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AUTH.NAME AUTHOR AFFILIATION
VAN BRUNT,E.E. Arizona Public Service Co.
RECIP.NAME RECIPIENT AFFILIATION
TEDESCO,R.L. Assistant Director for Licensing

SUBJECT: Forwards "Field Preservice Insp Program,Classes I & III,"; Info provided for 811119 meeting w/NRC.

See Rpts

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ARIZONA PUBLIC SERVICE COMPANY
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November 13, 1981
ANPP-19465 - JMA/KWG

Mr. R. L. Tedesco
Assistant Director for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2 and 3
Docket Nos. STN-50-528/529/530
File: 81-056-026

Dear Mr. Tedesco:

Please find attached the "Field Pre-Service Inspection Program for the Arizona Nuclear Power Project." This information is provided in preparation for the November 19, 1981 meeting with your staff.

Very truly yours,

E. E. Van Brunt

E. E. Van Brunt, Jr.
APS Vice President,
Nuclear Projects
ANPP Project Director

EEVBJr/KWG/mjb
cc: J. Kerrigan
P. Hourihan (w/a)
A. C. Gehr (w/a)
M. Hum (NRC)

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STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Vice President Nuclear Projects of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority so to do, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.

Edwin E. Van Brunt

Edwin E. Van Brunt, Jr.

Sworn to before me this 16th day of NOVEMBER, 1981.

Connie Lou Armstrong
Notary Public

My Commission expires:

June 24, 1983

FIELD
PRE-SERVICE INSPECTION PROGRAM
for
ARIZONA NUCLEAR POWER PROJECT

Unit No. 1

Class I

Prepared by:
INSERVICE INSPECTION
POWER SYSTEMS GROUP
COMBUSTION ENGINEERING, Inc.
Windsor, Connecticut

POWER SYSTEMS

FIELD PRE-SERVICE INSPECTION PROGRAM for ARIZONA NUCLEAR POWER PROJECT

Unit No. 1

Class II

Prepared by:
INSERVICE INSPECTION
POWER SYSTEMS GROUP
COMBUSTION ENGINEERING, Inc.
Windsor, Connecticut

POWER SYSTEMS

COMBUSTION ENGINEERING, INC

ZONE 41 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-14273-501-017 Rev. 04

TITLE: STEAM GENERATOR #1 - SECONDARY SIDE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-041-011	Stay Cap Assembly-to-Tube Sheet Weld	202-246	C-A	UT	NIP-949	UT-7
01-041-012	Stay Cap to Stay Cap Forging Weld	301-248	C-A	UT	NIP-949	UT-32
01-041-013	Handhole at 105 Degrees (Weld and Mechanical Joint)	103-242A	2510	Vis. (H)	525115-ESS-091	N/A
01-041-014	Handhole at 215 Degrees (Weld and Mechanical Joint)	103-242B	2510	Vis. (H)	525115-ESS-091	N/A
01-041-015	Upper Blowdown Nozzle at 180 Degrees	107-221	2510	Vis. (H)	525115-ESS-091	N/A
01-041-016	Economizer Blowdown Nozzle at 270 Degrees	104-242	2510	Vis. (H)	525115-ESS-091	N/A
01-041-018	Manway at 90 Degrees (Weld and Mechanical Joint)	104-222A	2510	Vis. (H)	525115-ESS-091	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note: Any welds appearing on the reference drawing but not in the zone tables, were done in the shop.

REVISION: 2

PAGE: V-41.1

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 41 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

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TITLE: STEAM GENERATOR #1 - SECONDARY SIDE

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01-041-018B	Bolting	N/A	C-D	Vis.	525115-ESS-091	N/A
01-041-019	Manway at 270 Degrees (Weld and Mechanical Joint)	104-222B	2510	Vis. (H)	525115-ESS-091	N/A
01-041-019B	Bolting	N/A	C-D	Vis.	525115-ESS-091	N/A
01-041-020	Level Indication Nozzle - Intermediate Shell at 22 Degrees - 30 Minutes	701-271A	2510	Vis. (H)	525115-ESS-091	N/A
01-041-021	Level Indication Nozzle - Intermediate Shell at 45 Degrees	701-271B	2510	Vis. (H)	525115-ESS-091	N/A
01-041-022	Level Indication Nozzle - Intermediate Shell at 315 Degrees	701-271C	2510	Vis. (H)	525115-ESS-091	N/A
01-041-023	Level Indication Nozzle - Intermediate Shell at 337 Degrees - 30 Minutes	701-271D	2510	Vis. (H)	525115-ESS-091	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 41 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-14273-501-017 Rev. 04

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01-041-024	Level Indication Nozzle on Cone at 22 Degrees - 30 Minutes	108-221A	2510	Vis. (H)	525115-ESS-091	N/A
01-041-025	Level Indication Nozzle on Cone at 45 Degrees	108-221B	2510	Vis. (H)	525115-ESS-091	N/A
01-041-026	Level Indication Nozzle on Cone at 315 Degrees	108-221C	2510	Vis. (H)	525115-ESS-091	N/A
01-041-027	Level Indication Nozzle on Cone at 337 Degrees - 30 Minutes	108-221D	2510	Vis. (H)	525115-ESS-091	N/A
01-041-028	Level Indication Nozzle on Upper Shell at 22 Degrees - 30 Minutes	1703-271A	2510	Vis. (H)	525115-ESS-091	N/A
01-041-029	Level Indication Nozzle on Upper Shell at 45 Degrees	1703-271B	2510	Vis. (H)	525115-ESS-091	N/A
01-041-030	Level Indication Nozzle on Upper Shell at 315 Degrees	1703-271C	2510	Vis. (H)	525115-ESS-091	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 41 CLASS 2
PROGRAM PLAN

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01-041-031	Level Indication Nozzle on Upper Shell at 337 Degrees - 30 Minutes	1703-271D	2510	Vis. (H)	525115-ESS-091	N/A
01-041-032	Pressure Test Nozzle on Upper Shell at 112 Degrees - 30 Minutes	1703-271E	2510	Vis. (H)	525115-ESS-091	N/A
01-041-033	Pressure Test Nozzle on Top Head Dome	110-201	2510	Vis. (H)	525115-ESS-091	N/A
01-041-034	6" Blowdown Nozzle at 90 Degrees	1712-105A	C-B	UT	NIP-956	UT-83
01-041-035	6" Blowdown Nozzle at 270 Degrees	1712-105B	C-B	UT	NIP-956	UT-83
01-041-036	Tube Sheet Drain Nozzle at 180 Degrees	1714-271	2510	Vis. (H)	525115-ESS-091	N/A
01-041-037	Upper Blowdown Nozzle-to-Extension Weld	401-228	2510	Vis. (H)	525115-ESS-091	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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COMBUSTION ENGINEERING, INC.

ZONE 41 CLASS 2

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01-041-038	Economizer Blowdown Nozzle-to-Extension Weld	301-243	2510	Vis. (H)	525115-ESS-091	N/A
01-041-039	Downcomer Feedwater Nozzle-to-Extension Weld	201-228	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-30 N/A
01-041-044	Feedwater Nozzle-to-Extension Piece Weld at 45 Degrees	201-247B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-29 N/A
01-041-045	Feedwater Nozzle-to-Extension Piece Weld at 315 Degrees Location	201-247	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-29 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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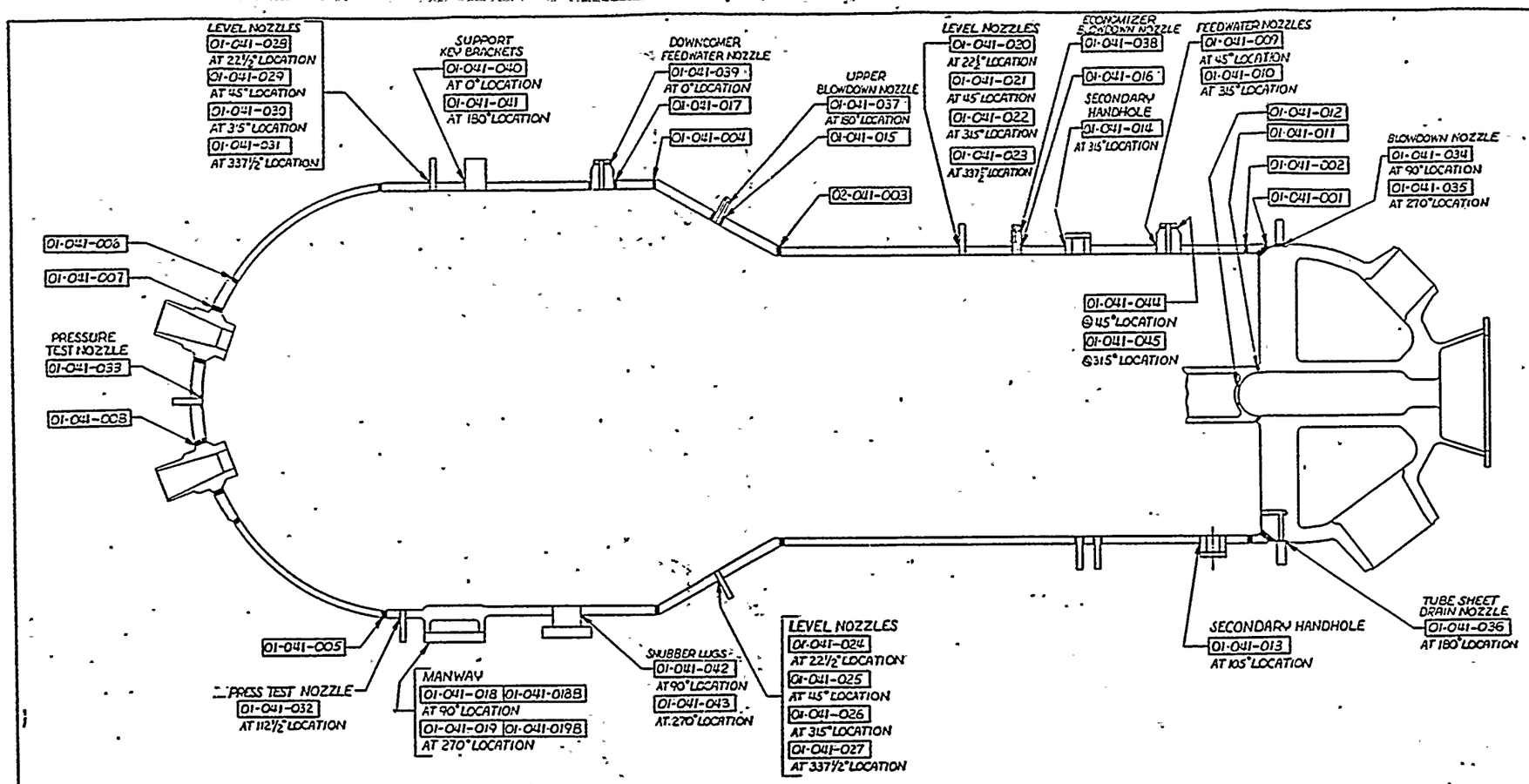
LEVEL NOZZLES
01-041-028
AT 22½° LOCATION
01-041-029
AT 45° LOCATION
01-041-030
AT 3'5° LOCATION
01-041-031
AT 337½° LOCATION
SUPPORT KEY BRACKETS
01-041-040
AT 0° LOCATION
01-041-041
AT 180° LOCATION
DOWNCOMER FEEDWATER NOZZLE
01-041-039
AT 0° LOCATION
01-041-017
01-041-004
UPPER BLOWDOWN NOZZLE
01-041-037
AT 180° LOCATION
01-041-015
02-041-003
LEVEL NOZZLES
01-041-020
AT 22½° LOCATION
01-041-021
AT 45° LOCATION
01-041-022
AT 315° LOCATION
01-041-023
AT 337½° LOCATION
ECONOMIZER BLOWDOWN NOZZLE
01-041-038
01-041-016
SECONDARY HANDHOLE
01-041-014
AT 315° LOCATION
FEEDWATER NOZZLES
01-041-009
AT 45° LOCATION
01-041-010
AT 315° LOCATION
01-041-012
01-041-011
01-041-002
01-041-001
BLOWDOWN NOZZLE
01-041-034
AT 90° LOCATION
01-041-035
AT 270° LOCATION
01-041-006
01-041-007
PRESSURE TEST NOZZLE
01-041-033
01-041-008
01-041-044
@ 45° LOCATION
01-041-045
@ 315° LOCATION
01-041-005
PRESS TEST NOZZLE
01-041-032
AT 112½° LOCATION
MANWAY
01-041-018 01-041-018B
AT 90° LOCATION
01-041-019 01-041-019B
AT 270° LOCATION
SNUBBER LUGS
01-041-042
AT 90° LOCATION
01-041-043
AT 270° LOCATION
LEVEL NOZZLES
01-041-024
AT 22½° LOCATION
01-041-025
AT 45° LOCATION
01-041-026
AT 315° LOCATION
01-041-027
AT 337½° LOCATION
SECONDARY HANDHOLE
01-041-013
AT 105° LOCATION
TUBE SHEET DRAIN NOZZLE
01-041-036
AT 180° LOCATION
REFERENCE DRAWINGS
(COMBUSTION ENG)
E-78273-201-001 REV 02
E-78273-221-001 REV 06
E-78273-241-001 REV 03
E-78273-246-002 REV 09
E-78273-271-002 REV 03
E-78273-271-026 REV 0
E-78273-271-016 REV 0
E-78273-271-004 REV 04
E-78273-242-001 REV 05
E-14273-501-017
APPROVED
REFERENCE
DESIGN
GE
COMBUSTION DIVISION
UNIT #1-ZONE 041
STEAM GENERATOR #1
WELD DESIGNATIONS
E-14273-501-017
8
7
6
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4
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1

