 200 PPM requirements. However, these materials meet all			24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS X			
17. Reported By A. L. Boulton 10/19/76			18. Validated By J. K. Kelly 10-19-76			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)			25. Disposition Results QC Concurrence with block 23 disposition released materials for use on 10/27/76 A. L. Boulton 11/9/76			
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			26. QC Acceptance A. L. Boulton 11/9/76 J. K. Kelly 11/9/76			
23. Project Engineering Disposition The liquid penetrant materials that have been used and that are presently being used at Midland jobsite were purchased in conformance to PT-SR-1, 2 Revision 0 which was in effect at the time of purchase. These materials also meet the ASME Section V special requirements for sulfur and halogen contents. They do not meet the requirements of PT-SR-1, 2 Rev. 1 which is, at this time, the liquid penetrant procedure being used at the jobsite.						

SECRET

Block 16 Continued:

regulating code requirements.

Hold Penetrant Engineering Disposition. All Items 10-19-76

Q Number 6.201

No hold tags applied

Block 22: certified as meeting the requirements of paragraph 3.1.2 of PT-SR-1,2, Rev. 1.

J. R. Barber 10-22-76  
C. A. Renfrel 10-22-76

Block 23 continued:

Using the same basis that is used in procuring all ASME materials - namely, that they are purchased to the addenda in effect at the time of purchase - these penetrant materials which were purchased to PT-SR-1, 2 Revision 0 in effect at time of purchase are acceptable and can be used until they are consumed. Any new purchases must be made to the latest revision of PT-SR-1, 2 that is mandatory for the Midland jobsite.

R. Torres 10/26/76  
J. P. Mayala  
T. V. V. V.



NONCONFORMANCE REPORT

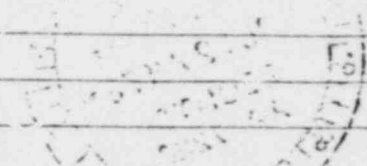
Sent 10-22-76  
Rec'd on 11/2/76  
ME

*Telecom*

1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>577</b>	20. Page <b>1 of 1</b>
2. Unit(s) <b>2</b>	3. Drawing/XXX <b>X-602</b>	Rev <b>1</b>	4. Item Description <b>Exterior Wall Reinforcing Bar</b>		5. Item Location <b>Cont. #2 Exterior Wall</b>
6. P.O. Or Spec No. <b>NA</b>	7. Serial No. <b>NA</b>	8. Replacement Part P/N <b>HA</b> REV _____	SER NO. _____	9. Source <b>Construction</b>	10. Contractor/Supplier <b>NA</b>
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO. <b>C-602</b>		IR NO. _____	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: <b>Design Drawing C-602 and Vendor Drawing E68C show 23 #11 additional verticals @ 16" starting at 673'-1" and extending to E1. 688'-6" from approximately 310° to 360°. Contrary to the above, these bars were not installed. This condition was noted during inspection. The "Q" number is 1.103. Work may not proceed pending Project Engineering Disposition. 1 QC Hold Tags applied.</b>			24. Disposition Concurrence		
			REWORK	REJECT	REPAIR
					<input checked="" type="checkbox"/> USE AS IS
17. Reported By <i>T. Neumann</i> Date <b>10-22-76</b>			18. Validated By <i>M. Murrelly</i> Date <b>10-22-76</b>		25. Disposition Results
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
Use as is.					
23. Project Engineering Disposition					
The subject 23 # 11 bars were added for Main Steam Line Whip forces transmitted to the wall through two embedments type 45 <sup>at</sup> E1. 682'-2 3/8" and Azimuth 347°-59' & 337°-6", respectively. Since these additional bars were added the pipe break criteria has been modified and these two embedments are not now required. This information was received from the Mechanical group when it was too late to make the changes and it was decided to keep the embedments and the additional bars even they are not used. Here the absence of the subject 23#11 bars will have no effect on the structural integrity of the wall. Engineering concurs to use as is.			26. QC Acceptance <i>[Signature]</i> Date <b>11/26/76</b>		
			AUTHORIZED INSPECTOR DATE		

*Abett's 10-22-76  
to file 10/12/76*

*off spec for T.C. Valenzano 11/16/76  
PROJECT FIELD ENGINEER DATE  
PROJECT ENGINEER DATE 11/10/76  
PROJECT CONSTR QC ENGINEER DATE 11-22-76  
AUTHORIZED INSPECTOR DATE*







NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 579	20. Page 1 of 2	
2. Unit(s) 2	3. Drawing/Part No. N/A	Rev ----	4. Item Description Spray Header Pipe Spools		5. Item Location Staging Area	
6. P.O. Or Spec No. 7220-M-204	7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A	9. Source Construction	10. Contractor/Supplier N/A		
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. N/A NO. 7220-M-204 Rev. 4	12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC:G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> NG <input type="checkbox"/> FLD
16. Nonconforming Condition: Specification M-204, Rev. 4, "Field Fabrication and Installation of Piping and Instrumentation for Nuclear Service" requires in Section 6.3.1 for piping and fittings, that "All stainless steel and Ni-base alloy materials must be handled in such a manner that it is not in contact with lead, zinc, copper and other non-ferrous low melting elements and alloys to prevent surface contamination." (1). Spray header pipe spools 2GCB-001-S613-1 and 2GCB-008-S613-1 came in contact with galvanized tendon sheathing while in the staging area. Two pieces of galvanized sheathing			24. Disposition Concurrence			
			REWORK REJECT REPAIR USE AS IS			
			(1) X (2) X			
			<i>S. Malaha</i> 11-15-76 PROJECT FIELD ENGINEER DATE <i>W. L. ...</i> 11-9-76 PROJECT ENGINEER DATE <i>S. Malaha</i> 11-15-76 PROJECT CONSTR QC ENGINEER DATE <i>W. L. ...</i> 11/15/76 AUTHORIZED INSPECTOR DATE			
17. Reported By <i>David L. Palmer</i> 10-25-76	Date	18. Validated By <i>S. Malaha</i> 11-26-76	Date	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)			NO SURFACE DAMAGE FOUND. SPOOLS HAVE BEEN CLEANED PER PROJECT ENGINEERING RECOMMENDATION <i>S. Malaha</i> 11-16-76			
22. <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING						
(1) a visual inspection of affected spool surface areas, which contacted tendon sheathing, does not indicate any surface damage. In this occurrence we recommend emery buffing of the contacted areas to remove any traces of zinc, followed by acetone wiping. (continued on page 2)						
23. Project Engineering Disposition						
(1) Contact was at room temperature for relatively short time. Recommend any discoloration be removed by Aluminum Oxide Abrasive or Clean Stainless Steel Brush. Visually inspect surface and use after rework Item (2). Since visual inspection indicates no surface pitting or damage, "use as is."						
			26. QC Acceptance <i>S. Malaha</i> 11-16-76 QC ENGINEER DATE <i>W. L. ...</i> 11/16/76 AUTHORIZED INSPECTOR DATE			

BESHTEL

Block 16. (con't)

from an adjacent stack onto the stainless spools. (2). Pipe pool 2GCB-008-S613-1 was in contact with carbon steel liner plate leak chase material. Cribbing movement allowed subject spool to come into contact with the carbon steel. Two QC Hold tags applied.

Block 22. (con't)----Field recommends that the buffing be considered "rework".

(2) Visual inspection reveals no surface damage. This is not a nonconforming condition. Cribbing has been modified to eliminate contact between carbon steel and stainless steel piping.

David Palmer 10-25-76  
K. Pulito 10-25-76

Block 16 continued)

Conditional release requested for construction to proceed. All material is retrievable after construction completion.

David Palmer 10-25-76  
K. Pulito 10-25-76  
PFE J.C. Delaney 10-26-76  
PFQCE M. M. M. 10-26-76  
LPQAE R. L. Richardson 10-26-76  
AI P. L. L. 10-26-76

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - PQAE  
Goldenrod Copy - OC



# Corrected Copy

NONCONFORMANCE REPORT

11-8-76

1. Project Name Midland Nuclear Plant		Job No. 07220		19. No. 584	20. Page 1 of 2
2. Unit(s) Common	3. Drawing/Part No. N/A	Rev N/A	Item Description Concrete Cure (EMBECO) <sup>AMT</sup> 11/4/76		5. Item Location Aux. Bldg. El. 584', D Line, 5.6, 5.1
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Construction	10. Contractor/Supplier N/A
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER			IR NO. C-1.11-23 7220-C-231	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
16. Nonconforming Condition: Spec. 7220-C-231, Rev. 11, Paragraph 18.0 states that grout shall be placed in accordance with manufacturer's requirements. Embeco suggests a surface temp of at least 60°F for 48 hrs. after grouting. However, the temp. of the G-1 GIBBER COLUMN PIERS <sup>AMT 11/3/76</sup> <del>column base plates</del> referenced was at 50°F for one day. Nonconformance noted during Q. C. surveillance. Hold for final engineering disposition. 4 Hold tags applied. REFERENCE DWG: C-191 DETAIL 3 <sup>AMT 11/3/76</sup>				14. Discovered During <input type="checkbox"/> REC:G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD	
				15. Equip Furnished By	
				24. Disposition Concurrence N/A SIC 11/5/76	
				REWORK	REJECT
				REPAIR	USE AS IS
				PROJECT FIELD ENGINEER	DATE
				PROJECT ENGINEER	DATE
				PROJECT CONSTR QC ENGINEER	DATE
				AUTHORIZED INSPECTOR	DATE
17. Reported By <i>Dunne M Jones</i> Date <i>11/1/76</i>			18. Validated By <i>Flannolly</i> Date <i>11-2-76</i>		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING			<input type="checkbox"/> TO OTHERS (SPECIFY)		
22. <input checked="" type="checkbox"/> Field Engineering Disposition			<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		
"Use as is". The purpose of the higher recommended curing temperature for Embeco 636 grout is to assure early development of high strength. This early strength development is not required in this case. Curing was extended 1 day. Watercure was satisfactory for all days. The items grouted were the dowels (#8 bar) for the G-1 column piers. Reference detail 3 drawing C-191Q Revision 2. <sup>11/1/76</sup>					
23. Project Engineering Disposition					
26. QC Acceptance <i>[Signature]</i> 11/8/76 QC ENGINEER DATE AUTHORIZED INSPECTOR DATE					

SECRET

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14 NCR NO. 584

Block #16 Continued:

The latest Embeco 636 Groat Instructions published April 1976 does not require a minimum curing temperature for grouted anchor bolts and dowels.

Therefore No Nonconformance exist

S J Chul

11/5/76

W. D. Decker

11-8-76

J. C. Feys 11/8/76

10098-2

White Copy - Originator  
 Canary Copy - Field Engineer  
 Pink Copy - PQAE  
 Goldenrod Copy - QC

QC 613



NONCONFORMANCE REPORT

1. Project Name Midland Nuclear Plant		Job No. 07220		19. No. 589	20. Page 1 of 2
2. Unit(s) Common	3. Drawing/Part No. N/A	Rev N/A	4. Item Description Concrete Curing (EMBECO) <sup>AMT</sup> 11/4/76	5. Item Location Aux. Bldg. El. 584'-0", C Line between 6.9 & 7.4, D & F Lines, between 5.6 & 7.4	
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV	SER NO.	9. Source Construction	10. Contractor/Supplier N/A
11. Inspection Criteria <input type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1.11-11, C-1.11-22 NO. 7220-C-231	22. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC:G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> F.I.D.
16. Nonconforming Condition: Specification 7220-C-231, Rev. 11, Paragraph 18.0 states that grout shall be placed according to manufacturer's recommendations. For Embeco 636 grout this requires a surface temp. of at least 60° for 48 hrs. after grouting. However, at C Line, between 6.9 & 7.4 the temp. was 58° for one day, and 57° on the 2nd day cure. At D & F lines between 5.6 & 7.4 lines, the average temp. of the eight pads dropped to 55° on the 2nd day of cure. Also, one pad at D line & 6.9 line dropped to 42° for the 2nd day of cure. Nonconformance noted during Q. C.			24. Disposition Concurrence REWORK REJECT REPAIR USE AS IS N/A 6/10 11/3/76		
17. Reported By Aurene H Jones		Date 11/3/76	18. Validated By M. J. Houmally		Date 11-4-76
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING NOT RECORDED		<input type="checkbox"/> TO OTHERS (SPECIFY)			
22. <input type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
23. Project Engineering Disposition					
26. QD Acceptance [Signature]					DATE 11/8/76
QC ENGINEER					DATE
AUTHORIZED INSPECTOR					DATE

**ESCHER**

BLOCK #16 CONTINUED:

NONCONFORMANCE REPORT (CONT'D)

PAGE 2 OF 2

14 NCR NO. 589

surveillance. Hold for final Engineering disposition. <sup>12 AMT 11/4/76</sup> Hold tags applied.

Reference Dwg: C-195

The latest Embeco 636 Grout Instructions published April 1976 does not require a minimum curing temperature for grouted anchor bolts and dowels.

Therefore no nonconformance exists

A. J. Charles  
11/5/76  
11-8-76

Jack L. Jones 11/8/76

100982

White Copy - Originator  
Canary Copy - Field Engineer  
Pink Copy - POAE  
Goldthread Copy - DC

QC 613



NONCONFORMANCE REPORT

1. Project Name Midland		Job No. 7220		19. No. 600	20. Page 1 of 1												
2. Unit(s) Unit #2	3. Drawing/Part No. 31A5870 GN-25088-9	Rev N/A	4. Item Description End Truck Driver & G-2 Girder		5. Item Location Polar Crane Unit #2												
6. P.O. Or Spec No. M-92	7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A SER N/A	9. Source Supplier	10. Contractor/Supplier Harnischfeger P & H													
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. PQCI M-3.10-2	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> FLD	15. Equip Furnished By											
16. Nonconforming Condition: During Torque Inspection of the Coupling Bolts used to mount the Corner #4 End Truck Drive, the aft outside Mounting Bolt failed. It was noted at this time that the hole through the Driver and G-2 Girder were off perpendicular, causing the bolt to seat improperly. This hole was drilled and line reamed by the manufacturer. Hole approx. $\pm 5^\circ$ off perpendicular. Hold for Engineering disposition. "Q" No. 4.001 2 Hold Tags Applied.			24. Disposition Concurrence														
			<table border="1"> <tr> <th>REWORK</th> <th>REJECT</th> <th>REPAIR</th> <th>USE AS IS</th> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>			REWORK	REJECT	REPAIR	USE AS IS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
REWORK	REJECT	REPAIR	USE AS IS														
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														
			<table border="1"> <tr> <td>PROJECT ENGINEER</td> <td>DATE</td> </tr> <tr> <td><i>Robert T. Volynsky</i></td> <td>11/19/76</td> </tr> <tr> <td>PROJECT CONSTR QC ENGINEER</td> <td>DATE</td> </tr> <tr> <td><i>Paul Kenna</i></td> <td>11-24-76</td> </tr> <tr> <td>AUTHORIZED INSPECTOR</td> <td>DATE</td> </tr> <tr> <td><i>Robert T. Volynsky</i></td> <td>11/24/76</td> </tr> </table>			PROJECT ENGINEER	DATE	<i>Robert T. Volynsky</i>	11/19/76	PROJECT CONSTR QC ENGINEER	DATE	<i>Paul Kenna</i>	11-24-76	AUTHORIZED INSPECTOR	DATE	<i>Robert T. Volynsky</i>	11/24/76
PROJECT ENGINEER	DATE																
<i>Robert T. Volynsky</i>	11/19/76																
PROJECT CONSTR QC ENGINEER	DATE																
<i>Paul Kenna</i>	11-24-76																
AUTHORIZED INSPECTOR	DATE																
<i>Robert T. Volynsky</i>	11/24/76																
17. Reported By <i>R.A. Messer</i>	Date 11/11/76	18. Validated By <i>Paul Kenna</i>	Date 11-12-76	25. Disposition Results Washers installed per block #2 <i>Richard J. Gray</i> 11/24/76													
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING <input type="checkbox"/> TO OTHERS (SPECIFY)		22. <input checked="" type="checkbox"/> Field Engineering Disposition <input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING															
The field will install beveled washers when required by AISC, specifically, paragraph 3 of section 5, specification for structural joints using ASTM A325 or A490 bolts applies.																	
23. Project Engineering Disposition																	
29. QC Acceptance <i>Richard J. Gray</i> 11/24/76 QC ENGINEER DATE AUTHORIZED INSPECTOR DATE																	



NONCONFORMANCE REPORT

1. Project Name Midland Units 1 and 2		Job No. 7220		19. No. 603	20. Page 1 of 3	
2. Unit(s) Common	3. Drawing/Part No. M-506 sh 2 OHCC-153-S506-2-1	Rev 4/F1	4. Item Description Pipe Fabrication	5. Item Location Nuclear Class III Combination Shop		
6. P.O. Or Spec No. 7220-M-101AC	7. Serial No. N/A	8. Replacement Part P/N N/A REV	9. Source Supplier	10. Contractor/Supplier ITT Grinnell, Kernersville, N.C.		
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input checked="" type="checkbox"/> SPEC <input type="checkbox"/> OTHER		12. ASME AUTHORIZED INSPECTION REQ'D <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD	
16. Nonconforming Condition: Specification 7220-M-201, Rev. 7, para. 7.2.3 states in part "Nuclear Class III (3) Piping shall be examined in accordance with The Nuclear Power Plant Component Code Article ND 5000." ASME Sect. III, article ND 5000, para. ND 5220 states in part "All pressure retaining welds in piping . . . greater than 4" Nominal Pipe size shall be examined by either Magnetic Particle, Liquid Penetrant or Radiographic Method."			24. Disposition Concurrence			
			REWORK	REJECT	REPAIR	
			USE AS IS			
			PROJECT FIELD ENGINEER DATE 11/17/76			
			PROJECT ENGINEER DATE 11-18-76			
			PROJECT CONSTR QC ENGINEER DATE 11/18/76			
			AUTHORIZED INSPECTOR DATE			
17. Reported By PMP Pitts	Date 11-15-76	18. Validated By D.B. Broun	Date 11-15-76	25. Disposition Results		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)		NDE CONDUCTED PER THE REQUIREMENTS OF FORM 84 MECHANICAL AND BLOCK 22. FIELD NDE RESULTS WERE ACCEPTABLE		
22. <input checked="" type="checkbox"/> Field Engineering Disposition		<input type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING		M. Broun 11-16-76		
Vendor did not provide NDE report for closure weld "D" (Pipe to Plate). Field Personnel shall perform the NDE in accordance with the requirement of the Form 84-Mechanical for the applicable pipe class.				G.A. Broun 11/16/76		
				J. Pulito 11-17-76		
23. Project Engineering Disposition				26. QC Acceptance		
				PMP Pitts 11-18-76		
				QC ENGINEER DATE 11/18/76		
				AUTHORIZED INSPECTOR DATE		



Contrary to the above NDE Documentation for Shop Weld "J", Vent spool closure plate to pipe fillet weld, was not furnished by the supplier.

Discovered during Document Review

Q number 4.547 One QC Hold Tags applied.

HOLD FOR ENGINEERING DISPOSITION

22



NONCONFORMANCE REPORT

11/18/76

1. Project Name Midland		Job No. 7220			19. No. 606	20. Page 1 of 2	
2. Unit(s) Common	3. Drawing/Part-No. C-288	Rev 5	4. Item Description Reinforcement		5. Item Location Aux. Bldg. @ El. 624'-0"		
6. P.O. Or Spec No. N/A	7. Serial No. N/A	8. Replacement Part P/N N/A REV N/A SER NO. N/A		9. Source Construction	10. Contractor/Supplier N/A		
11. Inspection Criteria <input checked="" type="checkbox"/> DWG <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		IR NO. C-1.21-67	12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	14. Discovered During <input type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST	15. Equip Furnished By <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG <input type="checkbox"/> FLD
16. Nonconforming Condition: Drawing C-202, Revision 6, Note 5 states..... "Slab dowels to match slab reinforcing unless otherwise noted." Drawing C-288, Revision 5 calls for "#6 @ 12 T & B." Contrary to this, in the bottom mat @ 24" space exists without a dowel at the west face of 7.4 line and the north face of B line, Elev. 624'-0". Q-List No. 1.203. 1 Hold Tag Applied. Hold for Engineering Disposition.				24. Disposition Concurrence			
				REWORK	REJECT	REPAIR X	USE AS IS
				PROJECT FIELD ENGINEER DATE 11/24/76 PROJECT ENGINEER DATE 11/23/76 PROJECT CONSTR QC ENGINEER DATE 11-24-76 AUTHORIZED INSPECTOR DATE			
17. Reported By D.T. Navin	Date 11-18-76	18. Validated By D. J. Cannolly	Date 11-18-76		25. Disposition Results Bars installed as per attached sketch sht. 2 of 2. R. S. 11/24/76		
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHERS (SPECIFY)					
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING					
Field recommends "Accept as is" for the following reasons:							
1. The correct number of dowels are installed, see sheet 2 (attached)							
2. There is a 3" Ø temporary fire water line that is embedded in 7.4 line which drops from Elev. 623'0" to Elev. 621'0" at a point 3'6" north of B line. It would be extremely hazardous to attempt to drill in an additional dowel.							
23. Project Engineering Disposition		James S. Diamond 11-19-76 Julie J. Jorgensen 11/19/76					
Project Engineering provides the following response:							
1) The structural capacity is adequate and no safety implications are involved.							
2) For the 2 main bars without dowels, add one # 6 bar each with standard hook on the east end spliced with the main bars.							
3) Calcs. are filed in final calcs.							
				26. QC Acceptance P.R. Sipe 11/24/76 QC ENGINEER DATE			
				AUTHORIZED INSPECTOR DATE			



NONCONFORMANCE REPORT

1 Project Name Midland		Job No.		19 No. 609		20 Page 1 of 1		
2 Unit/Item	3 Drawing/Part No. C-279 (2)	Rev 7223	4 Item Description Reinforcing Steel		5 Item Location El. 634'-6" Aux. Bldg. A Line 26.9			
6 P.O. Or Spk. No. N/A	7 Serial No. N/A	8 Replacement Part N/A	9 Source CONSTRUCTION	10 Contractor/Supplier N/A				
11 Inspection Criteria <input checked="" type="checkbox"/> GOWS <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER NO		12 ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13 SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		14 Discovered During <input checked="" type="checkbox"/> ERECT <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input type="checkbox"/> ENG <input type="checkbox"/> O/D		15 Equip Furnished By	
16 Nonconforming Condition Drawings C-279 (Q) Rev. 5, Section D, calls for 6 #11 Additional Vertical Bars, Each Face, Located at "A" & 6.7 Lines Between El. 609'-6" & 634'-6". Contrary to the above, 5 #11, Additional Vertical Bars, Each Face, were installed. Hold for Engineering Disposition. "Q" Number 1.203. 1 Hold tag applied.				24 Disposition Concurrence REWORK   REJECT   REPAIR   USE AS IS J.C. Jensen 11/30/76 PROJECT FIELD ENGINEER DATE L.C. Jones 11/29/76 PROJECT ENGINEER DATE J.C. Jensen 11-30-76 PROJECT CONSTR. Q. ENGINEER DATE AUTHORIZED INSPECTOR DATE				
17 Reported By J.C. Jensen 11-29-76		18 Inspected By L.C. Jones 11-24-76		25 Disposition Results				
21 Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		22 <input type="checkbox"/> Field Engineering Disposition <input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING						
23 Project Engineering Disposition Accept as is. Project Engineering to evaluate. J.C. Jensen 11-29-76 L.C. Jones 11/29/76								
26 DC Acceptance MOOTE 11-30-76 DC ENGINEER DATE AUTHORIZED INSPECTOR DATE								

01210

9/76



PART 2  
QUALITY ASSURANCE FINDING

AF/AS 1

PAGE 1 OF 1

1. PROJECT/DEPARTMENT/SUPPLIER Midland	2. TYPE OF AUDIT/SURVEILLANCE OFFICE <input type="checkbox"/> QA Management FIELD <input checked="" type="checkbox"/>	3. AUDIT IDENT. FG 1.1 (SMA-1)
4. AUDITOR H.B. Norris (HBN-1)	5. DATE OF FINDING 9/16/76	7. DISCUSSED WITH T.J. Bemres J. Davis
6. CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC. FPG-8, Rev. 4, Part II, Para. 4.0		

8. REQUIREMENTS  
 "Communications Log (outgoing) shall detail the following minimal information....  
 4.3 - The assigned file number.

9. FINDING  
 Eleven of nineteen pieces of correspondence on a single correspondence log sheet (7/26/76 - 8/10/76) had no assigned file no. The correspondence could not be located in the correspondence files in the document center.

10. RECOMMENDED ACTION/S
1. Provide documents to the document center for filing.
  2. Instruct the responsible personnel in the requirements of FPG-8.

11. SCHEDULED COMPLETION DATE 11/1/76	12. RESPONSIBILITY FOR CORRECTIVE ACTION P.S.
--	--

13. CORRECTIVE ACTION TAKEN
1. Correspondence logs updated to conform to FPG-8, Rev. 4 and documents provided to Document Control Center for filing.
  2. On September 20, 1976, the Lead Secretary gave individual and group instructions for the proper implementation of FPG-8. (Ref. BT 97)

14. DATE COMPLETED 11/1/76	15. SUBMITTED BY RESPONSIBLE AUTHORITY <i>W. H. Aldred</i>	16. CORRECTIVE ACTION <input checked="" type="checkbox"/> ACCEPTED <input type="checkbox"/> NOT ACCEPTED	<i>W. H. Aldred</i> QAE
-------------------------------	---	---	-------------------------

17. VERIFICATION ACTIONS BY QAE  
 Reviewed Incoming and Outgoing files for inclusion of assigned file number and other required entries. Discussed implementation of FPG-8, Rev. 4, with Correspondence Clerk to verify effectiveness of training.

18. IMPLEMENTATION <input checked="" type="checkbox"/> ACCEPTED <input type="checkbox"/> NOT ACCEPTED	<i>W. H. Aldred</i>	DATE QAE 11-2-76
--	---------------------	---------------------

19. DISTRIBUTION

# QUALITY AUDIT FINDING

AUDIT IDENT.	085 (13-1.1-1)
AUDIT DATE	03/24/76
AUDIT ITEM	N/A
AUDITOR	B. T. Steikov
DISCUSSED WITH	D. Puchy, K. Ward

DEPARTMENT/SELLER	Midland 1 and 2 Job 07220	TYPE OF AUDIT	Construction	FIELD	<input checked="" type="checkbox"/>	OFFICE	<input type="checkbox"/>
NDA ITEM	N/A	CHECKLIST ITEM	13-1.1-P-1 Item 1	WHERE FOUND	Specification 7220-G-27(0) Rev. 1		
ROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.				BQAM-ASME III, Div. 1, Rev. 1, August 1974, Para. 5221	SAME AS:		

Paragraph 5221 states in part: "Bechtel NDE Procedure Specifications are prepared and approved by Level III personnel within MF&QCS . . . .".

(NOTE: This is a new requirement in the BQAM added with Revision 1, effective August 1974).

The following NDE Procedures were prepared and approved by MF&QCS personnel not certified to Level III at the time the procedures were issued.

Procedure	Date
LT-VB-1,2	08/13/74
MT-P-1,2	08/26/74
MT-Y-1,2	10/30/74
PT-SR-1,2	08/21/74

## RECEIVED

NOV 15 1976  
 BECHTEL POWER CORP.  
 JOB 7220  
 PER                     

**RECTIVE ACTION**

1. Determine the extent of the problem. (Does a similar situation exist with welding and general procedures).
2. Assure that all procedure specifications in use at this jobsite are in accordance with this requirements of the BQAM - ASME III Div. 1.

DATE COMPLETION DATE	1 & 2: 05/14/76	RESPONSIBILITY FOR CORRECTIVE ACTION	MAOS
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See attached IOM B. M. MacLeod to R. L. Castleberry dated 10/29/76 and Specification Amendments and Addendums:

- |                        |                        |
|------------------------|------------------------|
| LT-VB-1, 2 Amendment 4 | MT-Y-1, 2 Addendum 5   |
| MT-P-1, 2 Addenda 8    | PT-SR-1, 2 Addendum 10 |

DATE	11-11-76	SUBMITTED BY RESPONSIBLY AUTHORITY	<i>Brent T. Steikov</i>	DATE	11/17/76
RECTIVE ACTION VERIFIED BY NAME					



# QUALITY AUDIT FINDING

126  
AUDIT DATE  
 7-8-76 - 7-22-76  
 18-1-2  
AUDITOR  
 G. Richardson/J. Hood  
DISCUSSED WITH  
 T. Lieb

<small>ACTIVITY, PARTY/SELLER</small> Midland Plants 1 & 2	<small>TYPE OF AUDIT</small> Construction	<input checked="" type="checkbox"/> <small>FIELD OFFICE</small>	
<small>AGENDA ITEM</small> N/A	<small>CHECKLIST ITEM</small> 7	<small>WHERE FOUND</small> QC Vault	
<small>CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.</small> 7220-C-230 10.4, Rev. 7		<small>DATE AS OF</small>	
<small>QUOTATION</small>			

"Dry pack mortar shall be ... well graded concrete sand conforming with ASTM C-33-71a or ASTM C-144-70.

**FINDING**

Mortar sand used for dry pack now on site has not been subjected to all of the required tests of ASTM C-144-70 <sup>and some 9/17/76</sup> does not meet ASTM C-33. Specifically the test for water demand ratio by weight, friable particles, lightweight particles and soundness have not been performed.

Date	Report
6-18-76	UST JU-97a
6-11-76	UST JU-94a

**CORRECTIVE ACTION**

1. Have Subcontractor place hold on this sand until tests are completed and use approved concrete sand during interim.
2. Based on results of tests determine the acceptability of concrete repairs utilizing this sand.
3. Hold training for OCE's and Lab. Subcontract personnel emphasizing the need to be aware of all ASTM requirements applicable to this site.

<small>SCHEDULE COMPLETION DATE</small> 7/22/76 2&3 8/27/76	<small>RESPONSIBILITY FOR CORRECTIVE ACTION</small> PEOCE
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1. Subcontractor placed a hold tag on mortar sand stockpile on July 26, 1976. This hold tag remains on the stockpile. In addition Bechtel NCR 507 was initiated and an additional hold tag has been applied by Bechtel QC personnel on August 31, 1976.
2. Test results reported a failure on water demand ratio. NCR 507 has been written. Continued.

<small>COMPLETED</small> 8-30-76	<small>SUBMITTED BY RESPONSIBLE AUTHORITY</small> <i>J. J. [Signature]</i>	<small>DATE</small> 11-29-76
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QA Audit Report No. 126 Continued.

3. A training session was held for QCE's and Lab. Subcontract personnel emphasizing the need to be aware of all ASTM requirements applicable to this site on August 27, 1976.