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 42 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-14273-501-015 Rev. 04
TITLE: STEAM GENERATOR #2 - SECONDARY SIDE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-042-011	Stay Cap Assembly-to-Tubesheet Weld	202-246	C-A	UT	NIP-949	UT-7
01-042-012	Stay Cap to Stay Cap Forging Weld	201-248	C-A	UT	NIP-949	UT-32
01-042-013	Handhole at 105 Degrees (Weld and Mechanical Joint)	103-242A	2510	Vis. (H)	525115-ESS-091	N/A
01-042-014	Handhole at 315 Degrees (Weld and Mechanical Joint)	103-242B	2510	Vis. (H)	525115-ESS-091	N/A
01-042-015	Upper Blowdown Nozzle at 180 Degrees	107-221	2510	Vis. (H)	525115-ESS-091	N/A
01-042-016	Economizer Blowdown Nozzle at 270 Degrees	104-242	2510	Vis. (H)	525115-ESS-091	N/A
01-042-018	Manway at 90 Degrees (Weld and Mechanical Joint)	104-222A	2510	Vis. (H)	525115-ESS-091	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note: Any welds appearing on the reference drawing, but not in the zone tables, were done in the shop.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 42 CLASS 2
PROGRAM PLAN

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REFERENCE DRAWING NO.: E-14273-501-015 Rev. 04
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01-042-018B	Bolting	N/A	C-D	Vis.	525115-ESS-091	N/A
01-042-019	Manway at 270 Degrees (Weld and Mechanical Joint)	104-222B	2510	Vis. (H)	525115-ESS-091	N/A
01-042-019B	Bolting	N/A	C-D	Vis.	525115-ESS-091	N/A
01-042-020	Level Indication Nozzle - Intermediate Shell at 22 Degrees - 30 Minutes	701-271A	2510	Vis. (H)	525115-ESS-091	N/A
01-042-021	Level Indication Nozzle - Intermediate Shell at 45 Degrees	701-271B	2510	Vis. (H)	525115-ESS-091	N/A
01-042-022	Level Indication Nozzle - Intermediate Shell at 315 Degrees	701-271C	2510	Vis. (H)	525115-ESS-091	N/A
01-042-023	Level Indication Nozzle - Intermediate Shell at 337 Degrees - 30 Minutes	701-271D	2510	Vis. (H)	525115-ESS-091	N/A

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ZONE 42 CLASS 2

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01-042-026	Level Indication Nozzle on Cone at 315 Degrees	108-221C	2510	Vis. (H)	525115-ESS-091	N/A
01-042-027	Level Indication Nozzle on Cone at 337 Degrees - 30 Minutes	108-221D	2510	Vis. (H)	525115-ESS-091	N/A
01-042-028	Level Indication Nozzle on Upper Shell at 22 Degrees - 30 Minutes	1703-271A	2510	Vis. (H)	525115-ESS-091	N/A
01-042-029	Level Indication Nozzle on Upper Shell at 45 Degrees	1703-271B	2510	Vis. (H)	525115-ESS-091	N/A
01-042-030	Level Indication Nozzle on Upper Shell at 315 Degrees	1703-271C	2510	Vis. (H)	525115-ESS-091	N/A

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 42 CLASS 2
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01-042-031	Level Indication Nozzle on Upper Shell at 337 Degrees - 30 Minutes	1703-271D	2510	Vis. (H)	525115-ESS-091	N/A
01-042-032	Pressure Test Nozzle on Upper Shell at 112 Degrees - 30 Minutes	1703-271E	2510	Vis. (H)	525115-ESS-091	N/A
01-042-033	Pressure Test Nozzle on Top Head Dome	110-201	2510	Vis. (H)	525115-ESS-091	N/A
01-042-034	6" Blowdown Nozzle at 90 Degrees	1712-105A	C-B	UT	NIP-956	UT-83
01-042-035	6" Blowdown Nozzle at 270 Degrees	1712-105B	C-B	UT	NIP-956	UT-83
01-042-036	Tube Sheet Drain Nozzle at 180 Degrees	1711-271	2510	Vis. (H)	525115-ESS-091	N/A
01-042-037	Upper Blowdown Nozzle-to-Extension Weld	401-228	2510	Vis. (H)	525115-ESS-091	N/A

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C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 42 CLASS 2

PROGRAM PLAN

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01-042-039	Downcomer Feedwater Nozzle-to-Extension Weld	201-228	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-30 N/A
01-042-044	Feedwater Nozzle-to-Extension Piece Weld at 45 Degrees Location	201-247B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-29 N/A
01-042-045	Feedwater Nozzle-to-Extension Piece Weld at 315 Degrees Location	201-247	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-29 N/A

N/A NOT APPLICABLE
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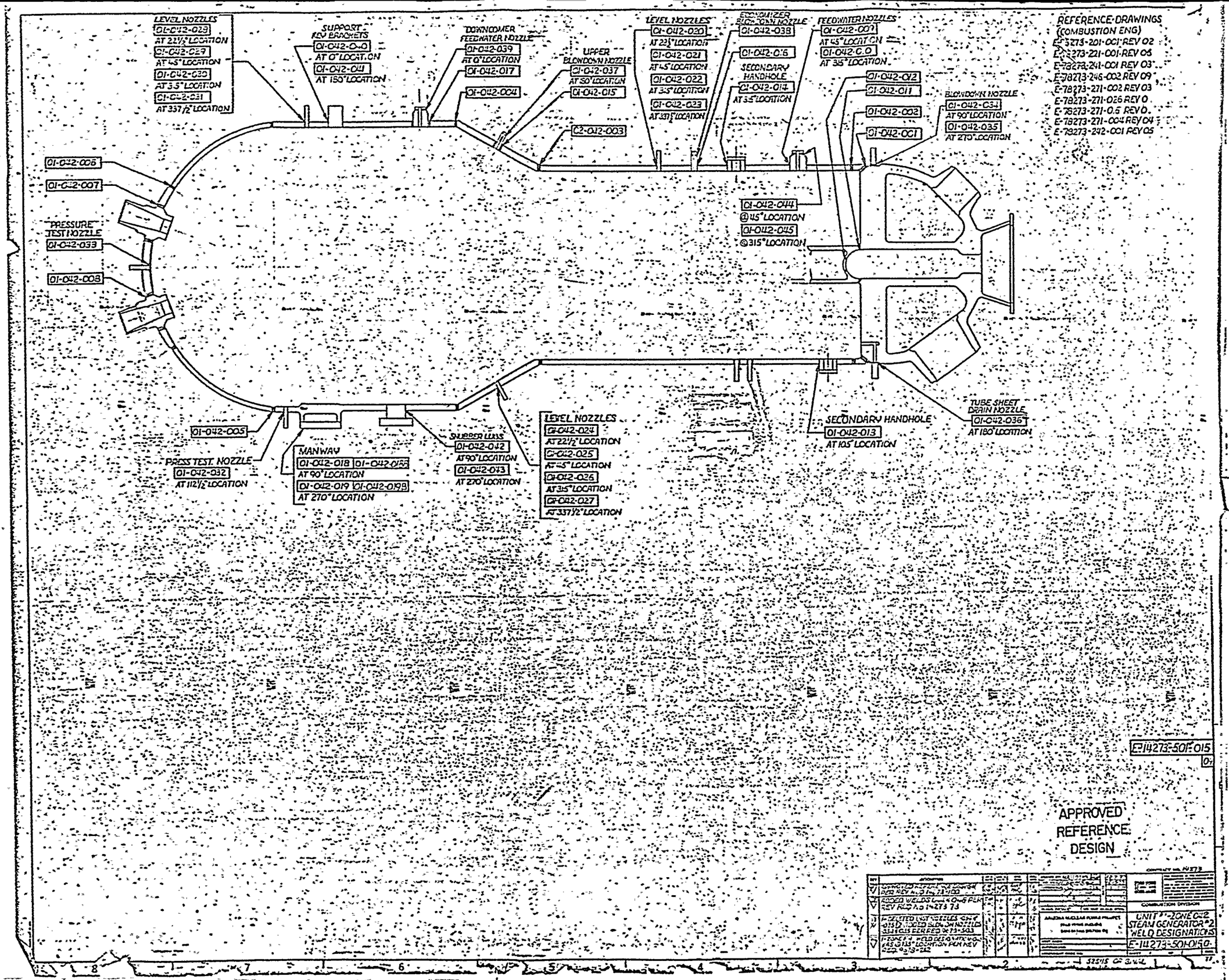