# QUALITY AUDIT FINDING

O.A.F. 131(18-3-4)

8-23-76

NA

AUDITORS: G.L. Richardson/  
J. Hook

DISCUSSED WITH: Dutton/  
F. Teague

DEPARTMENT/ISSUE AREA

TYPE OF AUDIT

X FIELD OFFICE

Midland 1 & 2

Construction

CHECKLIST ITEM

WHERE FOUND

14

Concrete Pour # A(633.2)a

ROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.

Spec. 7220-C-231 Rev. 11 Section 14

Section 14.0 "...All concrete construction joints to receive additional lifts of concrete shall be water cured."

Section 14.1 "Newly placed concrete shall be kept wet by the continuous presence of water with a nozzle, soakers, or wet burlap..."

Section 14.0 "...Curing operations shall start when the addition of water will not injure surface of the concrete."

ACI 301-72

Section 12.2.1 "For concrete surfaces not in contact with forms, one of the following cures shall be applied immediately after completion of placement and finishing..."

ACI 301-72 para 12.1 refers to ACI 308-71

ACI 308-71 para 2.7: "The need for adequate continuous curing is greatest during the first few hours after placement of concrete in hot weather."

Contrary to the above the concrete surface for placement A(633.2)a, appeared dry and there was no evidence that curing had been initiated when QA checked the area at 12:40 on 8/21/76. This placement was completed on 8/20/76 at 1916 hours. Subsequent investigation revealed that curing was not initiated until approximately 1600 hours on 8/21/76. QC verified adequate curing at approximately 1800 hours on 8/21/76.

Note: This placement must reach 80% of design strength prior to the adjacent slabs being placed. Ref. (Spec 7220-C-231 Rev. 11, Section 5.4).

## RECOMMENDED CORRECTIVE ACTION

1. Identify this concrete as non-conforming and obtain project engineering disposition.  
Note: The ability of the extra concrete cylinders to represent the concrete, should also be addressed prior to determining when the 80% strength requirement has been met.
2. Determine why curing was not started as required and take actions to preclude repetition and provide additional training for supervision and field engineering as may be necessary.

DATE OF COMPLETION

9/30/76

RESPONSIBILITY FOR CORRECTIVE ACTION

Project Superintendent

CORRECTIVE ACTION TAKEN

- 1) Nonconformance identified and dispositioned per NCR 509.
- 2) To prevent recurrence of this problem a field engineer is assigned to monitor week-end concrete curing as required by the schedule.

DATE SUBMITTED BY RESPONSIBLE AUTHORITY

9-27-76

J.C. Johnson PTE

CORRECTIVE ACTION VERIFIED BY QA

Jon H. Hook

11-2-76

8-24-76

N/A

PROJECT/DEPARTMENT/BELLEVUE	Midland	AREA OF AUDIT	Special Process Control
AGENCY ITEM	13-1.11-P-1	DATE	11/21/76
CONTROLLING DOCUMENT	RT-XC-2, Rev. 1, 3/28/76	REVISION	Specification G-27
AUDITOR	R.D. Ward	APPROVED	A. Borden

Justification: Iridium-192 may be used to radiograph sections having a thickness less than 0.75" or greater than 3.0" when a separate detailed procedure is prepared and proven effective by actual demonstration on the minimum or maximum thickness of material to be radiographed. The procedure must meet the requirement of the Code, this specification, and satisfy both the Project Engineer and the Authorized Code Inspector.

On material under 0.75", there is not a detailed procedure, an actual demonstration or a statement indicating that the specification satisfies both the Project Engineer and the Authorized Code Inspector.

There has been approximately 75 welds radiographed, all since 4/76 as per RT-XC-2 rev. 1 thickness ranging from 0.120" to 0.594" and diameter from 2 1/2" to 12", 3/8".

NOTE: All welds have been reviewed for film technique and weld quality and found to be acceptable by the NDE Subcontractor Penndel Testing/X-Ray Engineering Level II personnel, the Bechtel Level II personnel, and the Authorized Code Inspector. Additionally, 50 of these radiographs were reviewed during this audit by a Bechtel Level III and were found to be acceptable.

Prepared a detailed procedure, perform actual demonstrations on the material to be radiographed and have approval from the Project Engineer and the Authorized Code Inspector.

11/1/76 PFOCE

Radiographic technique B1 Revision 0 was developed by actual performance demonstration. Approval by Project Engineering and the Authorized Inspector is not a G-27 procedure requirement, but rather the requirement is to "satisfy" those two agencies. This has been done in the following manner: copies of the technique were sent to Project Engineering on 9/29/76 M&QS, and the QA Vault copy has been made available to the Authorized Inspector.

HAS REVIEWED AND "SIGNED-OFF" VAULT COPY OF TECHNIQUE B1, REV. 0.

11-1-76 PFOCE B.T. Stejka 11/21/76

# QUALITY AUDIT FINDING

SF-5 (10-3-2)  
 AUDIT DATE  
 Nov. 9-11, 1976  
 AUDIT IDENT.  
 10-3-2

PROJECT/DEPARTMENT/SELLER dland Units 1 & 2		TYPE OF AUDIT Construction	XX FIELD OFFICE	AUDITOR G. A. Waldrop
AGENDA ITEM N/A	CHECKLIST ITEM 12.3	WHERE FOUND Quality Control Office	DISCUSSED WITH J. Connolly	
CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC. SF/PSP G-7.1 Rev. 2, Paragraph 5.1.4				
CITATION				

Para. 5.1.4 states: "The Project Field Quality Control Engineer or his designee shall review the Correspondence Control Log monthly to determine that timely response and follow-up action has been taken to obtain closeout."

FINDING

There is no objective evidence that the Correspondence Control Log was reviewed during the months of March, April, July, August and October, 1976.

The review for November was completed during the audit.

RECOMMENDED CORRECTIVE ACTION

Implement the review required by the controlling procedure. Instruct and indoctrinate personnel as required.

SCHEDULE COMPLETION DATE Nov. 19, 1976	RESPONSIBILITY FOR CORRECTIVE ACTION PFOCE
CORRECTIVE ACTION TAKEN	

APPROVED	SUBMITTED BY RESPONSIBLE AUTHORITY
CORRECTIVE ACTION VERIFIED BY SAS	
DATE	

QUALITY ASSURANCE PROGRAM

AUDIT DATE	11-22-76
AUDIT IDENT.	SA-6 (25-2-3)
AUDITOR	J. Hook
DISCUSSED WITH	T. Lieb

1 OFFICE/DEPARTMENT/CELLER	2 TYPE OF AUDIT	3 XX FIELD OFFICE
Land Units 1 & 2	Construction	
4 AGENCY ITEM	5 CHECKLIST ITEM	6 WHERE FOUND
N/A	2C	Test Lab
7 CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.		

8  
U. S. Testing, QA Manual UST-TQ-1 Page 9 Rev. 7

9  
**PROFICIENCY EVALUATION** "The qualifications of personnel to be certified in accordance with this procedure shall be determined by oral interview and practical demonstration to evaluate the candidates proficiency for each level of qualification in each major area of inspection which he is required to perform. The results of the oral interview and practical demonstrations shall be recorded on form number USTF-TQ-1.

10  
**LEVEL I REQUIREMENTS** States in part: Level I candidates shall be required to demonstrate his ability to satisfactorily perform in the area in which he is to be certified, using a nine subject checklist.

11  
**CONTRARY TO THE ABOVE:**

- A. There is no proficiency evaluation record for the Lab Chief (Level III)
- B. A Lab Technician (David Holzhausen) has been certified as a Level I in the area of steel (rebar); yet his proficiency evaluation report has an unsatisfactory under one of the nine subjects. (Subject No. 9 - The use and calibration control requirements for inspection and testing tools and instruments).
- C. Two Lab Technicians (R. MacBay & R. Duncil) have N/A's entered for three areas to be addressed as shown in para. 4.2b No. 2, 5, 9. Two additional Lab Technicians (W. Johnroe, and D. Herrick) have N/A's for "Treatment of Nonconformances" (Para. 4.2b No. 5).

- 12  
**RECOMMENDED CORRECTIVE ACTION**
1. Have UST provide proficiency evaluation for the Lab Chief.
  2. Have UST instruct D. Holzhausen in the requirements of "Calibration and Control of M/T Equipment" so that an acceptable evaluation can be indicated.
  3. Have UST perform proficiency evaluation in areas marked N/A for all Lab Technicians.
  4. Review all lab certification records to assure each technician has been properly certified and take necessary action to comply with the procedure.
  5. Require U.S. Testing to conduct additional training for implementation of procedure No. UST-TQ-1.

13 SCHEDULE COMPLETION DATE	14 RESPONSIBILITY FOR CORRECTIVE ACTION
1) 11-24-76; 2-5) 12-15-76	PFOCE

15  
CORRECTIVE ACTION TAKEN

16  
DATE

17  
COMPLETED

18  
SUBMITTED BY RESPONSIBLE AUTHORITY

19  
CORRECTIVE ACTION VERIFIED BY GAE

20  
DATE

# QUALITY AUDIT FINDING

AUDIT DATE  
11-22-76  
 AUDIT IDENT.  
SA-7 (25-2-3)

DEPARTMENT/SELLER Midland Units 1 & 2		TYPE OF AUDIT Construction	XX FIELD OFFICE	AUDITOR J. Hook
AGENDA ITEM N/A	CHECKLIST ITEM 2b	WHERE FOUND U. S. Testing Lab		DISCUSSED WITH T. Lieb
CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC. U. S. Testing QA Manual QCP-6, Rev. 1				

**QUOTATION**

Section V "Each newly assigned technician shall be provided with indoctrination to assure an understanding of the following topics as they relate to his assigned duties.

- 1) Organization of the project and the particular requirements of the jobsite.
- 2) The purpose of the Project's Quality Assurance Program and how it related to his duties.
- 5) The Project's technical specifications.

**FINDINGS**

- 1) The Batch Plant Inspector (D. Herrick) records indicate that he has not completed the indoctrination program and has not been instructed in Spec. 7220-C-230.
- 2) The remaining records for the five technicians checked do not indicate completion of two of the 5 required indoctrination areas. These technicians are D. Holzhausen, W. Johnroe, R. Duncil, R. MacDay and G. Skrede.

**RECOMMENDED CORRECTIVE ACTION**

1. Require U. S. Testing to complete the indoctrination requirements for all Laboratory Technicians.
2. Require U. S. Testing to provide additional training in the requirements of procedure QCP-6 to those personnel responsible for its implementation.

SCHEDULE COMPLETION DATE 1 & 2; 12-15-76	RESPONSIBILITY FOR CORRECTIVE ACTION PFQCE
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**CORRECTIVE ACTION TAKEN**

CORRECTIVE ACTION VERIFIED BY GAB	DATE
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# QUALITY AUDIT FINDING

AUDIT DATE	11-22-76
AUDIT IDENT. NO.	SA-9- (25-2-3)
AUDITOR	J. Hook
DISCUSSED WITH	T. Lieb

PROJECT/DEPARTMENT/BELLEN	TYPE OF AUDIT	XX WFLD OFFICE	
L. Land Units 1 & 2	Construction		
AGENDA ITEM	CHECKLIST ITEM	WHERE FOUND	
N/A	2D	U. S. Testing File	

CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.  
U. S. Testing QA Manual UST-TQ-1 Rev. 7

**I PURPOSE** "This procedure was written to provide assurance that U. S. Testing Co. personnel assigned to perform inspections, tests, and audits are fully training and qualified as required for their work on each project."

**III REQUIREMENTS** "The U.S. Testing Co. will assign only those personnel who are properly trained and qualified to perform the required service.... Records of the U.S.T. Personnel will be maintained at the Hoboken Office and at the site."

**FINDING**

CONTRARY TO THE ABOVE:

U. S. Testing supplied additional lab personnel on 11/17/76 to assist in the testing of concrete during a large pour.

technician (F. Rose) was observed by QA to have taken a slump test by rodding the top layer 10 times and rodding the entire depth of the cone. This technician also made cylinders from different sample in which the slump and % air were made, the cylinders were rodded 24 times layer. This testing method does not conform to ASTM C-143 (Slump) and ASTM C-31 (Cylinders).  
NOTE: Immediate corrective action was taken by QC to correct the testing errors. The cylinders made were for information only and do not represent a record test. All subsequent testing observed by QA after QC corrections were performed satisfactorily.

**RECOMMENDED CORRECTIVE ACTION**

1) Request U. S. Testing home office to evaluate the indoctrination and certification of this individual and retrain where necessary.

SCHEDULE COMPLETION DATE	RESPONSIBILITY FOR CORRECTIVE ACTION
12-15-76	PEOCE
CORRECTIVE ACTION TAKEN	

COMPLETED	SUBMITTED BY RESPONSIBLE AUTHORITY
CORRECTIVE ACTION VERIFIED BY QA	DATE

# QUALITY AUDIT FINDING

AUDIT DATE  
11-22-76  
AUDIT IDENT.  
SA-9 (25-2-3)  
AUDITOR  
J. Hook  
DISCUSSED WITH  
T. Lieb

DEPARTMENT/CELLER Midland Units 1 & 2		TYPE OF AUDIT Construction	XX FIELD OFFICE
AGENDA ITEM N/A	CHECKLIST ITEM 3c	WHERE FOUND U. S. Testing Lab File	
CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC. U. S. Testing QA Manual U.S.T.-TQ-1 Rev. 7			
QUOTATION			

V 1.4 Training Records - All training records, whether it be orientation/indoctrination, group lectures, one-to-one training, self-instruction or on the job training, shall be recorded.

Contrary to the above;

After interviewing several U. S. Testing Lab Technicians, it was found that the technicians were not aware of the requirement to document the material that they reviewed for self instruction. Only one record out of 8 reviewed indicated documentation of this self instruction.

NOTE: The interview indicated self instruction was being carried out in the lab but was not documented.

RECOMMENDED CORRECTIVE ACTION

- 1) Require U. S. Testing to reinstruct its personnel on all the requirements of the training program and emphasize the need for documenting self instructions.

SCHEDULE COMPLETION DATE 12/15/76	RESPONSIBILITY FOR CORRECTIVE ACTION PEOCE
CORRECTIVE ACTION TAKEN	

COMPLETED	SUBMITTED BY RESPONSIBLE AUTHORITY
CORRECTIVE ACTION VERIFIED BY GAE	
DATE	



# QUALITY AUDIT FINDING

AUDIT DATE  
11/15-22/76  
AUDIT IDENT.  
SA-10 (9-3-2)

DEPARTMENT/SELLER Midland Units 1 & 2		TYPE OF AUDIT Construction	XX FIELD OFFICE	AUDITOR R. C. Hollar
SENDER ITEM 9-3-P-1	CHECKLIST ITEM 2.1e	WHERE FOUND FCR Log	DISCUSSED WITH	

CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.  
SF/PSP G-2.1 Rev. 0 & FIP G-2 Rev. 3 Appendix A

NOTATION

SF/PSP G-2.1 Para. 4.2.2.7 " A field Change Request Log shall be maintained by the Document Controller as a master file..."

FIP G-2 Appendix A Para. 5 "Record the drawing and/or specification number and revision to which the Field Change Request applies."

NOISE

The Field Change Request Log does not consistently identify the revision level of the applicable drawings.

*EXAMPLES?*

RECOMMENDED CORRECTIVE ACTION

1. Correct the FCR Log by identifying the revision level of the applicable drawing as indicated on all outstanding FCR forms.

SCHEDULE COMPLETION DATE 12-22-76	RESPONSIBILITY FOR CORRECTIVE ACTION Project Superintendent
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CORRECTIVE ACTION TAKEN

DATE	SUBMITTED BY RESPONSIBLE AUTHORITY
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CORRECTIVE ACTION VERIFIED BY DATE

DATE



# QUALITY AUDIT FINDING

AUDIT DATE  
11-15/22-76

AUDIT IDENT.  
IS  
SA-11 (9-3-2)

DEPARTMENT/SELLER Midland Units 1 & 2		TYPE OF AUDIT Construction	FIELD OFFICE XXX	AUDITOR R. C. Hollar
ENDS ITEM 9-3-P-1	CHECKLIST ITEM 2.2	WHERE FOUND Applicable stick files for drawing C-409 Rev. 6	DISCUSSED WITH	

CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.  
SF/BSP G-2.1 Rev. 0 dated 9-24-76

- Para. 4.2.2.6 "Copies of the approved FCR shall be distributed per Sections 3.1, 3.2 and 4.1"
- Para. 3.2.1.4 "The Lead Discipline Engineer is responsible for reviewing the drawing for discrepancies, incorporations of DCNs/FCRs and correlation of references. Any deficiencies noted will be reported by IOM to the Project Field Engineer, except as noted in 3.1.3"

Inadequate control of Field Change Requests C-51 and C-67. Revision 4 of drawing C-409 stated: "FCR C-51 & C-67 not applicable to this drawing."

Contrary to this statement FCR C-51 and C-67 are currently attached to drawing C-409, Rev. 6 and distribution of these FCRs is indicated on the distribution card for drawing C-409, Rev. 6.

### RECOMMENDED CORRECTIVE ACTION

1. Remove FCRs C-51 and C-67 from drawing C-409, Rev. 6 currently on the stick files and up-date the applicable Print Control Card.
2. Develop a system that will assure that FCRs are only distributed to the drawings that they effect and will not be distributed or are recalled when no longer applicable.

SCHEDULE COMPLETION DATE 12-22-76	RESPONSIBILITY FOR CORRECTIVE ACTION Project Superintendent
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CORRECTIVE ACTION TAKEN

COMPLETED	SUBMITTED BY RESPONSIBLE AUTHORITY
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CORRECTIVE ACTION VERIFIED BY QA

DATE

# QUALITY AUDIT FINDING

AUDIT DATE  
11/15-22/76  
AUDIT IDENT.  
SA-12 (9-3-2)

DEPARTMENT/SELLER Midland Units 1 & 2		TYPE OF AUDIT Construction	XX FIELD OFFICE	AUDITOR R. C. Hollar
ISSUE ITEM 9-3-P-1	CHECKLIST ITEM 2.2	WHERE FOUND Resident Eng., Aux. #1, Cont. 1 & 2 & QC Files		DISCUSSED WITH
CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC. SF/PSP G-2.1 Rev. 0 dated 9-24-76				

- Para. 4.2.2.6 "Copies of the approved FCR shall be distributed per Section 3.1, 3.2 and 4.1"
- Para. 3.2.1.1. "Prints of new engineering drawings and revision shall be distributed in accordance with the Drawing Distribution List...."
- Para. 4.1. "...upon receipt of a DCN, the file sepia of the drawing so revised will be marked "DCN # \_\_\_\_" near the title block by the Document Controller."

The following FCRs were not identified and/or attached to the applicable stick file drawings:

DRAWING # & Rev.	STICK FILE	DISCREPANCY
C-409 Rev. 6	Resident Eng.	FCRs C-51 and C-57 was identified on dwg. but not attached.
C-205 Rev. 6	Aux. #1	FCR C-530 not identified or attached to dwg.

CONTINUED

- RECOMMENDED CORRECTIVE ACTION
- Review Print Control Card and applicable "Stick files for outstanding FCRs and bring them into agreement.
  - Determine the effects the findings described above may have had on completed work and take appropriate action if necessary.

SCHEDULE COMPLETION DATE 12/22/76	RESPONSIBILITY FOR CORRECTIVE ACTION Project Superintendent
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DATE 12/22/76	SUBMITTED BY RESPONSIBLE AUTHORITY
------------------	------------------------------------

CORRECTIVE ACTION VERIFIED BY QA	DATE
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BLOCK 11 continued

<u>Drawing # &amp; Rev.</u>	<u>Stick File</u>	<u>Discrepancy</u>
C-601 Rev. 0 C-602 Rev. 1	Cont. 2	FCR C-517 identified but not attached to dwg.; FCR C-517 attached to dwg. C-602 Rev. 1
E-536 Rev. 11	QC	FCR E-91 not identified on dwg but attached
E-536 Rev. 11	Cont. 1	FCR E-91 not identified on dwg but attached.

QUALITY ASSURANCE DISCREPANCY REPORT

101

4. ISSUE DATE

5-10-76

5. QAD PREPARED BY:

G. A. Waldrop

8. DISCUSSED WITH

T. J. Behres

1. PROJECT/DEPT./CONTRACTOR

Midland 1 & 2

2. POINT OF ORIGIN

FIELD

OFFICE

6. WORK PLAN DATE

N/A

7. CHECKLIST ITEM

N/A

8. WHERE FOUND

Document Control

10. CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.

FPG-8, Rev. 1 and FPG-1, Rev. 4

11. QUOTATION 1. FPG-8, Page 4, first paragraph: "The originator or author of inter-project correspondence must state in the "subject" that the letter is quality related."

2. FPG-8, Page 4, second paragraph: "Letters generated between Bechtel personnel within the project which are not quality related do not require registration in the correspondence log. Such letters shall pass uncontrolled within the system."

3. FPG-8, Page 8, Step 16: "Typing Pool, Insure that reference to original correspondence is contained in letter."

4. FPG-1, Page 1, paragraph 1: "This procedure establishes the methods and controls for drafting . . . field procedures . . ."

12. DISCREPANCY DESCRIPTION 1. This is not actual practice on the jobsite. (Examples: BCBE-747 of 4-15-76, BCBE-745 of 4-15-76 and BCBE-1103 of 4-20-76.)

2. This is not actual practice on the jobsite. All correspondence is controlled.

3. This responsibility should be included in step 15 as it is the responsibility of the "action assignee".

4. FPG-8, Rev. 1, does not conform to the requirements of FPG-1. (See Index page of FPG-8.)

13. RECOMMENDED CORRECTIVE ACTION

Review Field Procedure FPG-8. Bring the procedure requirements and actual practice into agreement. Revise FPG-8 to conform to project requirements for instruction for construction usage.

14. SCHEDULED COMPLETION DATE 07/09/76

15. RESPONSIBILITY FOR CORRECTIVE ACTION  
Project Superintendent

16. CORRECTIVE ACTION TAKEN

FPG-8, Rev. 2, Communication Procedure, "complete rewrite," has been issued and is being implemented.

17. DATE COMPLETED 8/27/76

18. SUBMITTED BY RESPONSIBLE AUTHORITY

19. CORRECTIVE ACTION VERIFIED BY QAE

20. DATE

11-2-76

AA0-86 9/17/74

4. ISSUE DATE

8/18/76

QA02-120

1. PROJECT/DEPT./CONTRACTOR

MIDLAND 1 & 2

2. POINT OF ORIGIN

FIELD

OFFICE

5. OAI PREPARED BY:

D. T. Stojkov

6. WORK PLAN DATE

N/A

7. CHECKLIST ITEM

N/A

8. WHERE FOUND

Receiving Inspection

9. DISCUSSED WITH

10. CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.

NOAM, Section III, Number 4, Paragraph 2.0

11. QUOTATION

Paragraph 2.0 states in part: "Procurement Inspection performs source surveillance during the manufacturing process and reviews supplier quality verification documentation prior to shipment."

12. DISCREPANCY DESCRIPTION

The following NCRs (copies attached) have been issued as the result of nonconformances identified during receipt inspection of shipments of pipe spools from ITT Grinnell, Kernersville, N.C.: 431, 437, 438, 439, 440, 447, 448, 451, 452, 466, 467, 476 and 488. These nonconformance reports deal primarily with incomplete quality verification documentation and shipping damage which may be the result of inadequate documentation review and shipping preparation - both areas normally covered by Procurement Inspection.

13. RECOMMENDED CORRECTIVE ACTION

1) Determine the cause of these repeated nonconformances. 2) Take corrective action as indicated to prevent recurrence.

14. SCHEDULED COMPLETION DATE

9/20/76

15. RESPONSIBILITY FOR CORRECTIVE ACTION

Project Procurement Manager

16. CORRECTIVE ACTION TAKEN

See attached memo L. D. Sokol to G. L. Richardson dated 9/24/76.

AND P.L. CASTLEBERRY FAX TO GRINNEL DATED 9/17/76

17. DATE COMPLETED

9/24/76

18. SUBMITTED BY RESPONSIBLE AUTHORITY

Louis Sokol

19. CORRECTIVE ACTION VERIFIED BY OAI

Brent T. Stojkov

20. DATE

11/9/76

AA0-06 9/17/74

RECEIVED  
 SEP 27 1976  
 BECHTEL POWER CORP.  
 JOB 7220

Bechtel Power Corporation  
 Inter-office Memorandum

To: G. L. Richardson *SW T-76-82* Date: September 24, 1976  
 Subject: QADR-130 From: L. D. Sokol  
 NCR's on ITT Grinnell Pipe Spools Of: Procurement  
 Copies to: C. Buhl J. Klacking At: Ann Arbor  
 R. Castleberry P. Martinez  
 J. Connolly J. Milandin  
 K. Dotterer J. Newgen  
 A. Horner

QA ROUTE	INFO	ACT.
QA		
CIVIL	<i>[initials]</i>	
ELEC.	<i>[initials]</i>	
MECH.		<i>[initials]</i>
PIPING	<i>[initials]</i>	
FILE	02210	

1. The NCR's written against 7220-M-104A-AC were the subject of a meeting at Ann Arbor. The Messrs. Castleberry, Milandin, Klacking, Keenan, Rothwell, Dotterer and the writer attended on September 2, 1976. The following actions have been taken to identify, correct and preclude reoccurrence.
  - a) Three of the thirteen referenced NCR's are for missing venturi assemblies. Action to correct the problem of the missing venturi was completed by Engineering by placing a hold on the spools at the site and by directing ITT not to ship other spools requiring venturi assemblies.
    - 439 }  
451 }  
467 }
  - b) Two NCR's related to damage piping which, in view of the extent of damage, most likely happened during shipment and/or double handling. Some spools received during that time frame had been stored in a temporary off-site area during the strike. Procurement is not able to establish measures which can correct or prevent such damage.
    - 466 }  
476 }
  - c) Two NCR's involved an incorrect data plate. One error involved one letter and the other, one number. In view of the large volume of spools being shipped, the marking errors are not significant. No action can be taken to prevent human errors and reoccurrence of sporadic nameplate errors may continue. However, the errors will be noted.
    - 438 }  
488 }
  - d) One NCR covers loose material, 26" 90° ells, shipped from a sub supplier via ITT to Midland. Engineering advised Procurement Inspection on 4/23/76 that the only inspection required for that material was to ensure that caps were on flanges, MTR's and code compliance. More specific instructions from ITT to their sub-supplier and a firmer policy by ITT regarding sub-supplier performance will preclude reoccurrence of NCR's of this nature.
    - 459
  - e) The remaining five NCR's relate to documentation in one way or another. Two full-time inspectors are now assigned to ITT at Kernersville with the part-time assistance of a third inspector available during peak periods. Since the total of NCR's relating to Procurement Inspection
    - 431 }  
437 }  
446 }  
447 }  
448 }

responsibility is rationally reduced to five and, in view of the recent spool ship rate of approximately 250 per month, the rate of NCR's does not appear to be excessive.

2. The meeting referenced in paragraph No. 1 established several action items which may impact on the final closing of this QADR. Project Quality Assurance set October 1 as the deadline for these action items. An addendum to this memorandum will be issued to incorporate appropriate comments effecting NCR's referenced in QADR-130.

LDS/nar

*L. D. Sokol*  
L. D. Sokol





QUALITY ASSURANCE DISCREPANCY REPORT

SD-3

4. ISSUE DATE

10/7/76

5. QAD PREPARED BY:

G. A. Waldrop

6. DISCUSSED WITH

T. Valenzano

PROJECT/DEPT./CONTRACTOR

Midland Units 1 & 2

2. POINT OF ORIGIN

FIELD

OFFICE

5. WORK PLAN DATE

N/A

7. CHECKLIST ITEM

N/A

8. WHERE FOUND

Material Staging Area

10. CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.

SF/PSP G-3.2, Revision 1

11. QUOTATION

SF/PSP G-3.2 in para. 4.5.1 states: "Each NCR shall be given a disposition which is the action required to correct or resolve a nonconforming item."

SF/PSP G-3.2 in para. 4.6.3 states: "Each dispositioned NCR shall be reviewed...prior to implementing the action required...."

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NOV 19 1976  
SCHEDULE POWER CORP  
JOB 7200

12. DISCREPANCY DESCRIPTION

NCR-545 reported damage to four Polar Crane Girder Support Brackets. Although the NCR was not dispositioned, and QC Hold Tags were clearly visible, efforts were made to repair an area of damage using sufficient heat to destroy the coating in the damaged area.

QA	NO	ACT
QA		
LOAE	2	
CIVIL		
ELCC		
ASCH		

13. RECOMMENDED CORRECTIVE ACTION

1) Obtain disposition of NCR-545 and evaluate the effect of the unauthorized repairs already accomplished. 2) Determine the circumstances under which the unauthorized repairs were initiated and instruct appropriate personnel, including supervision, of the requirements of SF/PSP G-3.2 to prevent recurrence.

14. SCHEDULED COMPLETION DATE

Nov. 12, 1976

15. RESPONSIBILITY FOR CORRECTIVE ACTION

Project Superintendent

16. CORRECTIVE ACTION TAKEN

1. NCR 545 has been dispositioned. There were no adverse effects as a result of the unauthorized repairs.

The Superintendent inadvertently began repair prior to receipt of the approved NCR 545

17. DATE COMPLETED

11/18/76

18. SIGNED BY RESPONSIBLE AUTHORITY

G.A. Waldrop T.C. Valenzano

continued on next page.

19. CORRECTIVE ACTION VERIFIED BY QAD

20. DATE

11-23-76

Block #16 continued

To preclude a recurrence of this incident, a meeting was held on September 30, 1976 and all cognizant personnel were instructed on the requirements of SF/PSP G-3.2 as applicable to this project (Training Session BT 102).

QUALITY ASSURANCE DISCREPANCY REPORT

3. QAD IDENTIFICATION

SD-4

4. ISSUE DATE

10-8-76

5. QAD PREPARED BY:

Jon G. Hook

6. DISCUSSED WITH

H. Foster  
T. Lieb

1. PROJECT/DEPT./CONTRACTOR

ISLAND UNITS 1 & 2

2. POINT OF ORIGIN

FIELD

OFFICE

6. WORK PLAN DATE

N/A

7. CHECKLIST ITEM

N/A

8. WHERE FOUND

Q.C. Files

10. CONTROLLING DOCUMENT, SECTION, PARAGRAPH, ETC.

7220-C-208 Rev. 7 Para. 7.3.1

11. QUOTATION

Para. 7.3.1 states in part: Samples for aggregate testing "shall be taken as aggregate drops from the bins or weight-hoppers ... or other designated locations."

12. DISCREPANCY DESCRIPTION

Contrary to the above samples for aggregate users tests are taken from the aggregate stockpiles. This location of tests has not been designated and is the least desirable of all sampling locations. (Ref. ACI SP-2 pages 66-68) In addition there is no assurance the sample represents the materials batched for the 2500 cu. yd. period.