LEVEL NOZZLES
01-042-029
AT 22½° LOCATION
01-042-027
AT 45° LOCATION
01-042-030
AT 315° LOCATION
01-042-031
AT 337½° LOCATION
SUPPORT KEY BRACKETS
01-042-010
AT 0° LOCATION
01-042-011
AT 180° LOCATION
DOWNCOMER FEEDWATER NOZZLE
01-042-039
AT 0° LOCATION
01-042-017
01-042-004
UPPER BLOWDOWN NOZZLE
01-042-037
AT 180° LOCATION
01-042-015
C2-042-003
LEVEL NOZZLES
01-042-020
AT 22½° LOCATION
01-042-021
AT 45° LOCATION
01-042-022
AT 315° LOCATION
01-042-023
AT 337½° LOCATION
ECONOMIZER BLOWDOWN NOZZLE
01-042-038
01-042-016
SECONDARY HANDHOLE
01-042-014
AT 315° LOCATION
FEEDWATER NOZZLES
01-042-007
AT 45° LOCATION
01-042-010
AT 315° LOCATION
01-042-012
01-042-011
01-042-002
01-042-001
BLOWDOWN NOZZLE
01-042-034
AT 90° LOCATION
01-042-035
AT 270° LOCATION
REFERENCE DRAWINGS
(COMBUSTION ENG)
E-78273-201-001 REV 02
E-78273-221-001 REV 06
E-78273-241-001 REV 03
E-78273-246-002 REV 09
E-78273-271-002 REV 03
E-78273-271-026 REV 0
E-78273-271-005 REV 0
E-78273-271-004 REV 04
E-78273-242-001 REV 05
01-042-006
01-042-007
PRESSURE TEST NOZZLE
01-042-033
01-042-008
01-042-044
@ 45° LOCATION
01-042-045
@ 315° LOCATION
01-042-005
PRESS TEST. NOZZLE
01-042-032
AT 112½° LOCATION
MANWAY
01-042-018 01-042-018A
AT 90° LOCATION
01-042-019 01-042-019B
AT 270° LOCATION
SUPPORT LUGS
01-042-042
AT 90° LOCATION
01-042-043
AT 270° LOCATION
LEVEL NOZZLES
01-042-024
AT 22½° LOCATION
01-042-025
AT 45° LOCATION
01-042-026
AT 315° LOCATION
01-042-027
AT 337½° LOCATION
SECONDARY HANDHOLE
01-042-013
AT 105° LOCATION
TUBE SHEET DRAIN NOZZLE
01-042-036
AT 180° LOCATION
E-114273-501F-015
APPROVED REFERENCE DESIGN
COMBUSTION DIVISION
UNIT 1-ZONE C-2
STEAM GENERATOR #2
WELD DESIGNATIONS
E-114273-501H150

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 43 CLASS 2

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-064 Rev. 04

PROGRAM PLAN TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-043-001	Concentric Reducer-to-Steam Generator Outlet	SG-036-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-043-001A	Concentric Reducer Longitudinal Weld - Outer Side	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-043-002	Concentric Reducer-to-Elbow	SG-036-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80,88 N/A
01-043-003A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-003B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-004	Elbow-to-28" Carbon Steel Pipe	SG-036-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-005	28" Carbon Steel Pipe-to-Elbow	SG-036-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 43 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-064 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-043-006A	Longitudinal Weld on Ell Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-006B	Longitudinal Weld on Ell Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-007	Elbow-to-28" Carbon Steel Pipe	SG-036-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-008	28" Carbon Steel Pipe-to-Elbow	SG-036-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-009A	Longitudinal Weld on Ell Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-009B	Longitudinal Weld on Ell Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-010	Elbow to 28" Carbon Steel Pipe	SG-036-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 43 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-064 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-043-011	28" Carbon Steel Pipe-to-28" Carbon Steel Pipe (Note (1))	SG-036-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-012	28" Carbon Steel Pipe-to-Elbow	SG-036-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-013A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-013B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-014	Elbow-to-28" Carbon Steel Pipe	SG-036-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-015	28" Carbon Steel Pipe-to-Elbow	SG-036-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-016A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 43 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-064 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-043-016B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-017	Elbow-to-28" Carbon Steel Pipe	SG-036-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-018	28" Carbon Steel Pipe-to-Elbow (45 Degrees)	SG-036-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-019A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-019B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-020	Elbow-to-28" Carbon Steel Pipe	SG-036-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-021	28" Carbon Steel Pipe-to-Pipe (Note (1))	SG-036-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 43 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-064 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-043-022	28" Carbon Steel Pipe-to-Elbow (45 Degrees)	SG-036-S005-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-023A	Longitudinal Weld on Elbow	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-024	Elbow-to-28" Carbon Steel Pipe	SG-036-S005-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-025	28" Carbon Steel Pipe to Penetration No. 2	SG-036-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-043-026L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-027L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-028L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 43 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) INSIDE CONTAINMENT

REFERENCE DRAWING NO.: D-9678-501-064 Rev. 04

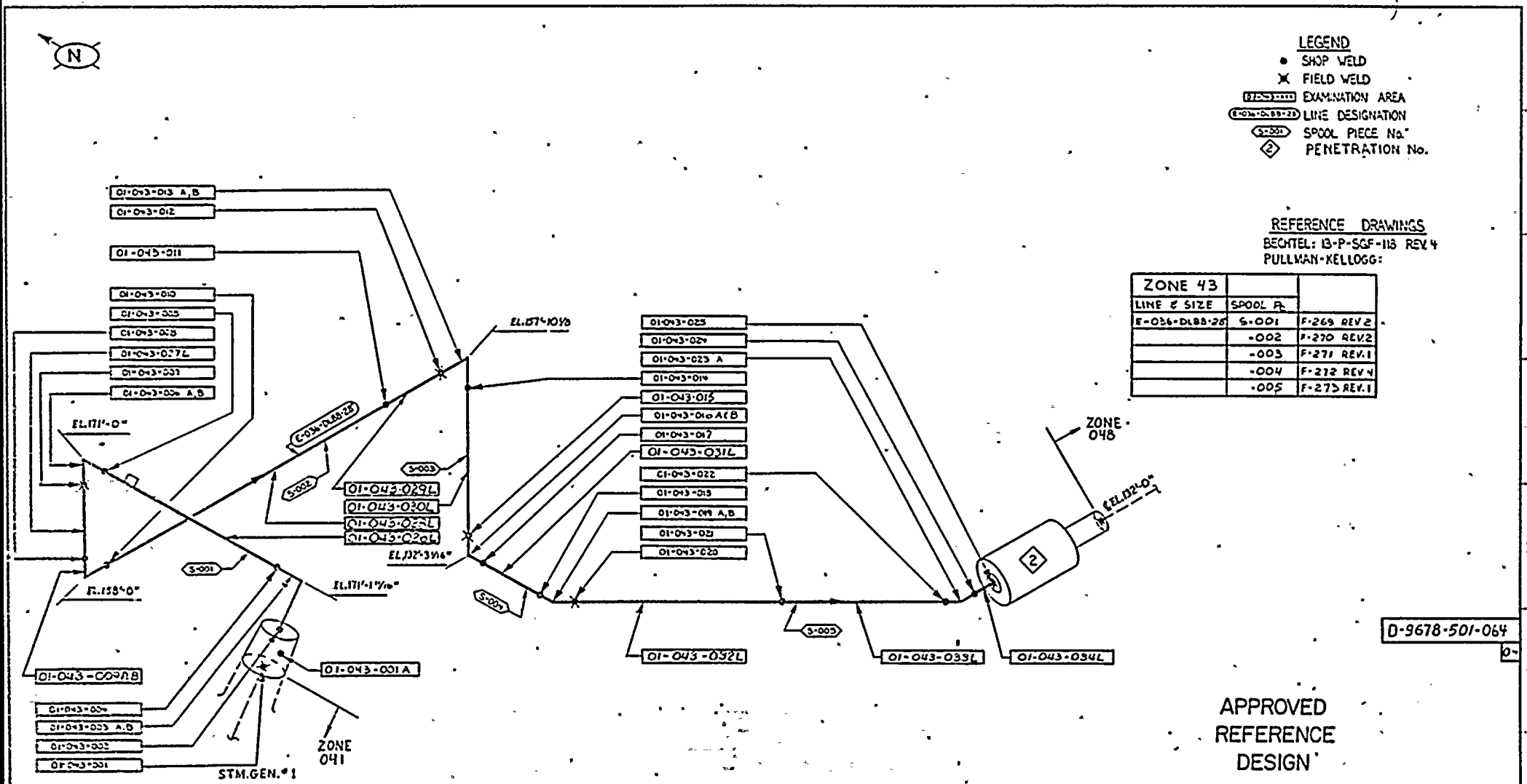
TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-043-029L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-030L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-031L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-032L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-033L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-043-034L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


N
LEGEND
SHOP WELD
FIELD WELD
EXAMINATION AREA
LINE DESIGNATION
SPOOL PIECE No.
PENETRATION No.
REFERENCE DRAWINGS
BECHTEL: 13-P-SGF-118 REV 4
PULLMAN-KELLOGG:
ZONE 43
LINE & SIZE
SPOOL #
E-036-DL88-28
S-001
F-269 REV 2
-002
F-270 REV 2
-003
F-271 REV 1
-004
F-272 REV 4
-005
F-273 REV 1
01-043-013 A,B
01-043-012
01-043-011
01-043-010
01-043-009
01-043-008
01-043-027L
01-043-007
01-043-006 A,B
EL.171'-0"
EL.158'-0"
EL.171'-1 7/16"
EL.157'-10 1/8"
EL.132'-3 1/16"
EL.132'-0"
01-043-029L
01-043-030L
01-043-028L
01-043-026L
01-043-025
01-043-024
01-043-023 A
01-043-014
01-043-015
01-043-016 A&B
01-043-017
01-043-031L
01-043-022
01-043-018
01-043-019 A,B
01-043-021
01-043-020
01-043-032L
01-043-033L
01-043-034L
01-043-009A,B
01-043-004
01-043-003 A,B
01-043-002
01-043-001
01-043-001A
ZONE 048
ZONE 041
STM.GEN.#1
D-9678-501-064
APPROVED REFERENCE DESIGN
UNIT 1 ZONE 43
REV
DESCRIPTION
1-ADDED EXAM AREA DESIGS-022, 024, 026 & 027 PER REV REQ 9678-503
1-GENERALLY REVISED PER REV. REQ #9678-262
UPGRADE TO APPROVED REF DESIGN PER REV REQ No. 9678-385
REVISED No'S & ADDED REF LINE SIZES; ADDED WELDS -001A, -001B, -011A PER REV REQ #9678-417
POWER SYSTEMS
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION
ZONE 43 MAIN STEAM STEAM GEN. NO 1 (EAST) INSIDE CONTAINMENT
D-9678-501-064
04
NONE
8
7
6
5
4
3
2
1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 44 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-001	Steam Generator-to-Concentric Reducer	SG-033-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-044-001A	Concentric Reducer Longitudinal Weld - Outer Side	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-044-002	Concentric Reducer-to-Elbow	SG-033-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-003A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-003B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-004	Elbow-to-28" Carbon Steel Pipe	SG-033-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-005	28" Carbon Steel Pipe-to-Elbow	SG-033-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 44 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-006A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-006B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-007	Elbow-to-28" Carbon Steel Pipe	SG-033-S007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-008	28" CS Pipe-to-Elbow	SG-033-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-009A	Longitudinal Weld on Elbow Outisde Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-009B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-010	Elbow-to-28" CS Pipe	SG-033-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 44 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-011	28" CS Pipe-to-Pipe - (Note (1))	SG-033-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-012	28" CS Pipe-to-Elbow	SG-033-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-013A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-013B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-014	Elbow-to-28" Carbon Steel Pipe	SG-033-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-015	28" CS Pipe-to-Elbow	SG-003-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-016A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 44 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-016B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-017	Elbow-to-28" CS Pipe	SG-033-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-018	28" CS Pipe-to-Elbow	SG-033-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-019A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-019B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-020	Elbow-to-28" CS Pipe	SG-033-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-021	28" CS Pipe-to-Elbow (45 Degrees)	SG-033-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 44 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-022A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-022B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-023	Elbow-to-28" CS Pipe	SG-033-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-024	28" CS Pipe-to-Pipe (Note (1))	SG-033-S006-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-025	NOT USED					
01-044-026	28" CS Pipe-to-Elbow	SG-033-S006-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-027A	Longitudinal Weld on Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 44 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-027B	Longitudinal Weld on Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-028	28" CS Elbow-to-Pipe	SG-033-S006-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-029	NOT USED					
01-044-030	28" CS Pipe-to-Penetration No. 1	SG-033-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-044-033L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-034L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-035L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-036L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 44 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-063 Rev. 04