13. RECOMMENDED CORRECTIVE ACTION

1. Issue an NCR to cover these samples and concrete represented. 2) Determine acceptable area for tests and instruct U. S. T. accordingly. 3) Require training on No. 2 by U.S.T.

14. SCHEDULED COMPLETION DATE

11-12-76

15. RESPONSIBILITY FOR CORRECTIVE ACTION

PFQCE

16. CORRECTIVE ACTION TAKEN

SEE ATTACHED LETTER QCFM-2576

17. DATE COMPLETED

18. SUBMITTED BY RESPONSIBLE AUTHORITY

19. CORRECTIVE ACTION VERIFIED BY

*Jon G. Hook*

20. DATE

11-29-76

Bechtel Power Corporation

Interoffice Memorandum

To: G. L. Richardson  
Subject: Response to Q.A.D.R. No. SD-4  
QCFM-2516

File No.  
Date: October 26, 1976

From: J. P. Connolly  
Of: Quality Control

Copies to: J. E. Russell

At: Midland, MI. Job No. 07220 Ext.

Specification C-208 paragraph 7.3.1 states "Samples shall be taken as aggregate drops from the bins or weight hoppers in the Batch Plant or from other designated locations". The design of the on-site Batch Plant is such that samples can not be obtained when aggregate drops from the bins or weight hoppers. Therefore, other sampling locations have been used. For gradations and moistures that are performed on a daily frequency during concrete production, aggregate is sampled from the conveyor belt between the bin and the weight hopper.

For Users Tests, the stockpiles have been the point of sampling. This choice was made because Users Tests are generally sampled during non-production times. It must be realized that the total sample of coarse aggregate weighs approximately 135 kilograms and to sample this during a pour would be an unnecessary and undesirable delay in production.

Although A. C. I. SP-2 states sampling from conveyors or from the discharge opening bins is preferable, it does allow stockpile samples. We also feel that the required Users Tests (L.A. Rattler, Potential Reactivity and Soundness) will not be adversely affected by this sampling method as might be the case of a Gradation Test. Ref. A.S.T.M. D75-71 3.3.3.

The assurance that the sample represents the material batched for the 2,500 cu. yd. period has been accomplished by sampling the area of each stockpile where Champion is pulling aggregate at the time.

If there are any questions please contact me.

RECEIVED  
OCT 27 1976

RESPONSE REQUIRED

BECHTEL POWER CORP.

JOB 7220

PER SW I-76-94

JPC/TRL/fis

J. P. Connolly  
PFGCE

QA ROUTE	INFO.	ACT.
LC&E	<i>M</i>	
CIVIL		
MECH.		
PIPING		
FILE		



# QUALITY ACTION REQUEST

From: J. G. Hook (Q.A.) Midland Units 1 & 2 Project Job 7220		①
To: J. Newgen	② Control Document ref.: 7220-C-231, para. 13.2.4	③ QAR Ident. No.: SD-8
Action Requested: Since winter curing for concrete began on Oct. 19, 1976, four Q-listed concrete pours were made. Three of these pours have nonconformance reports written against them for inadequate curing under winter conditions (Ref. No.'s 580, 581 & 582). In addition NCR-584 was written for improper winter curing of grout for base plates. An additional NCR is being processed due to inadequate cure for dowels that were grouted. On May 19, 1976 concern for winter curing of concrete was expressed by CPCo QA (Ref. letter Corley to Newgen 55FOA76) and a reply was made to CPCo QA on 7-1-76 (Ref. letter BCCC-1800). Evaluation of the response to CPCo QA must be made and additional positive actions to preclude repetition of the curing problems should be initiated by 11-8-76.		⑤
Signature: <i>J. G. Hook</i>	⑥ Date: 11-3-76	⑦ Reply Requested by: 11-17-76
Reply Note: NCR 584 and 589 closed-curing of grouting was in compliance with the latest manufacturers instructions. NCR's 580, 581 & 582 are linked to initial start-up difficulties with the vaporizer unit installed during the summer. It is now operating at full capacity and there have been <sup>FURTHER</sup> no problems with curing temperatures to date. In addition to the steps outlined in the above mentioned letter, the following steps have been taken to preclude nonconforming curing conditions:		⑨
Signature: <i>W. B. Boor for T. ...</i> Action Verified: <i>J. G. Hook</i>		⑩ Date: Nov. 17, 1976
		⑫ Date: Nov. 29, 1976
8/2/74 WHITE - Return to sender BPC 20877 G1001649-05		CANARY - Addressee's file PINK - Sender's file FILE

Quality Action Request

QAR Ident. No. SD-8

9. Reply: continued from page 1

- 1) Concrete temperatures are checked 24 hrs. a day by laborers. This is done by assigning one laborer per shift to check the concrete temperatures. Depending on the number of pours on cure, it takes the laborer 1 to 2 hours to check all the pours. This provides a constant monitoring system to correct problems with the heaters before they drop to the minimum curing temperatures. This practice will be continued only as long as required to establish confidence in the winter curing system.
- 2) As in the past months a field engineer will be in on week-ends and holidays, as required by the schedule, to monitor curing of concrete.
- 3) FCR's C-558 and C-562 have been generated to change the criteria by which some curing conditions, not detrimental to the concrete quality, are currently being identified as nonconformances. These changes are currently being evaluated by Project Engineering.



QUALITY ACTION  
REQUEST

From: B. T. Stojkiv		①				
To: J. F. Newgen	② Control Document ref.: WFMC-1 Rev. 1	③ QAR Ident. No.: SD-1	④			
Action Requested: NCR-538 identifies a nonconforming weld (FW-10, dwg. M-610, sh. 7) resulting from a welder having two different classifications of weld rod (309L-16 and 309L) in his possession in the same rod warmer. This is contrary to the requirements of WFMC-1, Paragraph 6.7. Please initiate whatever corrective actions considered appropriate to preclude recurrence of this procedure violation.		⑤				
Signature: B. T. Stojkiv		⑥	Date: 11-11-76	⑦	Reply Requested by: 12-10-76	⑧
Reply:		⑨				
Signature:		⑩	Date:	⑪		
Action Verified:		⑫	Date:	⑬		

8/2/74

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G1001649-05



# QUALITY ACTION REQUEST

From:	B. T. Stojkov (QA)	Midland Units 1 & 2	Job 7220	①
To:	J. F. Newgen	Control Document ref.:	QAR Ident. No.:	
		②	③	④
		NOAM, Rev. 9; FPG-9, Rev. 4	SD-11	
Action Requested:	The NOAM, Section III, Number 11, Field Procurement, is scoped to include the requirements of the procurement of both materials and services. Field Procedure FPG-9, Preparation of Field Material Requisitions, responds to the requirements of Paragraph 3.2 of NOAM, Section III, Number 11; but is not scoped to cover the procurement of services. No mention is made of services in Section 1.0, Scope, or elsewhere in the procedure. Field material requisitions are being written for services (FMR C-2280 for rebar testing). It is requested that the scope of FPG-9 be expanded to include the procurement of services. This should be stated in Section 1, Scope; and any special requirements stated in the appropriate procedure sections.			⑤
Signature:	<i>B.T. Stojkov</i>	Date:	Reply Requested by:	
		⑥	⑦	⑧
		11/12/76	12/13/76	
Reply:				⑨
Signature:			Date:	
			⑩	⑪
Action Verified:			Date:	
			⑫	⑬

8/2/74

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G1001649-05

# QUALITY ACTION REQUEST

From: J. G. Hook      QA-Midland Site      Job 7220		①
To: J. F. Newgen	② Control Document ref.: 7220-C-231 Rev. 11	③ QAR Ident. No.: 30-12
Action Requested: Section 11.6 states: "Concrete shall not be allowed or caused to flow a distance within the mass of more than 5 feet from point of deposition." Contrary to the above; for pour SWI(592.0)a, the slick lines and the valves were placed between 11 and 13 feet apart. In one area, other areas exceeded 10 feet. See attached sketch for layout. This problem was previously identified by QA and corrected on 11-2-76.		⑤
Take action to assure all subsequent pumping setups will be such as to allow the intent of the specification to be met. (valves or down pipes should not exceed 10 feet at maximum spacing). If this requires further clarification of the specification requirement, obtain this clarification from Project Engineering.		
Signature: <i>J. G. Hook</i>	⑥ Date: 11-17-76	⑦ Reply Requested by: 12-10-76
Reply: <i>[initials]</i>		⑧
Signature: _____		⑩ Date: _____
Action Verified: _____		⑫ Date: _____
		⑬

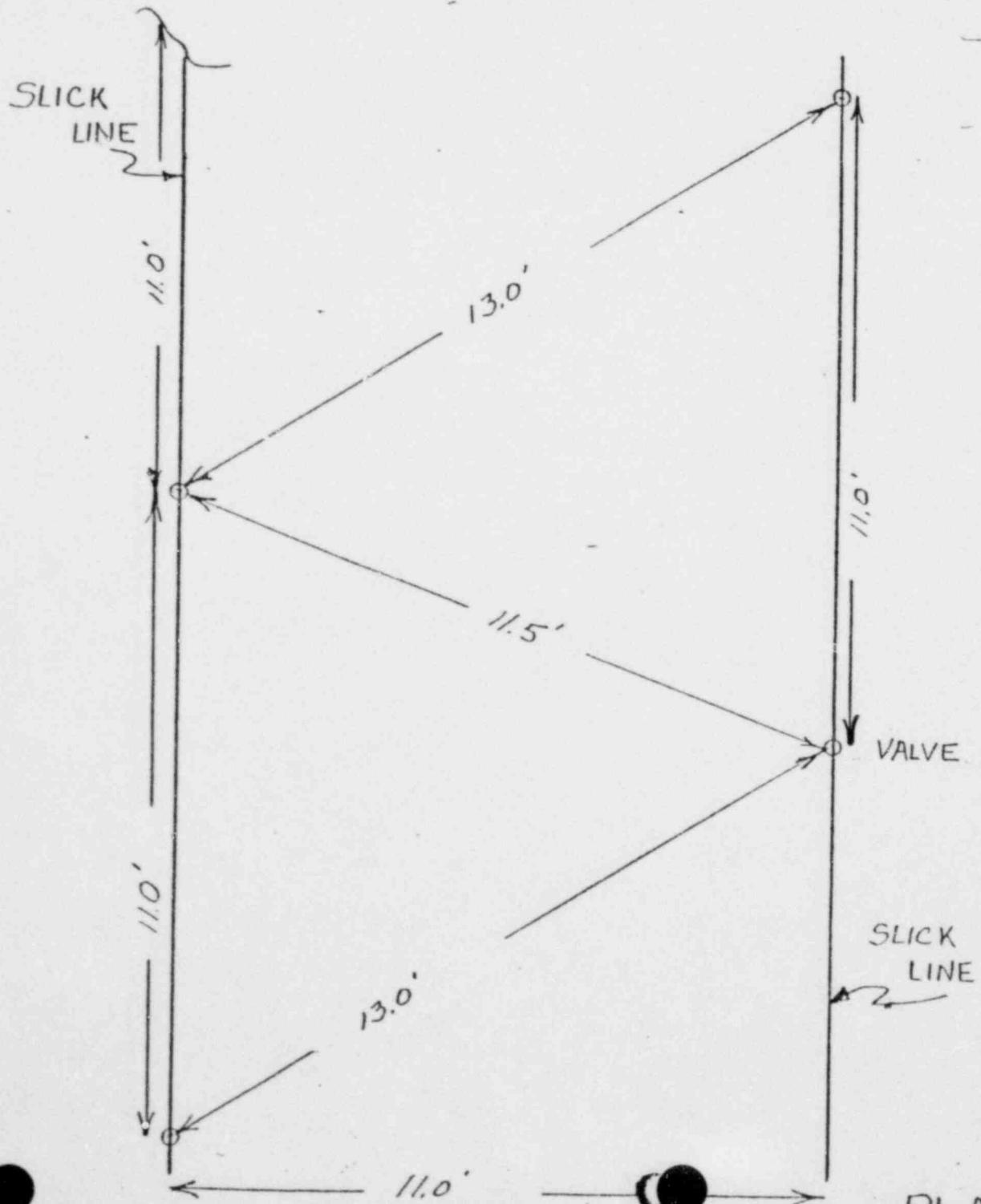
8/2/74

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BPC 20877  
G1001649-05



PLAN VIEW

# QUALITY ACTION REQUEST

From:	G. L. Richardson	Site QA	Midland Job 7220	①
To:	R. Castleberry/ J. Connolly	② Control Document ref.:	③ QAR Ident. No.:	④
		Applicable Drawings	SD-14	
Action Requested:	⑤ Described below are two conditions where welding of Hanger Assemblies are not as shown on the design drawings in that extra welds have been provided or the weld is excessive in size. Limits for weld sizes could not be identified by the field forces other than minimum limits.			
	Hanger 12-2HCB-5-H4 is questionable because the weld which connects pieces 2 and 3, (Shop Weld #1 on Grinnell drawing 2-613-4-22) is welded all the way around while the drawing only shows fillet welds on the outside of the flanges and both sides of the web.			
	Hanger 24-1HCB-2-H6 is questionable because the field weld which joins pieces No. 2 and 3 (Grinnell drawing 1-610-3-6) is not made in accordance with the detail shown on the drawing. The typical end connection detail specifies a 3/16 (CONTINUED)			
Signature:	<i>G. L. Richardson</i>	⑥ Date:	⑦ Reply Requested by:	⑧
		11/29/76	12-29-76	
Reply:	⑨			
Signature:	⑩		Date:	⑪
Action Verified:	⑫		Date:	⑬

8/2/74

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PINK - Sender's file

BPC 20877  
G1001649-05

ACTION REQUESTED BLOCK:

inch fillet weld on the top, bottom, and one edge of piece 3, while the actual weld was approximately 1/2 inch which filled the entire space between the edges of piece 3 and the web of piece 2. This weld incorporated the flange edge and top and bottom of piece 2.

Conversation with Project Engineering on 11/24/76 indicated that the two welds in question were acceptable even though they were not identical to the welds specified on the drawings.

Based on the above comments the following actions are requested:

- 1) Project Engineering should evaluate the need for more definition and direction on acceptable weld limits for hanger welding (and other structural welding) and provide this information to construction using normal program methods.
- 2) Based on the information provided by Project Engineering, Quality Control should evaluate the acceptability of hanger welds previously accepted and evaluate the acceptance criteria used to accept these welds. This criteria should be revised if necessary.

# QUALITY ACTION REQUEST

**RECEIVED**  
DEC 1 1976  
JOB FILE

From: G. A. Waldrop		Site: OA	Midland Job 7220	①																					
To: J. P. Connolly	② Control Document ref.: SF/PSP G-3.2	③ QAR Ident. No.: SD-15		④																					
Action Requested:				⑤																					
During a scheduled QA surveillance, pipe hanger 4-2HCB-21-H1 (Grinnell sketch No. 2-613-4-24) was found to have one field weld missing although the hanger was accepted by QC on IR M326-148W. After discussion with QC, NCR-604 was issued to obtain corrective action.																									
CORRECTIVE ACTION REQUIRED:																									
(1) QC reinspect a sufficient number of hangers to determine whether this is an isolated instance.																									
(2) QC conduct additional training of the individual responsible to preclude recurrence.																									
Signature: <i>G.A. Waldrop</i>	⑥ Date: 11-19-76	⑦ Reply Requested by: 12-17-76.		⑧																					
Reply: The following corrective action has been taken:				⑨																					
1. The hanger described in NCR-604 was the first installation attempt to be made on hangers by the QCE involved. The QCE had some difficulty interpreting where the weld symbol was designating the weld to be made. Consequently, this is considered to be an isolated instance. To further substantiate our rationale, QC has re-checked ten additional hanger and support installations and found no missing welds.																									
2. The QCE involved received individual instruction from the LWQCE, and a special training session was given for all Welding QCE's (Ref. QCFM 2625) concerning NCR-604.																									
			<table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td>QA</td> <td>INSP.</td> <td>ACT.</td> </tr> <tr> <td>ROUTE</td> <td></td> <td></td> </tr> <tr> <td>LQAE</td> <td></td> <td></td> </tr> <tr> <td>CIVIL</td> <td></td> <td></td> </tr> <tr> <td>ELEC.</td> <td></td> <td></td> </tr> <tr> <td>MECH.</td> <td></td> <td></td> </tr> <tr> <td>PIPING</td> <td></td> <td></td> </tr> </table>		QA	INSP.	ACT.	ROUTE			LQAE			CIVIL			ELEC.			MECH.			PIPING		
QA	INSP.	ACT.																							
ROUTE																									
LQAE																									
CIVIL																									
ELEC.																									
MECH.																									
PIPING																									
Signature: <i>J.P. Connolly</i>	⑩ Date: 11-30-76			⑪																					
Action Verified: <i>G.A. Waldrop</i>	⑫ Date: 12-6-76			⑬																					

8/2/74

WHITE - Return to sender

CANARY - Addressee's file

PINK - Sender's file

BPC 20877  
G1001649-05

FILE










# QUALITY ACTION REQUEST

From: B. T. Stojkov                      QA-Midland                      Job 7720		①
To: J. Newgen/J. Connolly	② Control Document ref.: NOAM, Rev. 9	③ QAR Ident. No.: SD-13
Action Requested: The NOAM Section III, Number 11 states: "The Project Engineer is responsible for establishing the technical and quality requirements for all Q-listed materials and services and providing these requirements to Field Construction. Project Field Engineering prepares Field Material Requisitions (FMRs) incorporating appropriate requirements supplied by Project Engineering." This Program requirement is clarified in M.M. Krout's IOM of 3/8/74 covering approval of Quality Assurance programs for field purchased "Q-list" materials, equipment and services. This IOM states in part: 4) Project Engineering will evaluate Supplier/Subcontractor Q.A. Programs for "Q-list Materials, Equipment or Services at the "bid stage."  5) Project Engineering will ap		⑤
Signature: <i>B. T. Stojkov</i>	⑥ Date	
Reply:		
Signature:		
Action Verified:		


MEMO FROM  
B. T. STOJKOV
11/22  
TO:
DATE

FILE,

NOTE THAT NOAM SEC. III, NO. 11 IS QUOTED NOT THE CURRENTLY APPLICABLE PROJECT AMENDMENT. THIS WAS DONE BE CAUSE THE PROJECT AMENDMENT IS IN THE PROCESS OF BEING VOIDED. SEE MANAGEMENT AUDIT FINDING SMA-3 RESPONSE CLR-11-76-314.

*B.T. Stojkov*

ACTION REQUESTED:

- 6) No work covered by the manual will be performed prior to approval of the manual.

Further, SF/PSP G-1.1, lists among the PFQCE's responsibilities "Assure the requisitions and resultant field purchase orders contain a Project Engineering specification governing applicable Q.A. requirements."

Contrary to the above, neither FMR C-2280 nor consequent purchase order 7220-F-3082 for rebar testing services incorporated Project Engineering established Quality Assurance Program requirements to be met by the Supplier. Both the FMR and P.O. were reviewed and signed by Quality Control as meeting quality program requirements.

Also contrary to the above, FMR CC-2248 for fabrication service on Bechtel furnished Q-List material makes no mention of quality requirements to be met by the Supplier. This FMR was reviewed and signed by Q.C.

It is our understanding that in the first instance the rebar testing supplier, R. W. Hunt Co., has submitted a Q.A. Manual and it is being reviewed by Project Engineering. We understand further that no work will be performed until the Q.A. Manual is approved. In the second instance, the supplier selected to perform the fabrication, Wiltse & Co., has had his Quality Assurance Manual approved by Project Engineering for use in conjunction with other orders.

As a consequence of the above we request the following actions:

- 1) The subject FMR's and consequent purchase orders be revised to incorporate the necessary supplier quality program requirements.
- 2) Provide training to those individuals reviewing FMR's and purchase orders (Lead Discipline Engineers, Quality Control Engineers, etc.) as to supplier quality program requirements to be met in conjunction with the procurement of Q-Listed material and services.

# Bechtel Power Corporation

## Inter-office Memorandum

R. L. Castleberry  
J. F. Newgen

Date November 2, 1976

Subject

Midland Project - Job 7220  
MCAR 14 - Missing Rebar  
Reactor Building Exterior Wall  
File: 904

From J. M. Klacking

Of Quality Assurance

Copies to

TM Leverette  
JB Violette  
JM Landin  
PAMartinez

RHermeston  
EARumbaugh  
DRJohnson

At Ann Arbor  
6 (B) Section 1

The attached Management Corrective Action Report number 14 requires action by Project Engineering and Construction Management. A response date of November 30, 1976 is necessary to provide timely resolution. If you have questions please contact me.

*J. M. Klacking*  
J. M. Klacking

JMK/HAW/jc  
HQA-830

Attachment

bcc: GLRichardson  
HWSlager (MCAR 14 only)

QA ROUTE	INFO.	ACT.
LQAE	<i>JK</i>	
CIVIL	<i>JK</i>	
ELEC.	<i>JK</i>	
MECH.	<i>JK</i>	
PIPING	<i>JK</i>	
FILE	2100	

# 14

# RECEIVED

NOV 04 1976  
BECHTEL POWER CORP.  
JOB 7220

PER *SW*



QUALITY ASSURANCE PROGRAM  
 MANAGEMENT CORRECTIVE ACTION REPORT  
 MCAR-1

REPORT NO. 14  
 DATE November 2, 1976

OB NO. 7220 Q NO. 1.103

\*DESCRIPTION (Including references):

Bechtel NCR-577 (attached) describes a condition where 23 additional #11 vertical rebars were omitted from Reactor Building No 2 exterior wall. This condition was not noted by Field Engineering or Field Quality Control during their checkouts for installation. Field Engineering discovered this condition two (2) days after embedment while preparing for the next rebar placement. The fabrication drawing which detailed the rebar (C-39-E68C) was not referenced on the placement drawing lists prepared by Field Engineering and Quality Control prior to rebar checkout

\*RECOMMENDED ACTION (Optional)

(continued)

1. It is understood that the embeds requiring the 23 additional rebars were deleted. How and when was this determined and documented.
2. Verify that required interface controls were initiated to have the Civil Drawings revised (deleting the additional rebars) to reflect the embed deletions.
3. Field Engineering and Quality Control should implement the proposed method of acceptance inspections which will utilize design drawings for acceptance of rebar.

(continued)

REFERRED TO  ENGINEERING  CONSTRUCTION  QA MANAGEMENT

ISSUED BY [Signature] 11/2/76  
 Project QA Engineer Date

II. REPORTABLE DISCREPANCY  
 NO  YES

NOTIFIED CLIENT \_\_\_\_\_ Date \_\_\_\_\_  
 Project Manager \_\_\_\_\_ Date \_\_\_\_\_

III CAUSE  
  
 CORRECTIVE ACTION TAKEN  
  
  
  
  
  
  
  
  
  
 AUTHORIZED BY \_\_\_\_\_ Date \_\_\_\_\_

- DISTRIBUTION:
- Project Manager
  - Construction Manager
  - Engineering Manager
  - Project Engineer
  - Supt. / Proj. Const. Mgr.
  - P & I Procurement Mgr.
  - Chief Field QC Engineer
  - or Procurement Insp. Mgr.
  - QA Supervisor
  - Client

Div QA Manager  
 Mgr of QA-TPO

FORMAL REPORT TO CLIENT \_\_\_\_\_ Date \_\_\_\_\_  
 (If Section II Applies)

CORRECTIVE ACTION IMPLEMENTED

VERIFIED BY \_\_\_\_\_ Date \_\_\_\_\_  
 Project QA Engineer

\*Describe in space provided and attach reference document.

November 2, 1976

DESCRIPTION (Continued)

(during August, 1976). Preliminary investigations have resulted in the following possible causes:

- a. Vendor drawing C-39-E68C was not distributed to Quality Control when it was first given a Level III approval.
- b. Vendor drawing C-39-E68C was distributed on 10/4/76 but was not added to the placement drawing lists for the effected placement by Quality Control. Field Engineering had included the drawing on a preliminary list but failed to include it on the final list.
- c. The design drawing, C-602, which also called out the rebar was referenced by both Field Engineering and Quality Control but apparently was not used during the acceptance inspections.

RECOMMENDED ACTION (Continued)


4. Quality Control should develop a system to assure that the placement drawing list will be updated as required to reflect new or revised drawings.
- Field Engineering should determine why their placement drawing list was not updated in accordance with field procedure FIC-11 when the fabrication drawing was distributed on 10/4/76. Based on this determination appropriate action in the areas of procedure revision or personnel training should be initiated where required.



CONFORMANCE REPORT

1. Project Name <b>Midland</b>		Job No. <b>7220</b>		19. No. <b>577</b>	20. Page <b>1</b>
2. Unit(s) <b>2</b>	3. Drawing/RXXXX <b>C-602</b>	Rev <b>1</b>	4. Item Description <b>Exterior Wall Reinforcing Bar</b>		
6. P.O. Or Spec No. <b>NA</b>	7. Serial No. <b>NA</b>	8. Replacement Part <b>NA</b>	9. Source <b>Construction</b>	10. Contractor/Supplier <b>NA</b>	
11. Inspection Criteria <input checked="" type="checkbox"/> DWA <input type="checkbox"/> SPEC <input type="checkbox"/> OTHER		12. ASME AUTHORIZED INSPECTION REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	13. SKETCH ATTACHED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		14. Discovered During <input checked="" type="checkbox"/> REC'G <input checked="" type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG
18. Nonconforming Condition: <b>Design Drawing C-602 and Vendor Drawing E68C show 23 #11 additional verticals @ 16" starting at 673'-1" and extending to E1, 688'-6" from approximately 310° to 360°. Contrary to the above, these bars were not installed. This condition was noted during inspection. The "Q" number is 1,103. Work may not proceed pending Project Engineering Disposition. QC Hold Tags applied.</b>		15. Equip Furnished <input type="checkbox"/> REC'G <input type="checkbox"/> CONST <input type="checkbox"/> TEST <input type="checkbox"/> CLIENT <input checked="" type="checkbox"/> ENG			
17. Reported By <i>[Signature]</i> Date <i>11-22-76</i>		18. Validated By <i>[Signature]</i> Date <i>11-22-76</i>			
21. Routing <input checked="" type="checkbox"/> TO FIELD ENGINEERING		<input type="checkbox"/> TO OTHER'S INSPECTION			
22. <input type="checkbox"/> Field Engineering Disposition		<input checked="" type="checkbox"/> FIELD ENGINEERING RECOMMENDED DISPOSITION TO PROJECT ENGINEERING			
Use as is.					
23. Project Engineering Disposition					
25. Disposition Results					
26. QC Acceptance					
		QC ENGINEER		DATE	
		AUTHORIZED INSPECTOR		DATE	

*Handwritten notes:*  
 11/22/76  
 for [unclear]

Route To	This Copy For		File	16.3.4 & 16.3.6
CQUillis	SHilowell		Issue Date	September 1, 1976
HSIager	GSKeeley	NONCONFORMANCE REPORT NO. QF-114	Project	Midland 1 & 2
FMSouthworth	TCooke		File Title	NCR's on Bechtel Construction & Quality Control
	INKLacking			
	GLRichardson			

This Nonconformance Report is Issued To:

J. F. Newgen  
Bechtel Project Superintendent

J. P. Connolly  
Bechtel Project Field QC Engineer  
who is responsible for corrective action.

Prepared By RPW/RLB Date 9/1/76

Approved By J. P. Connolly Date 9/1/76

Written Reply Requested By Date 9/15/76

Corrective Action Requested By Date 9/15/76

Nonconformance Description and Supporting Details:

Concrete pour CC(592.5)a has been identified as having rebar omitted because of a discrepancy between the Project Engineering approved vendor drawing and the design drawing. Also, the detailing on the vendor drawing does not clearly give a location, or orientation for the additional #11 rebar called for adjacent to the access pipe in the reactor pedestal. Despite the lack of clarity of detailing of the additional rebar called for on vendor drawing E-38 Bechtel construction, field engineering and QC proceeded to prepare for the pour without clarification from Project Engineering. This is contrary to General Instruction No. 4 in PQCI C-1.20, Rev. 0 which is the instruction for QC activities during concrete preplacement operations. (Contd)

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_

Recommended Corrective Action:

Re-emphasize to the personnel involved the importance of using all the information available to them and getting clarification on any detail that is not clear on a drawing.

1 Corrective Action Taken: Training session BT-75 was held 9/10/76 for civil field engineers to emphasize the importance of using all of the information and documentation available in order to identify potential problems before they occur. A QC training session was held 9/9/76 to explain the problems experienced on pour CC(592.5)a, and PQCI C-1.20 as related to rebar inspection.

1 Verification of Corrective Action Required Yes  No

1 Method of Verification:

The records of both training sessions were reviewed.

1 Nonconformance Closure Confirmed By RPW/RLB  
Date 9/15/76


To be completed at time of closure by Command Center QA Services.

File 16.3.4 & 16.3.6  
Issu<sup>e</sup> Date September 1, 1976  
Project Midland 1 & 2  
File Title NCR's on Bachtel  
Construction & Quality Control

Report No QF-114

Nonconformance Description and Supporting Details: (Contd)

FIC-11 requires the Area Lead Civil Engineer or his designee to prepare a list of all design drawings, field sketches, and vendor drawings which specifically call out rebar placement requirements. This list shall be available for use by Area Superintendents and Field Engineers. Design drawing C-371 was on the list of drawings for the Reactor Pedestal Cover Slab pour CC(592.5)a but apparently was not used as it would have raised questions about the orientation and configuration of the additional #11 rebar.

Route To	This Copy For	 <b>CONSUMERS POWER</b> Nonconformance Report No <u>OP-115</u>	File	16.3.4 & 16.3.6
CQHills HWSlager FMSouthworth	SHHowell GSKeeley TCCooke JMKlacking GLRichardson			Issue Date
			Project	Midland
			File Title	NCR's on Bechtel Construction & Quality Control

This Nonconformance Report is Issued To:

J. F. Neugen  
Bechtel Project Superintendent

J. P. Connolly  
Bechtel Project Field QC Engineer  
who is responsible for corrective action.

Prepared By RE Callahan Date 9/3/76Approved By J.P. Connolly Date 9/3/76Written Reply Requested By Date 9/14/76Corrective Action Requested By Date 9/14/76

## Nonconformance Description and Supporting Details:

See attachment.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_"One Hold Tag Applied" WORK 9-21-76

Recommended Corrective Action:

See attachment.

<sup>1</sup>Corrective Action Taken: Bechtel Project Engineering has evaluated the as built condition of rebars in the repair area of the wall at 4.55 at elev. 622'-0" and the construction joint at elev. 632'-3" and found both areas to meet the design, ACI Code and specification requirements.