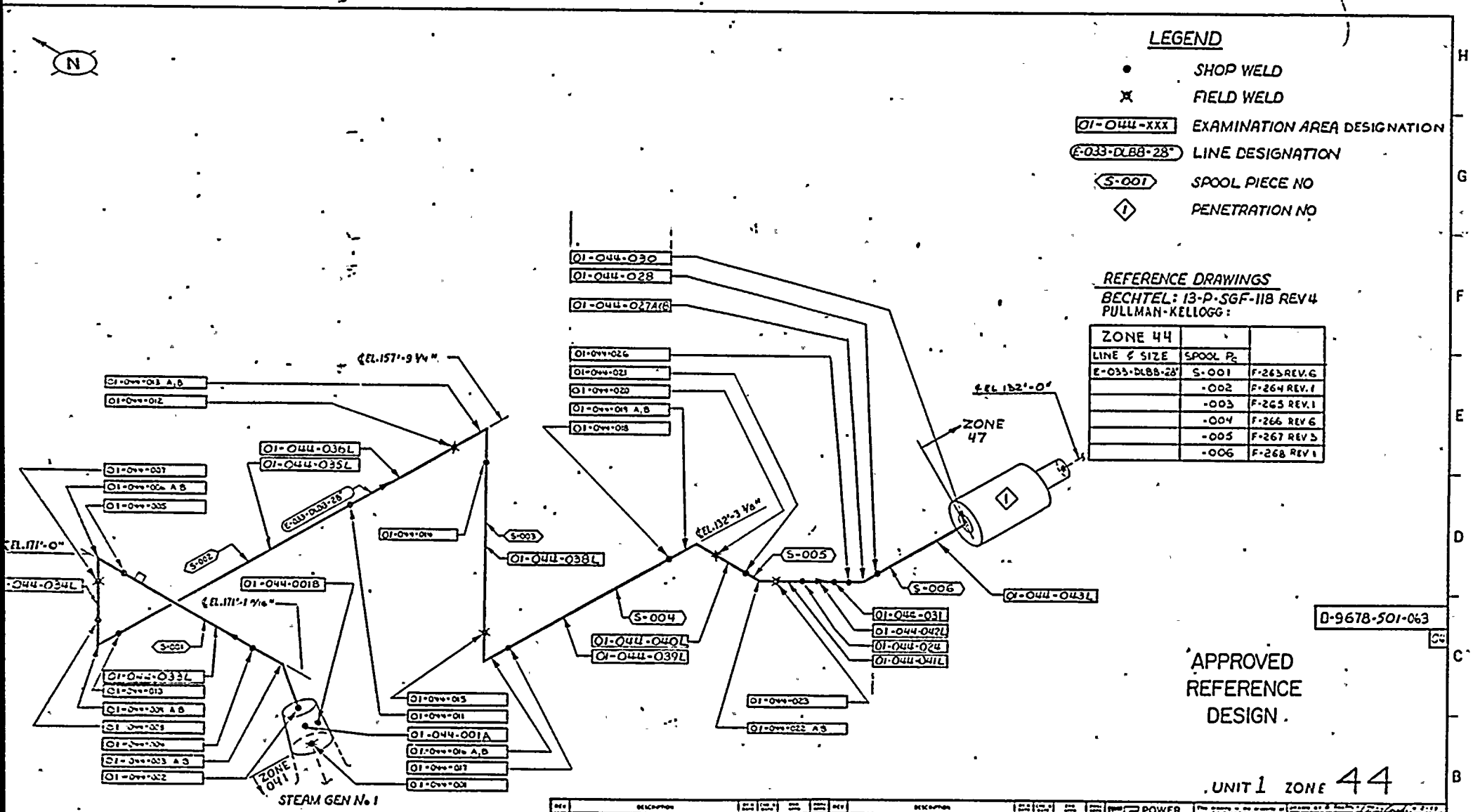
TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-044-037	NOT USED					
01-044-038L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-039L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-040L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-041L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-042L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-044-043L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


N
LEGEND
SHOP WELD
FIELD WELD
01-044-XXX EXAMINATION AREA DESIGNATION
E-033-DLB8-28" LINE DESIGNATION
S-001 SPOOL PIECE NO
PENETRATION NO
REFERENCE DRAWINGS
BECHTEL: 13-P-SGF-118 REV 4
PULLMAN-KELLOGG:
ZONE 44
LINE & SIZE | SPOOL Pc
E-033-DLB8-28" | S-001 | F-263 REV. 6
-002 | F-264 REV. 1
-003 | F-265 REV. 1
-004 | F-266 REV 6
-005 | F-267 REV 5
-006 | F-268 REV 1
01-044-030
01-044-028
01-044-027A(B)
01-044-026
01-044-021
01-044-020
01-044-019 A,B
01-044-018
01-044-036L
01-044-035L
E-033-DLB8-28"
01-044-019
S-003
01-044-038L
S-002
01-044-0018
S-001
01-044-034L
01-044-033L
01-044-013
01-044-015
01-044-011
01-044-001A
01-044-016 A,B
01-044-017
01-044-021
STEAM GEN No. 1
ZONE 041
S-004
01-044-040L
01-044-039L
S-005
S-006
01-044-043L
01-044-031L
01-044-042L
01-044-024
01-044-041L
01-044-023
01-044-022 A,B
ZONE 47
APPROVED REFERENCE DESIGN.
D-9678-501-063
UNIT 1 ZONE 44
1-GENERALLY REVISED PER REV. REQ. # 9678-262
UPGRADE TO APPROVED REF DESIGN PER REV REQ No 9678-385
REVISED NO'S & ADDED REF LINE SIZES; ADDED WELDS -001A, -001B, -011A PER REV REQ # 9674-417.
POWER SYSTEMS
ARIZONA NUCLEAR POWER PROJECT
ZONE 44 MAIN STM STM GEN # 1 (WEST) INSIDE CONTAINMENT
D-9678-501-063
04
661012
NONE

COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-001	Steam Generator-to-Concentric Reducer	SG-042-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-045-001A	Concentric Reducer Longitudinal Weld - Outer Side	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-045-002	Concentric Reducer-to-Elbow	SG-042-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80,88 N/A
01-045-003A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-003B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-004	Elbow-to-28" CS Pipe	SG-042-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-005	28" CS Pipe-to-Elbow	SG-042-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-006A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-006B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-007	Elbow-to-28" CS Pipe	SG-042-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-008	28" CS Pipe-to-Elbow	SG-042-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-009A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-009B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-010	Elbow-to-28" CS Pipe	SG-042-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-011	28" CS Pipe-to-Pipe (Note (1))	SG-042-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-012	28" CS Pipe-to-Elbow	SG-042-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-013A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-013B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-014	Elbow-to-28" CS Pipe	SG-042-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-015	28" CS Pipe-to-Elbow	SG-042-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-016A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-016B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-017	Elbow-to-28" CS Pipe	SG-042-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-018	28" CS Pipe-to-Elbow (45 Degrees)	SG-042-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-019A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-019B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-020	Elbow-to-28" CS Pipe	SG-042-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-021	28" CS Pipe-to-Pipe (Note (1))	SG-042-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-022	28" CS Pipe-to-Elbow (45 Degrees)	SG-042-S005-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-023A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-023B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-024	Elbow-to-28" CS Pipe	SG-042-S005-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-025	28" CS Pipe-to-Penetration No. 3	SG-042-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-045-026	NOT USED					
01-045-027L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-028L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-045-029	NOT USED					
01-045-030L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-045-031L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-045-032L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-045-033L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-045-034	NOT USED					
01-045-035L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-045-036L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 45 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-062 Rev. 04

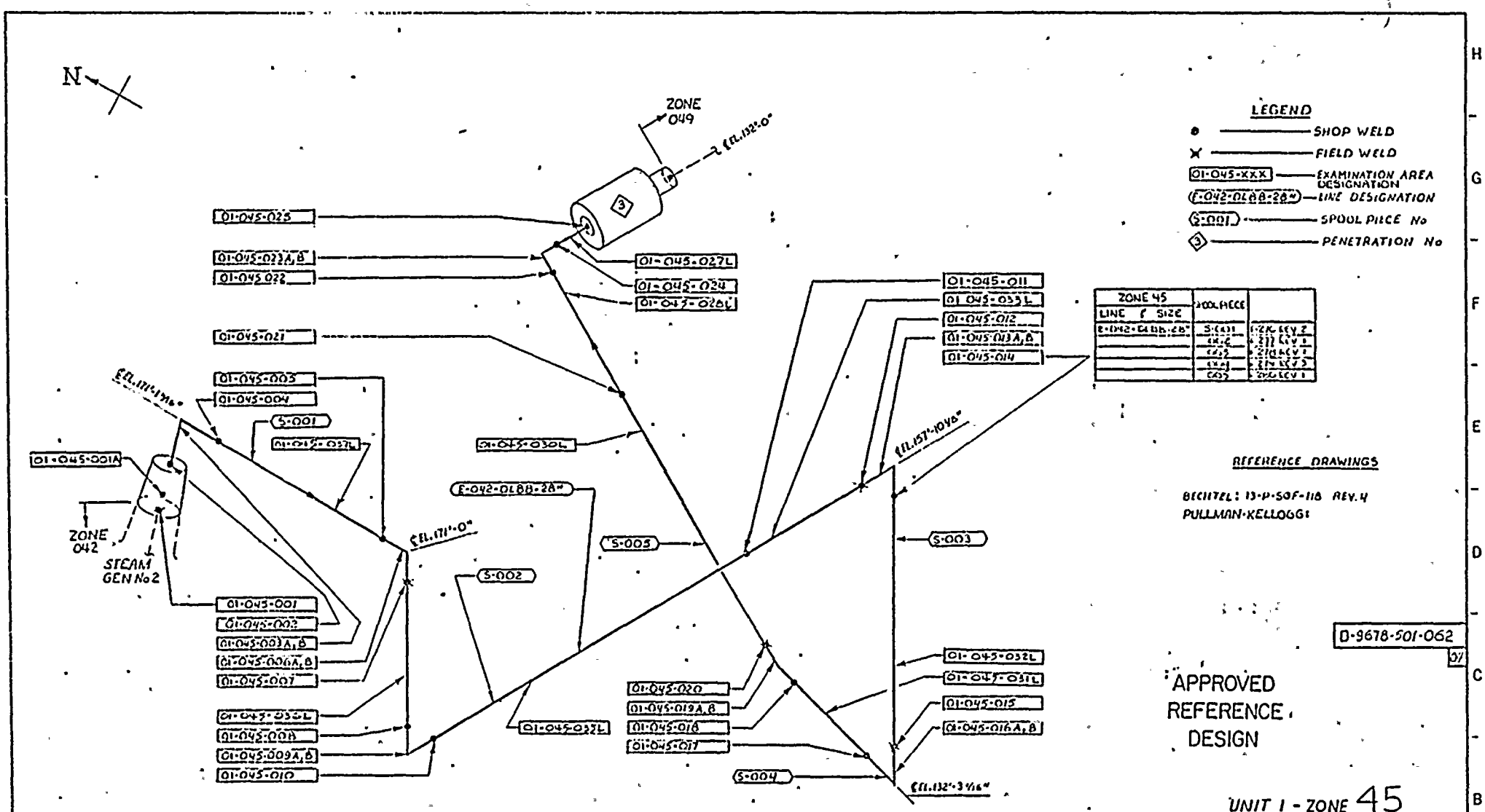
TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-045-037L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


N
ZONE 049
℄ EL.132'-0"
3
01-045-025
01-045-023A,B
01-045-022
01-045-027L
01-045-024
01-045-026L
01-045-021
01-045-003
01-045-004
S-001
01-045-037L
01-045-030L
01-045-001A
ZONE 042
STEAM GEN No 2
℄ EL.171'-1 1/16"
℄ EL.171'-0"
E-042-01BB-28"
S-002
S-005
01-045-001
01-045-002
01-045-003A,B
01-045-006A,B
01-045-007
01-045-036L
01-045-008
01-045-009A,B
01-045-010
01-045-033L
01-045-020
01-045-019A,B
01-045-018
01-045-017
S-004
01-045-011
01-045-035L
01-045-012
01-045-013A,B
01-045-014
℄ EL.157'-10 1/16"
S-003
01-045-032L
01-045-031L
01-045-015
01-045-016A,B
℄ EL.132'-3 1/16"
LEGEND
SHOP WELD
FIELD WELD
01-045-XXX — EXAMINATION AREA DESIGNATION
E-042-01BB-28" — LINE DESIGNATION
S-001 — SPOOL PIECE No
3 — PENETRATION No
ZONE 45
LINE ℄ SIZE
SPOOL PIECE
REFERENCE DRAWINGS
BECHTEL: 13-P-SOF-118 REV. 4
PULLMAN-KELLOGG:
D-9678-501-062
07
APPROVED REFERENCE DESIGN
UNIT 1 - ZONE 45
1-ADDED CALLOUTS 022, 024, 026 & 027 [2-EXAM OUR WAS OK PER REQ 9678-503
1-GENERALLY REVISED PER REV REQ # 9678-222
UPGRADE TO APPROVED REF DESIGN PER REV REQ No 9678-379
[EXAM AREA INS WAS 01-[2-ADDED CHART] 3-ADDED GEN NOTE, [4-DELETED EXAM AREA NO -021A & -021A] 5-ADDED EXAM AREA NO -001B, -001A & -011A PER REV REQ NO 9678-417
POWER SYSTEMS
ZONE 45, MAIN STEAM STEAM GEN. No 2 (EAST) INSIDE CONTAINMENT
D-9678-501-062
04
8
7
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A

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 46 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-001	Steam Generator-to-Concentric Reducer	SG-045-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-046-001A	Concentric Reducer Longitudinal Weld - Outer	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-88 N/A
01-046-002	Concentric Reducer-to-Elbow	SG-045-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80,88 N/A
01-046-003A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-003B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-004	Elbow-to-28" CS Pipe	SG-045-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-005	28" CS Pipe-to-Elbow	SG-045-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 46 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-006A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-006B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-007	Elbow-to-28" CS Pipe	SG-045-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-008	28" CS Pipe-to-Elbow	SG-045-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-009A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-009B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-010	Elbow-to-28" CS Pipe	SG-045-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 46 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-011	28" CS Pipe-to-Pipe (Note (1))	SG-045-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-012	28" CS Pipe-to-Elbow	SG-045-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-013A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-013B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-014	Elbow-to-28" CS Pipe	SG-045-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-015	28" CS Pipe-to-Elbow	SG-045-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-016A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 46 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-016B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-017	Elbow-to-28" CS Pipe	SG-045-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-018	28" CS Pipe-to-Elbow	SG-045-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-019A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-019B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-020	Elbow-to-28" CS Pipe	SG-045-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-021	28" CS Pipe-to-Elbow (45 Degrees)	SG-045-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 46 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-022A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-022B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-023	Elbow-to-28" CS Pipe	SG-045-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-024	28" CS Pipe-to-Pipe (Note (1))	SG-045-S006-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-025	28" CS Pipe-to-Elbow (45 Degrees)	SG-045-S006-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-026A	Longitudinal Weld in Elbow Outside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-026B	Longitudinal Weld in Elbow Inside Radius	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 46 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-027	Elbow-to-28" CS Pipe	SG-045-S006-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-028	28" CS Pipe-to-Penetration No. 4	SG-045-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-046-030L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-031L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-032L	NOT USED					
01-046-033L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-034L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-035L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 46 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-061 Rev. 04

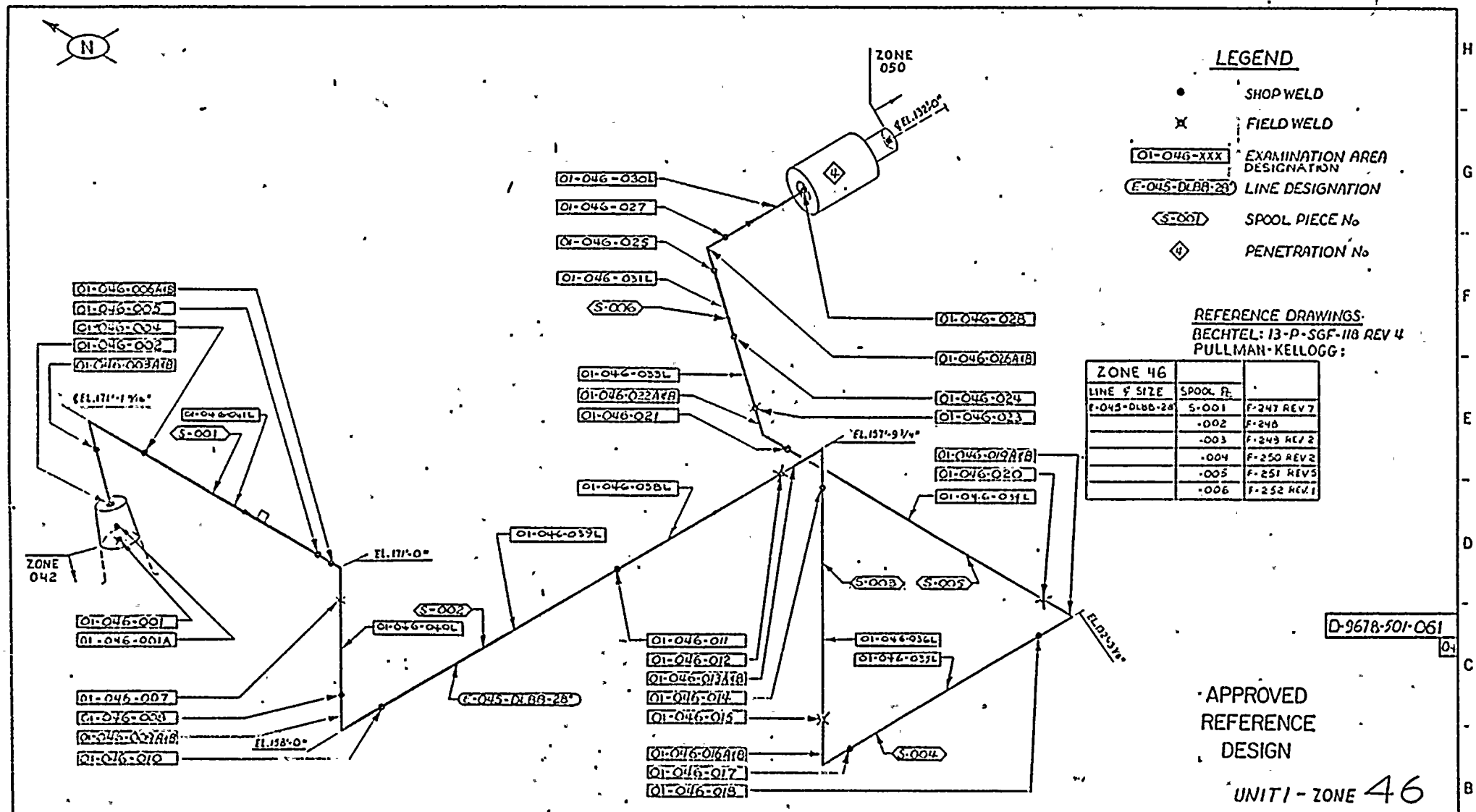
TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-046-036L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-037L	NOT USED					
01-046-038L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-039L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-040L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-046-041L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



ZONE 46		
LINE & SIZE	SPOOL #.	
E-045-DLBB-28"	S-001	F-247 REV 7
	-002	F-248
	-003	F-249 REV 2
	-004	F-250 REV 2
	-005	F-251 REV 5
	-006	F-252 REV 1

COMBUSTION ENGINEERING, INC.

ZONE 47 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-056 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-047-001	Containment Penetration 1 to 28" Carbon Steel Pipe	SG-206-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-002	28" CS Pipe-to-Pipe	SG-206-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-003	28" CS Pipe-to-6" Sweepolet	SG-206-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-004	6" Sweepolet-to-Long Weld Neck Flange	SG-206-S001-L	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-047-005	NOT USED					
01-047-006	NOT USED					
01-047-007	28" CS Pipe-to-6" Sweepolet	SG-206-S001-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 47 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-056 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-047-008	6" Sweepolet-to-Long Weld Neck Flange	SG-206-S001-M	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-047-009	NOT USED					
01-047-010	NOT USED					
01-047-011	28" CS Pipe-to-6" Sweepolet	SG-206-S001-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-012	6" Sweepolet-to-Long Weld Neck Flange	SG-206-S001-N	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-047-013	NOT USED					
01-047-014A	28" CS Pipe-to-Pipe	SG-206-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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COMBUSTION ENGINEERING, INC.