It cannot be determined at this time if the Bechtel QC sign off for the rebar placement in the wall was proper or not. However, after the rebar in this wall was accepted by QC, the program was changed providing further definition of acceptance criteria.

Verification of Corrective Action Required Yes  No <sup>1</sup>Method of Verification:

The transmittal from Bechtel Engineering approving the as built condition of the rebar in the wall was reviewed.

<sup>1</sup>Nonconformance Closure Confirmed By RE CallahanDate 11/1/76<sup>1</sup>To be completed at time of closure by Consumers Power QA Services.

File 16.3,4 & 16.3,6  
Issue Date September 3, 1976  
Project Midland  
File Title NCR's on Bechtel  
Construction & Quality Control

Attachment to Report No QF-115

Nonconformance Description and Supporting Details:

During a repair to the 4.55 line wall between "C" line and Unit #1 Reactor Building, the following items were found:

1. At elevation 622' two adjacent bars are cut off and apparently only one has a corresponding splice bar. Also, the two bars that are cut off have less than the minimum space required by ACI 318, Section 7.4.1.
2. Adjacent to the south side of the wall opening at elevation 622' on the inside face of the wall two adjacent rebar have been cut off and a third bar is continuous through the chipped out area.


A review of the exposed rebar at the construction joint in 4.55 line wall adjacent to Unit #1 Reactor Building at elevation 632.25 revealed the following condition:

1. Design drawing C-285 revision calls for two rows of #11 rebar. Contrary to this, there is only one row and the other bars are in a random pattern. The bars that are in a row are not evenly spaced.
2. Drawing C-285 revision calls for vertical #11 bars @ 12" spacing for each face of the wall at elevation 632.25'. Contrary to this, the spacing of the bar along both faces of the wall does not correspond with this requirement.

The nonconformance was identified by I. T. Yin the NRC principal inspector at Midland.

Recommended Corrective Action:

1. Have Project Engineering determine if the present arrangement meets structural requirements.
2. Determine why QC signed off for the wall pour without noting discrepancies.
3. Since the original concrete in 4.55 line wall was placed before the program was changed and extensive training was conducted in that new program, no additional training is felt to be necessary but the personnel involved should be informed of the situation in 4.55 line.

Route To	This Copy For	 CONSUMERS POWER Noneconformance Report No. QF-117	File	16.3.4 & 16.3.6
CONUTS	SMHowell		Issue Date	September 27, 1976
MSLager	CSKeeley		Project	Midland 1 & 2
MSSouthworth	ICCooke JMKlacking GLRichardson		File Title	MCR's on Bechtel Construction and QC

This Nonconformance Report is Issued To:	Prepared By <u>RSK</u> Date <u>9/21/76</u>
J. P. Conrolly Bechtel Project QC Engineer	Approved By <u>[Signature]</u> Date <u>9/21/76</u>
J. F. Newgen Bechtel Project Superintendent who is responsible for corrective action.	Written Reply Requested By Date <u>10-11-</u>
	Corrective Action Requested By Date <u>10-23-</u>

Nonconformance Description and Supporting Details:

During the final inspection of rebar by CPCo in the Unit #2 reactor building exterior wall to elevation 673'-1" including the top lift of the equipment hatch pour back, one #6 tie bar in the equipment hatch area was missing. The missing rebar is identified on vendor drawing E55 F 1/3 as on E-4 bar.

After discussions with several Bechtel QCE's, it appears the tie bar in question may have been installed and then, after final QC inspection, was removed.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_

Recommended Corrective Action:

1. Develop a method to inform QC when rebar is removed or moved after the final inspection has started.
2. Inform construction personnel that anytime a rebar is temporarily moved for access it must be replaced in its former location.
3. QC should determine how the tie bar was missed during their final inspection and take corrective action to preclude repetition.

Corrective Action Taken:

See attachment.

Verification of Corrective Action Required Yes  No

Method of Verification:

Records of the Bechtel Construction and QC training sessions were reviewed.

Nonconformance Closure Confirmed By RSK  
Date 10/1/76

To be completed at time of closure by Consumers Power QA Services.

File 16.3.4 & 16.3.6  
Issue Date September 27, 1976  
Project Midland 1 & 2  
File Title NCR's on Bechtel  
Construction and QC

Report No QF-117 (Contd)

Corrective Action Taken:

QC determined that the bar was removed after they completed their inspection of that group of bars. Two other work operations were being performed in that area and during one of them the bar was removed.

Training session BT-75 was held by Bechtel Construction to inform field engineering of the requirement to inform QC any time rebar is moved or removed during or after QC inspection. This requirement is contained in Field Instruction FIC-7.

After QC completes their rebar inspection, a close monitoring of all work activities is to be performed.

Route To	This Copy For
FMSouthworth	SHHowell
HWSlager	GSKeeley
CQHills	TCCooke
	JMilandin
	JMKlacking
	GLRichardson
	Subject File



Consumers Power

Nonconformance  
Report No QF-119

File 16.3.6  
 Issue Date September 21, 1976  
 Project Midland 1 & 2  
 File Title NCR's on Bechtel  
Quality Control

This Nonconformance Report is Issued To:

J. P. Connolly  
 Bechtel Project Field Quality  
 Control Engineer

who is responsible for corrective action.

Prepared By Donald E. Horn Date 9-21-76Approved By JK Keating Date 9-21-76Written Reply Requested By Date 10-19-76Corrective Action Requested By Date 10-19-76

## Nonconformance Description and Supporting Details:

Specification C-208, Revision 7 section 7.3.2, last paragraph states in part "Concrete cylinders shall be maintained at a temperature of 60°F to 80°F prior to stripping, stripped within 24 hours after casting, marked and stored in the curing room until the designated date for testing". Contrary to these requirements, set 998 was stripped 28 hours 27 minutes after casting and set 999 was stripped 24 hours 30 minutes after casting.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_

No Hold Tags Applied.

## Recommended Corrective Action:

- (1) Receive a Project Engineering evaluation on the acceptability of these cylinders and the concrete these cylinders represent.
- (2) Take corrective action to preclude repetition.

<sup>1</sup> Corrective Action Taken: (1) Project Engineering's disposition was given on NCR 520 which was written on the same nonconformance. Project Engineering disposition was to "use as is" based on stripping of concrete cylinder sets in excess of 24 hours after casting may tend to cause a reduction in concrete cylinder strengths and the 28 day breaks exceeded the required 3000 psi at 90 days. (2) A QC Engineer has been assigned full time to surveillance inspection of U.S. Testing activities to assure compliance with Bechtel specifications and the requirements of their approved QA Manual.

Verification of Corrective Action Required Yes  No <sup>1</sup> Method of Verification:

Reviewed NCR 520 and Letter FQCL-109.

<sup>1</sup> Nonconformance Closure Confirmed By Donald E. Horn  
 Date 11-4-76

<sup>1</sup> To be completed at time of closure by Consumers Power QA Services.



Route To	This Copy For	File
FMSouthworth	SHHowell	16.3.4 & 16.3.6
HWSlager	GSKeeley	Issue Date September 21, 1976
CQHills	TCCooke	Project Midland 1 & 2
	JMilandin	File Title NCR's on Bechtel
	JMKlacking	Construction & Quality Control
	GLRichardson	
	Subject File	



CONSUMERS POWER

Nonconformance  
Report No QF-120

This Nonconformance Report is Issued To:  
J. P. Connolly  
Bechtel Project Field Quality Control  
Engineer  
J. F. Newgen  
Bechtel Project Superintendent  
who is responsible for corrective action.

Prepared By Donald E. Horn Date 9-21-76  
Approved By AKenting Date 9-21-76  
Written Reply Requested By Date 10-8-76  
Corrective Action Requested By Date 10-8-76

Nonconformance Description and Supporting Details: Specification C-210, Revision 4 sections 12.5.2, 12.5.3 and 12.5.4 state in part that (1) The uncompacted lift thickness of soil placement shall be not more than 12 inches. (2) In areas not accessible to roller equipment, the material shall be placed in lifts not to exceed 4 inches in uncompacted thickness. Contrary to these requirements, (1) soil was placed between manhole #5 and #6 above the Sanitary Sewer in the West Plant Dike in an uncompacted lift thickness varying between 9 and 14 inches, (2) in an area not accessible to roller equipment, soil was placed between manhole #4 and #5 above the Sanitary Sewer in the West Plant Dike in uncompacted lift thickness of 6 inches. The material was removed down to the required lift thicknesses and compacted, prior to continued work in this area.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_  
No Hold Tags Applied.

Recommended Corrective Action:

- (1) Determine why the original uncompacted lift thicknesses exceeded the maximum lift thicknesses.
- (2) Take corrective action to preclude repetition.

Corrective Action Taken:

- (1) This was the result of insufficient monitoring of the placing crews and the work was done in accordance to the note on Detail 6 of Drawing C-130, Rev. 3 which is in conflict with Specification C-210.
- (2) A Training Session was given to the Laborer General Foreman and Laborer Foreman and Drawing Change Notice No. 5 to Drawing C-130, Rev. 3 corrected the conflict between Drawing C-130, Rev. 3 and Specification C-210.


Verification of Corrective Action Required Yes  No

Method of Verification:

Reviewed Training Session BT94, letters BCCC-2068 and FQCL-114, and DCN No. 5 on Drawing C-130, Rev. 3.

Nonconformance Closure Confirmed By Donald E. Horn  
Date 11-9-76

To be completed at time of closure by Consumers Power QA Services.

Route To FNSouthworth HWSlager CQHills	This Copy For SHHowell GSKeeley TCCooke JMilandin JMKlacking GLRichardson Subject File	 CONSUMERS POWER Nonconformance Report No OF-122	File <u>16.3.6</u> Issue Date <u>September 27, 1976</u> Project <u>Midland 1 &amp; 2</u> File Title <u>NCR's on Bechtel Quality Control</u>
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This Nonconformance Report is Issued To: J. P. Connolly Bechtel Project Field Quality Control Engineer who is responsible for corrective action.	Prepared By <u>Donald E. Horn</u> Date <u>9-27-76</u> Approved By <u>[Signature]</u> Date <u>7/27/76</u> Written Reply Requested By Date <u>10-25-76</u> Corrective Action Requested By Date <u>10-25-76</u>
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Nonconformance Description and Supporting Details:  
Specification C-208 Rev. 7 section 7.3.2 states "Cylinders shall be made, cured, and tested in accordance with ASTM C-31 and C-39". ASTM C-31 section 7.3 states "Remove test specimens made for checking the adequacy of the laboratory mixture preparations for strength, or as the basis for acceptance, from the molds at the end of 20 ± 4h and stored in a moist condition at 73.4 ± 3F (23 ± 1.7C) until the moment of test". Contrary to this requirement, the concrete cylinder curing tank #3 had a water temperature reading of 78°F on September 22, 1976.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_  
No Hold Tags Applied.

Recommended Corrective Action:

- (1) Determine the age of the concrete cylinders in curing tank #3.
- (2) Send this information to Project Engineering and receive a Project Engineering evaluation on the acceptability of these cylinders and the concrete they represent.
- (3) Take corrective action to preclude repetition. The written reply to this is requested with the Project Engineering evaluation.

<sup>1</sup> Corrective Action Taken:

See attachment.

<sup>1</sup> Verification of Corrective Action Required Yes  No

<sup>1</sup> Method of Verification:

Reviewed letter FQCL-111, FQCL-120 and closed out Bechtel NCR 541.

<sup>1</sup> Nonconformance Closure Confirmed By Donald E. Horn  
Date 11-29-76


<sup>1</sup> To be completed at time of closure by Consumers Power QA Services.

File 16.3.6  
Issue Date September 27, 1976  
Project Midland 1 & 2  
File Title NCR's on Bechtel  
Quality Control

Attachment to Report No QF-122

<sup>1</sup>Corrective Action Taken:

- (1) The concrete cylinders were identified and their ages determined.
- (2) This nonconforming condition was documented in Bechtel NCR 541 and sent to Project Engineering for disposition. Project Engineering determined the nonconforming condition would have an insignificant effect upon the concrete cylinder results. The concrete cylinders would represent the concrete placed.
- (3) A QC Engineer has been assigned full time surveillance inspection of U.S. Testing activities to assure compliance with Bechtel specifications and U.S. Testing QA Manual.

Route To	This Copy For	 <b>CONSUMERS POWER</b> Nonconformance Report No QF-124	File	16.3.6
FMSouthworth	SHHowell		Issue Date	September 28, 1976
CQHillis	GSKeelcy		Project	Midland 1 & 2
HWSlager	TCCooke		File Title	NCR's on Bechtel Quality Control
	JMilandin			
	JMKlacking			
	GLRichardson			

This Nonconformance Report is Issued To:

Mr. J. P. Connolly  
Project Field Quality Control Engineer

who is responsible for corrective action.

Prepared By DR Keating Date 9-28-76

Approved By [Signature] Date 10/28/76

Written Reply Requested By Date 10-11-76

Corrective Action Requested By Date 10-25-76

Nonconformance Description and Supporting Details:

See Attachment.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_  
No Hold Tags Applied.

Recommended Corrective Action:

- 1) Review all Bechtel Radiographic Review Forms issued since May 19, 1976 (issue date for PSP G-7.1) for corrections. Require Lead Welding Quality Control Engineer to review, initial, and date all corrections that were made after the Level II signed off and dated the form.
- 2) Review PSP G-7.1 with involved personnel.
- 3) Comply with requirements of PSP G-7.1.

Corrective Action Taken:

See Attachment.

1 Verification of Corrective Action Required Yes  No

1 Method of Verification:

See Attachment.

1 Nonconformance Closure Confirmed By DR Keating  
Date 11-9-76

1 To be completed at time of closure by Consumers Power QA Services.

File 16.3.6  
Issue Date September 28, 1976  
Project Midland 1 & 2  
File Title NCR's on Bechtel  
Quality Control

Attachment to Report No QF-124

Nonconformance Description and Supporting Details:

Project Special Provision SF/PSP G-7.1, Rev. 1, "Documentation and Records Control" requires in section 3.5 that, "Corrections to construction quality assurance records shall identify the person who made the correction and the date of the correction. Corrections shall be authorized by the organization with responsibility for preparation of the original affected record. The appropriate lead discipline Quality Control Engineer, shall review, initial and date all changes".

Additionally, the above referenced PSP also indicates in section 4.1.3 that, "A document shall be considered a construction quality assurance record when the document has been reviewed and accepted as complete and is stamped, initialed, signed or otherwise authenticated and dated by a Level II Quality Control Engineer".


Contrary to section 3.5, Bechtel Radiographic Review Forms that have been signed and dated by a Level II Quality Control Engineer have had corrections made after the signoff that have not been reviewed, initialed and dated by the lead discipline Quality Control Engineer.

<sup>1</sup>Corrective Action Taken:

- 1) All Radiographic Review Forms issued since May 19, 1976 have been reviewed for corrections made after being accepted as Quality Assurance records. Two reports were found to have had this type correction made on them. The two corrected copies were reviewed by the Lead Quality Control Welding Engineer, then the change was initialed and dated on the documents by the LWQCE as required by PSP G-7.1. Additionally, during verification of corrective action, a third report required a correction which was made by the LWQCE.
- 2) A QC training session was conducted on October 11, 1976 by the LWQCE on the topic of PSP G-7.1 Rev. 2 and related problems of QF-124. All QC Welding personnel attended.
- 3) PSP G-7.1 has been complied with.