ZONE 47 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-056 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-047-015	28" CS Pipe-to-6" Sweepolet	SG-206-S001-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-016	6" Sweepolet-to-Long Weld Neck Flange	SG-206-S001-P	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-047-017	NOT USED					
01-047-018	NOT USED					
01-047-019	28" CS Pipe-to-6" Sweepolet	SG-206-S001-H	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-020	6" Sweepolet-to-Long Weld Neck Flange	SG-206-S001-Q	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-047-021	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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COMBUSTION ENGINEERING, INC.

ZONE 47 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-056 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-047-022	NOT USED					
01-047-023	28" CS Pipe-to-12" Sweepolet	SG-206-S001-J	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-024	28" CS Pipe-to-Pipe	SG-206-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-025	28" CS Pipe-to-Valve	SG-206-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-026	NOT USED					
01-047-027	28" CS Pipe-to-12" Sweepolet	SG-206-S001-K	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-028	12" Sweepolet-to-12" Sch 100 Pipe	SG-206-S001-R	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-4 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 47 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-056 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-047-029	12" Sch 100 Pipe-to-Cap	SG-206-S001-S	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-047-030	Valve UV-170 to 28" Special Forged Cylinder	SG-206-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-031	Special Forged Cylinder to Special Forged Cylinder	SG-206-S011-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-89 N/A
01-047-032	Special Forged Cylinder to 28" CS Pipe	SG-035-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-047-033L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-034L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-047-035L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 47 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-056 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-047-036L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 325110-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

PAGE: V-47.6

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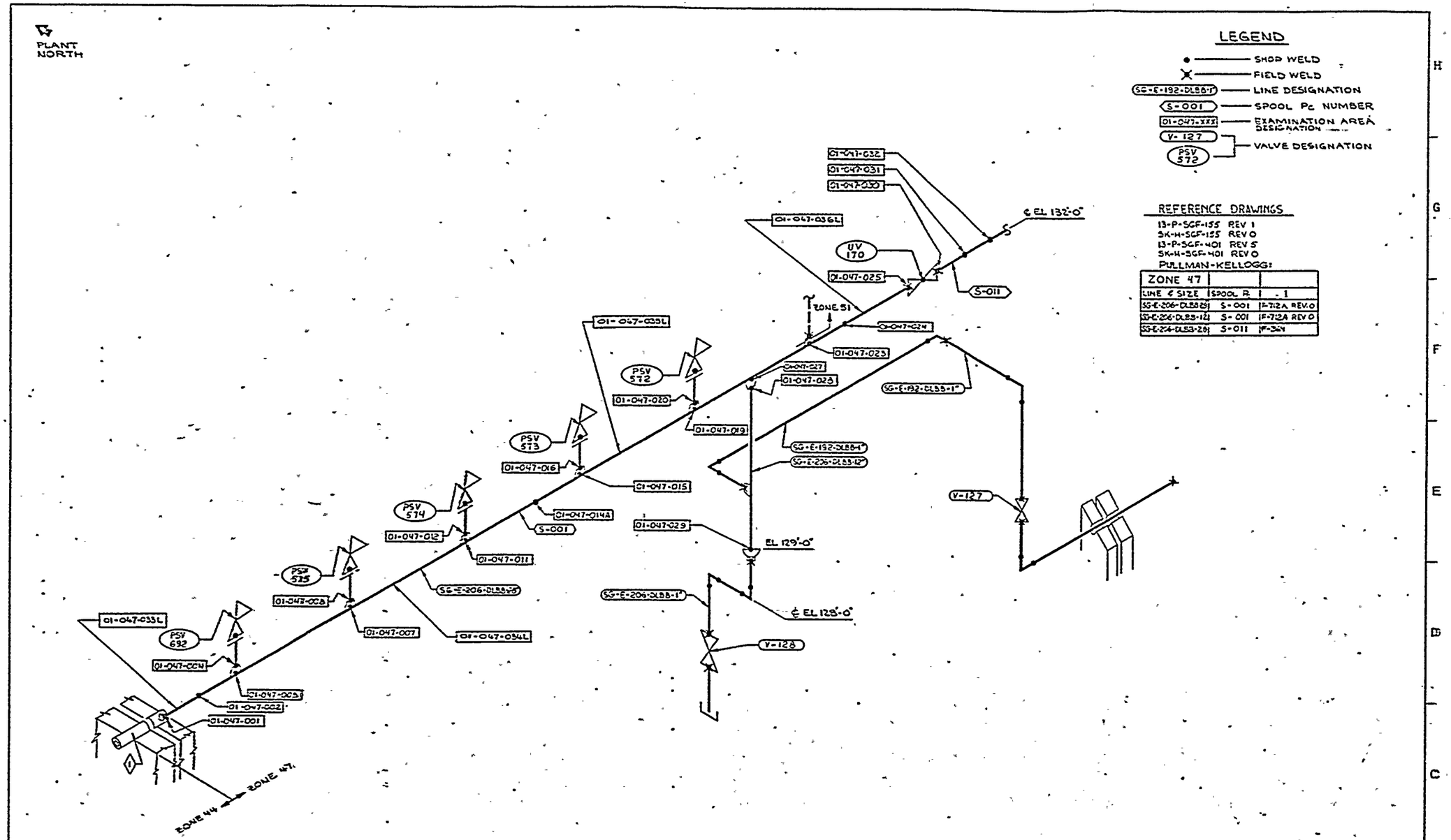


E-9678-501-056 03

APPROVED REFERENCE DESIGN

ZONE 47

UNIT 1

GENERALLY REVISED PER REV. REQ. NO. 9678-255

UP GRADED TO APPROVED REFERENCE DESIGN PER REV REQ. 9678-255

POWER SYSTEMS

ZONE 47
MAIN STEAM
STEAM GEN NO 1(W)

E-9678-501-056 03

DNA-791

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 48 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-057 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-048-001	Containment Penetration 1 to 28" Carbon Steel Pipe	SG-207-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-002	28" CS Pipe-to-Pipe	SG-207-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-003	28" CS Pipe-to-6" Sweepolet	SG-207-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-004	6" Sweepolet-to-Long Weld Neck Flange	SG-207-S001-M	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-048-005	NOT USED					
01-048-006	NOT USED					
01-048-007	28" CS Pipe-to-6" Sweepolet	SG-207-S001-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 48 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-057 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-048-008	6" Sweepolet-to-Long Weld Neck Flange	SG-207-S001-N	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-048-009	NOT USED					
01-048-010	NOT USED					
01-048-011	28" CS Pipe-to-6" Sweepolet	SG-207-S001-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-012	6" Sweepolet-to-Long Weld Neck Flange	SG-207-S001-P	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-048-013	NOT USED					
01-048-014A	28" CS Pipe-to-Pipe	SG-207-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 48 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-057 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-048-015	28" CS Pipe-to-6" Sweepolet	SG-207-S001-H	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-016	6" Sweepolet-to-Long Weld Neck Flange	SG-207-S001-Q	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-048-017	NOT USED					
01-048-018	NOT USED					
01-048-019	28" CS Pipe-to-6" Sweepolet	SG-207-S001-J	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-020	6" Sweepolet-to-Long Weld Neck Flange	SG-207-S001-R	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-048-021	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 48 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-057 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-048-022	NOT USED					
01-048-023	28" CS Pipe-to-12" Sweepolet	SG-207-S001-K	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-024	28" CS Pipe-to-Pipe	SG-207-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-025	28" CS Pipe-to-Valve UV-180	SG-207-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-026	NOT USED					
01-048-027	28" CS Pipe-to-12" Sweepolet	SG-207-S001-L	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-028	12" Sweepolet-to-12" Sch 100 Pipe	SG-207-S001-S	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 48 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-057 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-048-029	12" Sch 100 Pipe-to-Cap	SG-207-S001-T	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-048-030	Valve UV-180-to-28" Special Forged Cylinder	SG-207-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-031	Special Forged Cylinder-to-Special Forged Cylinder	SG-207-S011-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-89 N/A
01-048-032	Special Forged Cylinder-to-28" CS Pipe	SG-038-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-048-033	NOT USED					
01-048-034	6" Sch 80 on 28" OD X 1.75" M/W Sweepolet	SG-207-S001-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-035	4" Weldolet to Special Forged Cylinder	SG-207-S011-K	C-G	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 48 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-057 Rev. 03

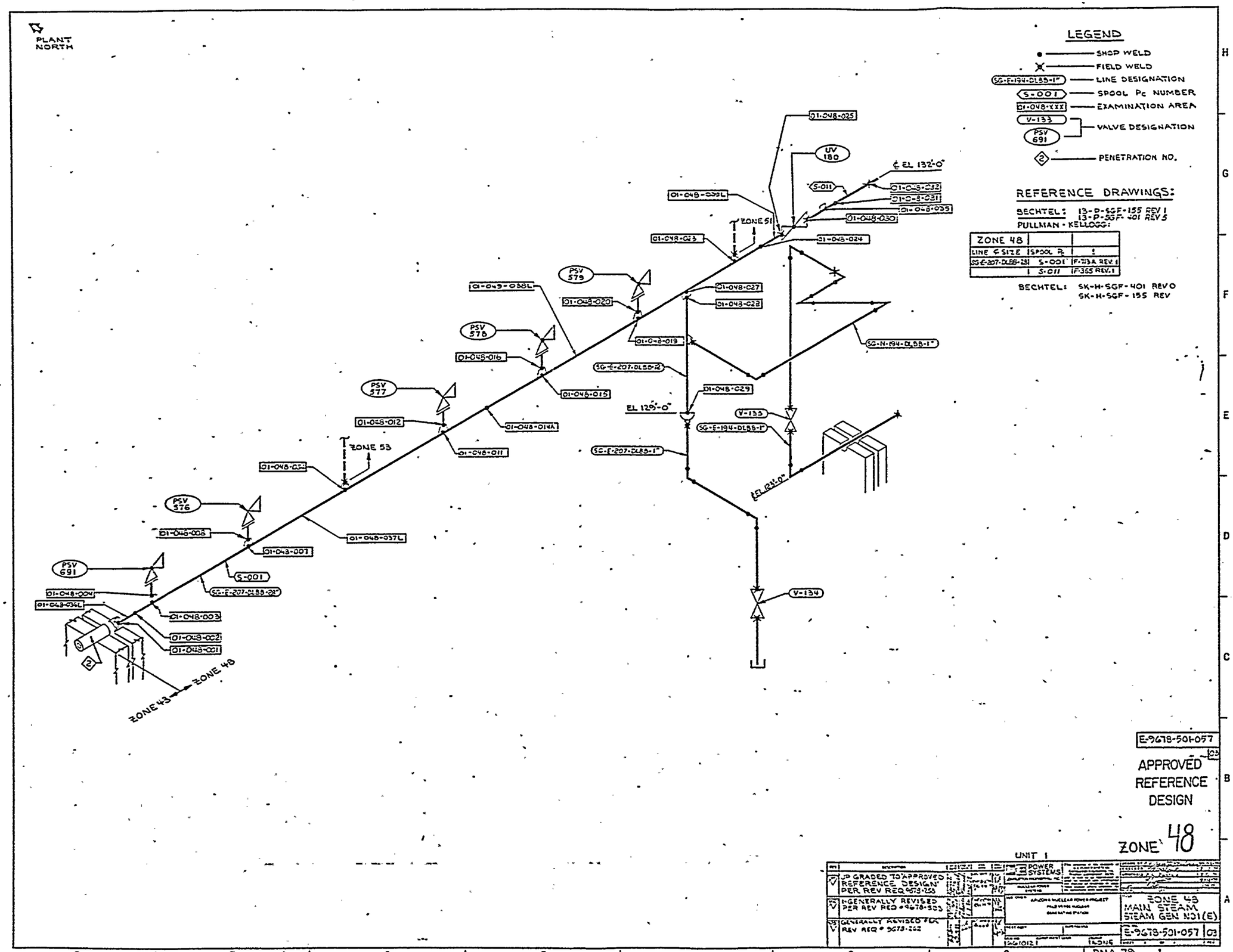
TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-048-036L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/a
01-048-037L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-038L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-048-039L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


PLANT NORTH
LEGEND
SHOP WELD
FIELD WELD
SG-E-194-DL88-1" LINE DESIGNATION
S-001 SPOOL Pc NUMBER
01-048-XXX EXAMINATION AREA
V-133
PSV 691
VALVE DESIGNATION
2 PENETRATION NO.
REFERENCE DRAWINGS:
BECHTEL: 13-D-SGF-155 REV 1
13-P-SGF-401 REV 5
PULLMAN - KELLOGG:
ZONE 48
LINE & SIZE | SPOOL Pc
SG-E-207-DL88-28 | S-001 | F-713A REV. 1
S-011 | F-365 REV. 1
BECHTEL: SK-H-SGF-401 REV 0
SK-H-SGF-155 REV
01-048-025
UV 180
℄ EL 132'-0"
S-011
01-048-032
01-048-031
01-048-035
01-048-030
01-048-024
01-048-033L
ZONE 51
01-048-023
PSV 579
01-048-027
01-048-028
01-048-020
01-049-038L
PSV 578
01-048-019
SG-N-194-DL88-1"
01-048-016
SG-E-207-DL88-2
01-048-015
PSV 577
01-048-029
EL 129'-0"
V-133
SG-E-194-DL88-1"
01-048-012
01-048-014A
01-048-011
SG-E-207-DL88-1"
ZONE 53
01-048-034
℄ EL 123'-0"
PSV 576
01-048-008
01-048-037L
01-048-007
PSV 691
S-001
01-048-004
SG-E-207-DL88-28"
01-048-036L
01-048-003
V-134
01-048-002
01-048-001
2
ZONE 43
ZONE 48
E-9678-501-057
03
APPROVED REFERENCE DESIGN
ZONE 48
UNIT 1
UPGRADED TO APPROVED REFERENCE DESIGN PER REV REQ 9678-255
GENERALLY REVISED PER REV REQ #9678-303
GENERALLY REVISED FOR REV REQ # 9678-262
POWER SYSTEMS
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION
ZONE 48
MAIN STEAM
STEAM GEN NO1(E)
E-9678-501-057
03
DNA 79

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 49 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) OUTSIDE CONTAINMENT

REFERENCE DRAWING NO.: E-9678-501-058 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-049-001	Containment Penetration 1 to 28" Carbon Steel Pipe	SG-208-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-002	28" CS Pipe-to-Pipe	SG-208-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-003	28" CS Pipe-to-6" Sweepolet	SG-208-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-004	6" Sweepolet-to-Long Weld Neck Flange	SG-208-S001-M	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-049-005	NOT USED					
01-049-006	NOT USED					
01-049-007	28" CS Pipe-to-6" Sweepolet	SG-208-S001-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 49 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) OUTSIDE CONTAINMENT

REFERENCE DRAWING NO.: ~~E-9678-501-058 Rev. 03~~

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-049-008	6" Sweepolet-to-Long Weld Neck Flange	SG-208-S001-N	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-049-009	NOT USED					
01-049-010	NOT USED					
01-049-011	28" CS Pipe-to-6" Sweepolet	SG-208-S001-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-012	6" Sweepolet-to-Long Weld Neck Flange	SG-208-S001-P	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-049-013	NOT USED					
01-049-014A	28" CS Pipe-to-Pipe	SG-208-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 49 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-058 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-049-015	28" CS Pipe-to-6" Sweepolet	SG-208-S001-H	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-016	6" Sweepolet-to-Long Weld Neck Flange	SG-208-S001-Q	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-049-017	NOT USED					
01-049-018	NOT USED					
01-049-019	28" CS Pipe-to-6" Sweepolet	SG-208-S001-J	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-020	6" Sweepolet-to-Long Weld Neck Flange	SG-208-S001-R	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-049-021	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 49 CLASS 2

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-058 Rev. 03

PROGRAM PLAN

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-049-022	NOT USED					
01-049-023	28" CS Pipe-to-12" Sweepolet	SG-208-S001-K	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-024	28" CS Pipe-to-Pipe	SG-208-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-025	28" CS Pipe-to-Valve UV-171	SG-208-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-026	NOT USED					
01-049-027	28" CS Pipe-to-12" Sweepolet	SG-208-S001-L	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-028	12" Sweepolet-to-12" Sch 100 Pipe	SG-208-S001-S	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 49 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-058 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-049-029	12" Sch 100 Pipe-to-Cap	SG-208-S00-T	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-049-030	Valve UV-171-to-28" Special Forged Cylinder	SG-208-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-031	Special Forged Cylinder-to-Special Forged Cylinder	SG-208-S011-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-89 N/A
01-049-032	Special Forged Cylinder-to-28" CS Pipe	SG-044-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-049-033	NOT USED					
01-049-034	6" Sch 80 on 28" OD X 1.75" M/W Sweepolet	SG-208-S001-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-035	4" Weldolet to Special Forged Cylinder	SG-208-S011-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-89 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 49 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-058 Rev. 03

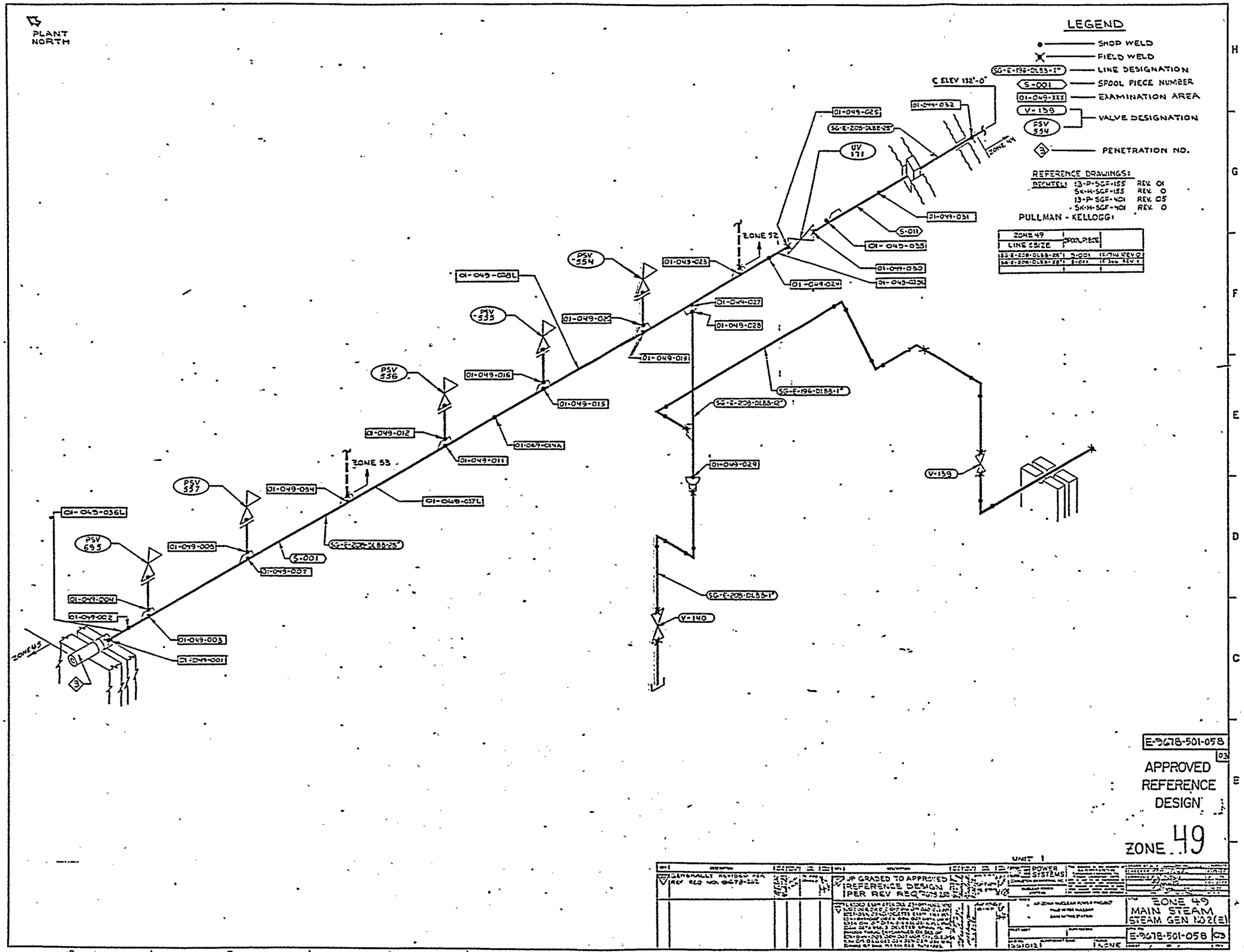
TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (EAST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-049-036L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-037L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-038L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-049-039L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


PLANT NORTH
LEGEND
SHOP WELD
FIELD WELD
LINE DESIGNATION
SPOOL PIECE NUMBER
EXAMINATION AREA
VALVE DESIGNATION
PENETRATION NO.
REFERENCE DRAWINGS:
PULLMAN - KELLOGG:
ZONE 49
SPOOL PIECE
LINE SIZE
℄ ELEV 132'-0"
ZONE 44
ZONE 52
ZONE 53
ZONE 45
PSV 554
PSV 535
PSV 536
PSV 537
PSV 695
UV 171
V-139
V-140
S-001
S-011
01-049-025
01-049-032
01-049-031
01-049-035
01-049-030
01-049-033
01-049-024
01-049-023
01-049-027
01-049-028
01-049-019
01-049-029
01-049-028L
01-049-022
01-049-016
01-049-015
01-049-012
01-049-014A
01-049-018
01-049-034
01-049-037L
01-049-036L
01-049-008
01-049-007
01-049-004
01-049-002
01-049-003
01-049-001
E-9678-501-058
03
APPROVED
REFERENCE
DESIGN
ZONE 49
UNIT 1
POWER SYSTEMS
UP GRADED TO APPROVED REFERENCE DESIGN PER REV REQ
ZONE 49
MAIN STEAM
STEAM GEN NO2(E)
E-9678-501-058
03
DNA 79