<sup>1</sup>Method of Verification:

- 1) Corrections on Radiograph Review Forms 328, 393, and 388 were reviewed and found to comply with PSP G-7.1. Additionally, Radiograph Review Forms from May 19, 1976 through July 27, 1976 were reviewed and no other corrections requiring review by the Lead QCE were observed.
- 2) Documentation of the training session (letter QCFM-2472) was reviewed and found adequate.
- 3) PSP G-7.1 has been complied with.

Route To FMSouthworth CQHills HWSlager	This Copy For SHHowell GSKeeley TCCooke JMilandin JMKlacking GLRichardson JPConnolly	 CONSUMERS POWER Nonconformance Report No <u>OP-125</u>	File <u>16.3.4</u> Issue Date <u>September 29, 1976</u> Project <u>Midland 1 &amp; 2</u> File Title <u>NCR's on Bechtel Construction</u>
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This Nonconformance Report is Issued To:

Mr. J. F. Newgen  
Project SuperintendentPrepared By M. Keating Date 9-29-76Approved By J. F. Newgen Date 10-13-76Written Reply Requested By Date 10-13-76Corrective Action Requested By Date 10-13-76

who is responsible for corrective action.

## Nonconformance Description and Supporting Details:

The Bagwell Coating QA Manual, Procedure 3232-BCP06 "Instruction for Processing and Documenting Nonconformances" requires that "The related EC-5A Form will be conspicuously attached to the nonconforming item". The EC-5A form is the Bagwell hold tag.

Contrary to the above, Bagwell NCR's 04156-RR-1, 04196-RR-1, 04206-RR-1, 04216-RR-1, and 04226-RR-1 are open and hold tags are not conspicuously attached to the items referenced in those NCR's.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No           
No Hold Tags Applied.

## Recommended Corrective Action:

- 1) Attach Bagwell hold tags for above referenced NCR's.
- 2) Verify that Bagwell hold tags are attached on any other open Bagwell NCR's and replace them where they are determined to be missing.
- 3) Review requirements with cognizant subcontractor personnel.

## Corrective Action Taken:

- 1) Bagwell hold tags for the above referenced Bagwell NCR's were replaced.
- 2) All other open NCR's have been reviewed and hold tags replaced where they were determined to be missing.
- 3) Bechtel QC has verbally discussed the requirement with the Bagwell QCE.


Verification of Corrective Action Required Yes  No 

## Method of Verification:

- 1) Verified that the hold tags for the Bagwell NCR's referenced above were replaced. These open NCR's apply to Unit 1, second lift liner plate coating.
- 2) Reviewed all other open Bagwell NCR's and verified that tags were hung on the nonconforming items identified in the NCR's. Other open NCR's apply to Unit 2 dome coating and Unit 2, second lift coating.
- 3) Discussions with the Bagwell QCE indicate that he is familiar with the requirement.

Nonconformance Closure Confirmed By M. Keating  
Date 11-11-76

To be completed at time of closure by Consumers Power QA Services.

Route To	This Copy For		File
FMSouthworth	SRHowell	 CONSUMERS POWER Nonconformance Report No <u>OF-132</u>	16.3.6
HWSlager	GSKeeley		Issue Date <u>October 20, 1976</u>
JHMaclaren	TCCooke		Project <u>Midland 1 &amp; 2</u>
	JMilandin		File Title <u>NCR's on Bechtel</u>
	JNKJacking		<u>Quality Control</u>
	CLRichardson		
	Subject File		

This Nonconformance Report is Issued To:

J. P. Connolly  
 Bechtel Project Field Quality Control  
 Engineer

who is responsible for corrective action.

Prepared By Donald E. Horn Date 10-20-76Approved By J. P. Connolly Date 11/2/76Written Reply Requested By Date 11-03-76Corrective Action Requested By Date 11-17-76

## Nonconformance Description and Supporting Details:

Specification C-208 Revision 7, second paragraph of section 11.0 states "The sub-contractor shall immediately report failing tests and any deviations from the Specifications to the Contractor who will either reject the material or evaluate it to assess its acceptability". Contrary to this requirement, Heat Number 85952 for #7 rebar had a yield strength of 58.3 KSI (Test No. N-3563) where a minimum of 60 KSI is required and U.S. Testing did not notify Bechtel of this failure.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_  
No Hold Tags Applied

## Recommended Corrective Action:

Take corrective action to preclude repetition of this nonconformance.

## 1 Corrective Action Taken:

The Laboratory Chief reviewed the specification with the lab technician in charge of reviewing the rebar yield strength test results and reporting responsibilities.

In addition an individual discussion was held between the Laboratory Chief and all technicians that any failure determined at the time of testing shall be "red lined" and related to the Laboratory Chief.

1 Verification of Corrective Action Required Yes  No 

## 1 Method of Verification:

Review of letter FQCL-118.

1 Nonconformance Closure Confirmed By Donald E. Horn  
Date 11-22-76

1 To be completed at time of closure by Consumers Power QA Services.

Route To	This Copy For	File
FMSouthworth	SMHowell	16.3.1
HWSlager	GSKeeley	Issue Date October 20, 1976
JHMacLaren	TCCooke	Project Midland 1 & 2
	JMilandin	File Title NCR's on Bechtel
	JMKlacking	Engineering
	GLRichardson	
	Subject File	



Consumers Power

Nonconformance  
Report No QF-133

This Nonconformance Report is Issued To:

Mr. R. L. Castleberry  
Midland Project Engineer  
Bechtel Power Corporation  
Ann Arbor, MI 48106

Prepared By Donald E. Horn Date 10-20-76Approved By [Signature] Date 10/20/76Written Reply Requested By Date 11-03-76Corrective Action Requested By Date 11-17-76

who is responsible for corrective action.

Nonconformance Description and Supporting Details: 10CFR50 Appendix B criterion II "Quality Assurance Program" states in part that "The applicant shall identify the structures, systems, and components to be covered by the quality assurance program and the major organizations participating in the program, together with the designated functions of these organizations". Contrary to this requirement, drawings C-109 Revision 9 and C-111 Revision 9 state "Earthwork in the plant area fill south of coordinate S5050 and west of coordinate E 100 does not require the application of a nuclear quality assurance program," while drawing C-45 Revision 0 shows Q-Listed back-fill material required south of coordinate S5050 around the Diesel Generator Building and Service Water Pump Structure and along Railroad Line "D". Also, Bechtel is (Cont)

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_  
No Hold Tags Applied

Recommended Corrective Action:

- (1) Review the drawings in question.
- (2) Determine what earthwork does require the application of a nuclear quality assurance program.
- (3) Make revisions in the drawings and/or Q-List where necessary.
- (4) Notify the organizations participating in the quality assurance program of any revisions made.

Corrective Action Taken:

(1) The drawings in question were reviewed. (2) The application of a nuclear quality assurance program was determined for earthwork. (3) Drawing number C-45, Rev. 0 was included in the Project Q-List, Rev. 7. (4) No revisions to the drawings in question were required, so notification of the organizations participating in the quality assurance program was not needed.

Verification of Corrective Action Required Yes  No 

Method of Verification:

Review of letter BLC-3289.

Nonconformance Closure Confirmed By Donald E. Horn  
Date 11-22-76

To be completed at time of closure by Consumers Power QA Services.




File 16.3.1  
Issue Date October 20, 1976  
Project Midland 1 & 2  
File Title NCR's on Bechtel  
Engineering

Report No QF-133

Nonconformance Description and Supporting Details: (Contd)

using drawing C-45 Revision 0 which is not on the Project Q-List, Revision 6.

Route To	This Copy For		File
FMSouthworth JHMaclaren HWSlager	SHHowell GSKeeley TCCooke HWSlager File	 <b>CONSUMERS POWER</b> Nonconformance Report No <u>OF-134</u>	<u>16.1 &amp; 16.2</u> Issue Date <u>October 26, 1976</u> Project <u>Midland</u> File Title <u>NCR's on POASD; NCR's on Consumers Project Organization</u>

This Nonconformance Report is Issued To:  
 T. C. Cooke  
 Consumers Power Project Superintendent  
 J. L. Corley  
 Consumers Power Quality Assurance  
 Superintendent  
 who is responsible for corrective action.

Prepared By T. C. Cooke Date 11/2/76  
 Approved By J. L. Corley Date 11/2/76  
 Written Reply Requested By Date 11/09/76  
 Corrective Action Requested By Date 11/26/76

Nonconformance Description and Supporting Details:

Concrete placement CC2(683.25)a' was made on October 20, 1976 after sign-off by Consumers Power Quality Assurance. On October 22, 1976 it was discovered that 23 - #11 bars had been omitted from that placement. In addition, the fabrication drawing which showed the missing bars was not on the list of drawings applicable to the placement which had been prepared by the PMO. The bars were shown on the design drawings.

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_

Recommended Corrective Action:

- Determine the underlying cause and conditions.
- Using the items found in #1 above, develop corrective action to preclude repetition.

Corrective Action Taken:

- The underlying cause and conditions were that the drawing list was developed from information supplied by Bechtel and the fabrication drawings were not reviewed for notes indicating additional drawings when preparing the drawing list.
- Since only design drawings are being used now and since those drawings were clear, no additional corrective action is required. However, Project personnel have committed to reviewing notes on fab drawings if they are used.

Verification of Corrective Action Required Yes  No

Method of Verification:

Not applicable.

Nonconformance Closure Confirmed By J. L. Corley  
 Date 11/26/76

To be completed at time of closure by Consumers Power QA Services.

Route To	This Copy For
FMSouthworth	SHHowell
HWSlager	CSKeelley
JHMaclaren	TCCooke
	JMilandin
	JMKlacking
	GLRichardson
	Subject File



CONSUMERS POWER

Nonconformance  
Report No OE-135

File 16.3.4 & 16.3.6  
 Issue Date November 24, 1976  
 Project Midland 1 & 2  
 File Title NCR's on Bechtel  
Construction & Quality Control

This Nonconformance Report is Issued To:  
 Mr. J. F. Newgen  
 Bechtel Project Superintendent  
 Mr. J. P. Connolly  
 Bechtel Project Field Quality Control  
 Engineer  
 who is responsible for corrective action.

Prepared By Donald E. G. ... Date 11/24/76  
 Approved By [Signature] Date 11/24/76  
 Written Reply Requested By Date 12-08-  
 Corrective Action Requested By Date 12-22-

## Nonconformance Description and Supporting Details:

See Attachment "A".

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only)Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_

## Recommended Corrective Action:

- (1) Review all concrete placement records for 1976 of Class I pours for similar problems.
- (2) Receive a Project Engineering evaluation on the acceptability of the concrete with the missing record tests in this nonconformance and any found in the review of concrete placement records.
- (3) Take corrective action to preclude repetition.

Corrective Action Taken:

Verification of Corrective Action Required Yes  No

Method of Verification:

Nonconformance Closure Confirmed By \_\_\_\_\_  
 Date \_\_\_\_\_

To be completed at time of closure by Consumers Power QA Services.

Attachment "A" to Report No QF-135

Nonconformance Description and Supporting Details:

Additional emphasis on concrete testing frequencies and locations were expanded beyond Specification C-208 and C-230, in letter C-208-56 dated March 19, 1975, to U.S. Testing.

Item 1 in this letter states:

"The point of record testing for concrete slump, air content and temperature is at the transit truck discharge. If a test is missed at the truck discharge the record test sample may be obtained from the end of the concrete conveyance."

Item 2 in this letter states:

"The batch plant inspector is responsible for keeping track of all test frequencies based on the amount of concrete produced. He shall continue to mark the required tests on the batch tickets. Additionally, the field concrete technician shall check the test frequencies."


Item 3 in this letter states:

"The interval between record slump test shall not exceed 35 cubic yards produced."

Item 5 in this letter states:

"Slump, air content, and temperature tests taken at the batch plant must always be backed up with a record test at the truck discharge."

- (1) Contrary to items 1, 2 and 3, the interval between record slump tests was 90 cubic yards for concrete placement CC(673.1)b'.
- (2) Contrary to items 1, 2, and 5, slump, air content, and temperature tests taken at the batch plant between accumulative yardage 36 and 126 were not backed up with a record test at the truck discharge for concrete placement CC(673.1)b'.
- (3) Section 2.5 of PQCI No. C-1.30 Rev. 0 "Concrete Placement Inspection" states "The QCE receiving concrete shall record on Form QC-C12-1 that the testing methods, frequency of testing, and concrete acceptance was in accordance with project requirements". Section 2.5 of QCIR No. C-1.30-60 for pour CC(673.1)b' was signed by a QC Engineer accepting the frequency of testing and form QC-C12-1 for pour CC(673.1)b' was signed by a QC Engineer accepting the frequency of testing. Contrary to this, the frequency of testing was not acceptable as mentioned in (1) and (2) above.

Route To	This Copy For	Consumers Power	File
FMSouthworth	SHHowell	 CONSUMERS POWER Nonconformance Report No QF-136	16.3.6
HWSlager	GSKeeley		Issue Date November 30, 1976
JHMaclaren	TCCooke		Project Midland 1 & 2
	JFNewgen		File Title NCR's on Bechtel
	JMilandin		Quality Control
	JMKlacking		
	GLRichardson		
	Subject File		

This Nonconformance Report is Issued To:

J. P. Connolly  
Bechtel Project Field Quality Control  
Engineer

who is responsible for corrective action.

Prepared By Donald S. Allen Date 11-30-76

Approved By [Signature] Date 11/30/76

Written Reply Requested By Date 12-13-76

Corrective Action Requested By Date 12-30-76

Nonconformance Description and Supporting Details: Specification C-208, Rev. 7 section 7.3.2 second paragraph states in part that "Cylinders shall be made, cured and tested in accordance with ASTM C-31, and C-39". ASTM C 31-69 section 7.3 states in part "Remove test specimens made for checking the adequacy of the laboratory mixture proportions for strength, or as the basis for acceptance, from the molds at the end of 20 ± 4 hr. and stored in a moist condition at 73.4 ± 3°F (23 ± 1.7°C) until the moment of test. As applied to the treatment of demolded specimens, moist curing means that the test specimens shall have free water maintained on the entire surface area at all times. This condition is met by immersion in saturated lime water and may be met by storage in a moist room or cabinet meeting the requirements of ASTM Specification C 511".

AEC Reportable Yes  No  See Procedure 9 (For Nuclear Projects Only) (Contd on Attachment)

Stop Work Necessary Yes  No  See Procedure 16 - Stop Work No \_\_\_\_\_

Recommended Corrective Action:

- (1) Receive a Project Engineering evaluation on the acceptability of these two concrete cylinder results and how these results represent the concrete placed.
- (2) This same type of nonconformance was identified in NCR QF-83 and a training meeting was held by U.S. Testing to preclude repetition. Further corrective action is needed to preclude repetition.

<sup>1</sup> Corrective Action Taken:

<sup>1</sup> Verification of Corrective Action Required Yes  No

<sup>1</sup> Method of Verification:

<sup>1</sup> Nonconformance Closure Confirmed By \_\_\_\_\_  
Date \_\_\_\_\_

<sup>1</sup> To be completed at time of closure by Consumers Power QA Services.

File 16.3.6  
Issue Date November 30, 1976  
Project Midland 1 & 2  
File Title NCR's on Bechtel  
Quality Control

Attachment to Report No QF-136

Nonconformance Description and Supporting Details: (Contd)

Contrary to these requirements, two concrete cylinders (set 1202 - cylinder numbers 9098 and 9100) being cured by immersion in water were found partially exposed to the air in the curing tank for approximately three hours. The two concrete cylinders were lying horizontal, approximately one quarter inch of the cylinders was not immersed in the saturated lime water and the exposed surface of the cylinders did not look moist or feel moist.