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 50 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-059 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-050-001	Containment Penetration to 28" Carbon Steel Pipe	SG-209-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-002	28" CS Pipe-to-Pipe	SG-209-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-003	28" CS Pipe-to-6" Sweepolet	SG-209-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-004	6" Sweepolet-to-Long Weld Neck Flange	SG-209-S001-L	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-050-005	NOT USED					
01-050-006	NOT USED					
01-050-007	28" CS Pipe-to-6" Sweepolet	SG-209-S001-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 50 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-059 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-050-008	6" Swecpolet-to-Long Weld Neck Flange	SG-209-S001-M	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-050-009	NOT USED					
01-050-010	NOT USED					
01-050-011	28" CS Pipe-to-6" Sweepolet	SG-209-S001-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-012	6" Sweepolet-to-Long Weld Neck Flange	SG-209-S001-N	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-050-013	NOT USED					
01-050-014A	28" CS Pipe-to-Pipe	SG-209-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 50 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-059 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-050-015	28" CS Pipe-to-6" Sweepolet	SG-209-S001-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-016	6" Sweepolet-to-Long Weld Neck Flange	SG-209-S001-P	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-050-017	NOT USED					
01-050-018	NOT USED					
01-050-019	28" CS Pipe-to-6" Sweepolet	SG-209-S001-H	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-020	6" Sweepolet-to-Long Weld Neck Flange	SG-209-S001-Q	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-100 N/A
01-050-021	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 50 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-059 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-050-022	NOT USED					
01-050-023	28" CS Pipe-to-12" Sweepolet	SG-209-S001-J	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-024	28" CS Pipe-to-Pipe	SG-209-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-025	28" CS Pipe-to-Valve UV-181	SG-209-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-026	NOT USED					
01-050-027	12" Sch 100 Sweepolet on 28" Pipe	SG-209-S001-K	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-028	12" Sweepolet-to-12" Sch 100 Pipe	SG-209-S001-R	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 50 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-059 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-050-029	12" Sch 100 Cap-to-12" Sch 100 Sweepolet	SG-209-S001-S	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-050-030	Valve UV-181-to-Special Forged Cylinder	SG-209-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-031	Special Forged Cylinder-to-Special Forged Cylinder	SG-209-S011-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-89 N/A
01-050-032	Special Forged Cylinder-to-28" Pipe	SG-047-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-80 N/A
01-050-033L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-034L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A
01-050-035L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 50 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-059 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 (WEST) OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-050-036L	Pipe Longitudinal Seam	N/A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-79 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

PAGE: V-50.6

C-E 0090287 (Rev. 7/80)

PLANT NORTH

LEGEND

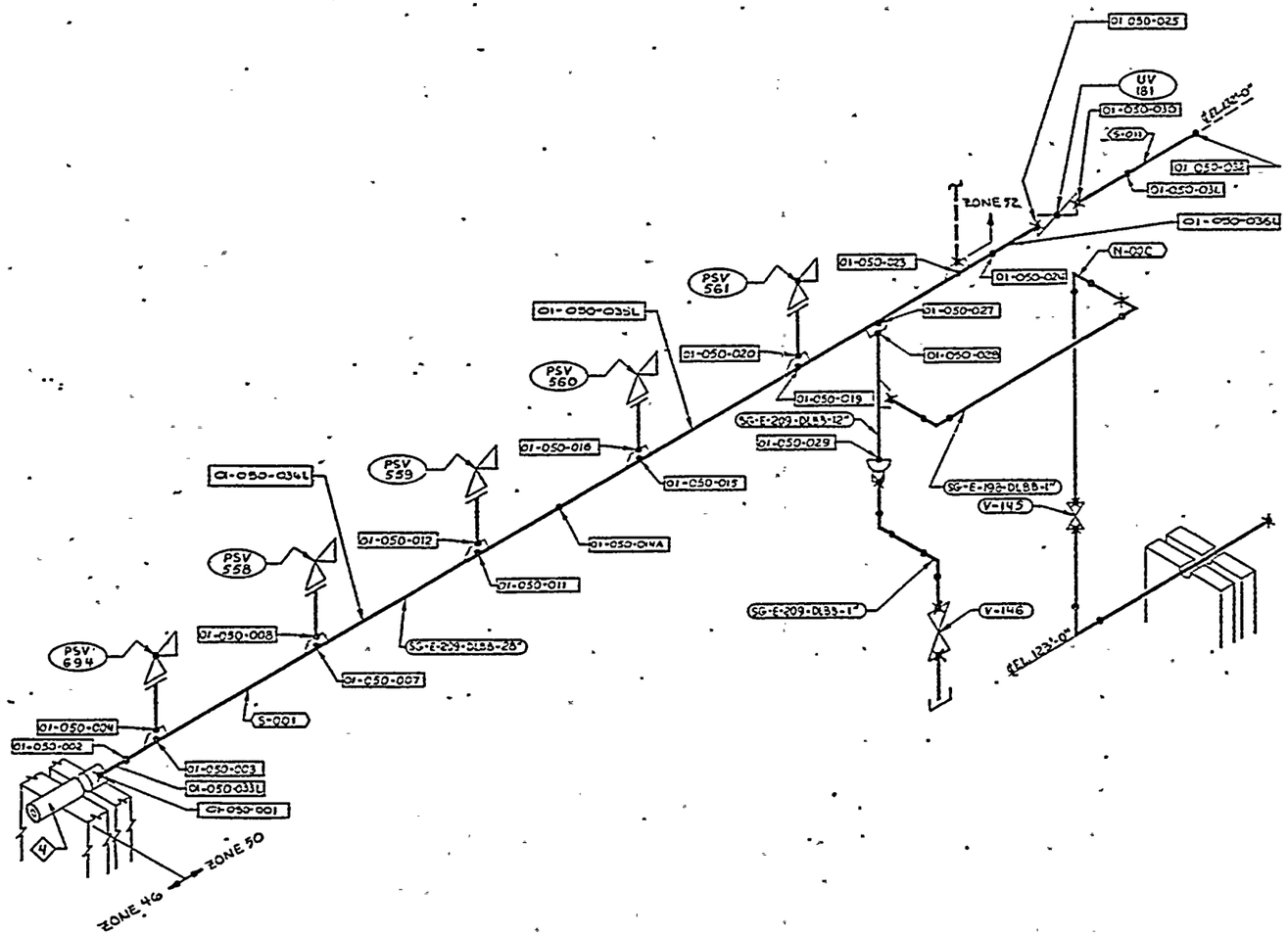
- SHOP WELD
- FIELD WELD
- SG-E-198-DL33-1" — LINE DESIGNATION
- S-001 — SPOOL Pc NUMBER
- 01-050-XXX — EXAMINATION AREA DESIGNATION
- V-145, PSV 558 — VALVE DESIGNATION
- 4 — PENETRATION NO.

REFERENCE DRAWINGS:

BECHTEL: 13-P-SGF-155 REV.7
13-P-SGF-401 REV.5
5K-H-SGF-401 REV.0
5K-H-SGF-155 REV.

PULLMAN-KELLOGG:

ZONE 50		
LINE & SIZE	SPOOL #	
SG-E-203-DL33-28"	S-001	F-715 REV.0
SG-E-209-DL33-28"	S-011	F-257 REV.2



E-9678-501-059 03

APPROVED REFERENCE DESIGN

ZONE 50

UNIT 1

REV	DESCRIPTION
03	UPGRADED TO APPROVED REFERENCE DESIGN PER REV REQ #9678-358
02	GENERALLY REVISED PER REV. REQ No. 9678-301
01	GENERALLY REVISED PER REV REQ NO 9678-202

POWER SYSTEMS

ZONE 50 MAIN STEAM STEAM GEN NO 2(4)

E-9678-501-059 03

DNA-79

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-001	12" Sweepolet to 12" Sch 100 Pipe	SG-059-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-002	12" Sch 100 Pipe to Elbow	SG-059-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-003	Elbow to 12" Sch 100 Pipe	SG-059-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-004	12" Sch 100 Pipe to Elbow	SG-059-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-005	Elbow to 12" Sch 100 Pipe	SG-059-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-006	12" Sch 100 Pipe to Elbow	SG-059-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-007	Elbow to 12" Sch 100 Pipe	SG-059-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-008A	12" Sch 100 Pipe to Elbow	SG-059-S003-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-008B	Elbow to 12" Sch 100 Pipe	SG-059-S003-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-059-009	12" Sch 100 Pipe to Valve	SG-059-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-010	NOT USED					
01-051-011	Valve to 12" Sch 100 Pipe	SG-059-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-012	12" Sch 100 Pipe to Elbow	SG-059-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-013	Elbow to 12" Sch 100 Pipe	SG-059-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-014	12" Sch 100 Pipe to Elbow	SG-059-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-015	Elbow to 12" Sch 100 Pipe	SG-059-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-016	12" Sch 100 Pipe to Tee	SG-059-S005-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-017	Tee Branch Pipe to 12" Sch 100 Pipe	SG-059-S005-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-018	12" Sch 100 Pipe to Atmospheric Dump Exhaust Outlet	SG-059-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-019	Tee to 12" Sch 100 Pipe	SG-070-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-020	12" Sch 100 Pipe to Elbow	SG-070-S004-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-021	Elbow to 12" Sch 100 Pipe	SG-070-S004-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-022	12" Sch 100 Pipe to Elbow	SG-070-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-023	Elbow to 12" Sch 100 Pipe	SG-070-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-024	12" Sch 100 Pipe-to-Valve	SG-070-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-025	NOT USED					
01-051-026	Valve to 12" Sch 100 Pipe	SG-070-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-027	12" Sch 100 Pipe to Elbow	SG-070-S003-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-028	Elbow to 12" Sch 100 Pipe	SG-070-S003-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-029	12" Sch 100 Pipe to Elbow	SG-070-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-030	Elbow to 12" Sch 100 Pipe	SG-070-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-031	12" Sch 100 Pipe to Elbow	SG-070-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-032	Elbow to 12" Sch 100 Pipe	SG-070-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-033	12" Sch 100 Pipe to Elbow	SG-070-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-034	Elbow to 12" Sch 100 Pipe	SG-070-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-035	12" Sch 100 Pipe to Tee	SG-070-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-036	Tee to 12" Sch 100 Pipe	SG-070-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-037	12" Sch 100 Pipe to 12" Sweepolet	SG-070-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-038	NOT USED					
01-051-039	NOT USED					
01-051-040	NOT USED					
01-051-041	NOT USED					
01-051-042	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-043	NOT USED					
01-051-044	NOT USED					
01-051-045	NOT USED					
01-051-046	NOT USED					
01-051-047	NOT USED					
01-051-048	Valve Pipe to Valve	Valve W2	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-049	Valve Pipe to Valve	Valve W1	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-051-050	Valve Pipe to Valve	Valve W2	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 51 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-054 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 1 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-051-051	Valve Pipe to Valve	Valve W1	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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REFERENCE DRAWINGS

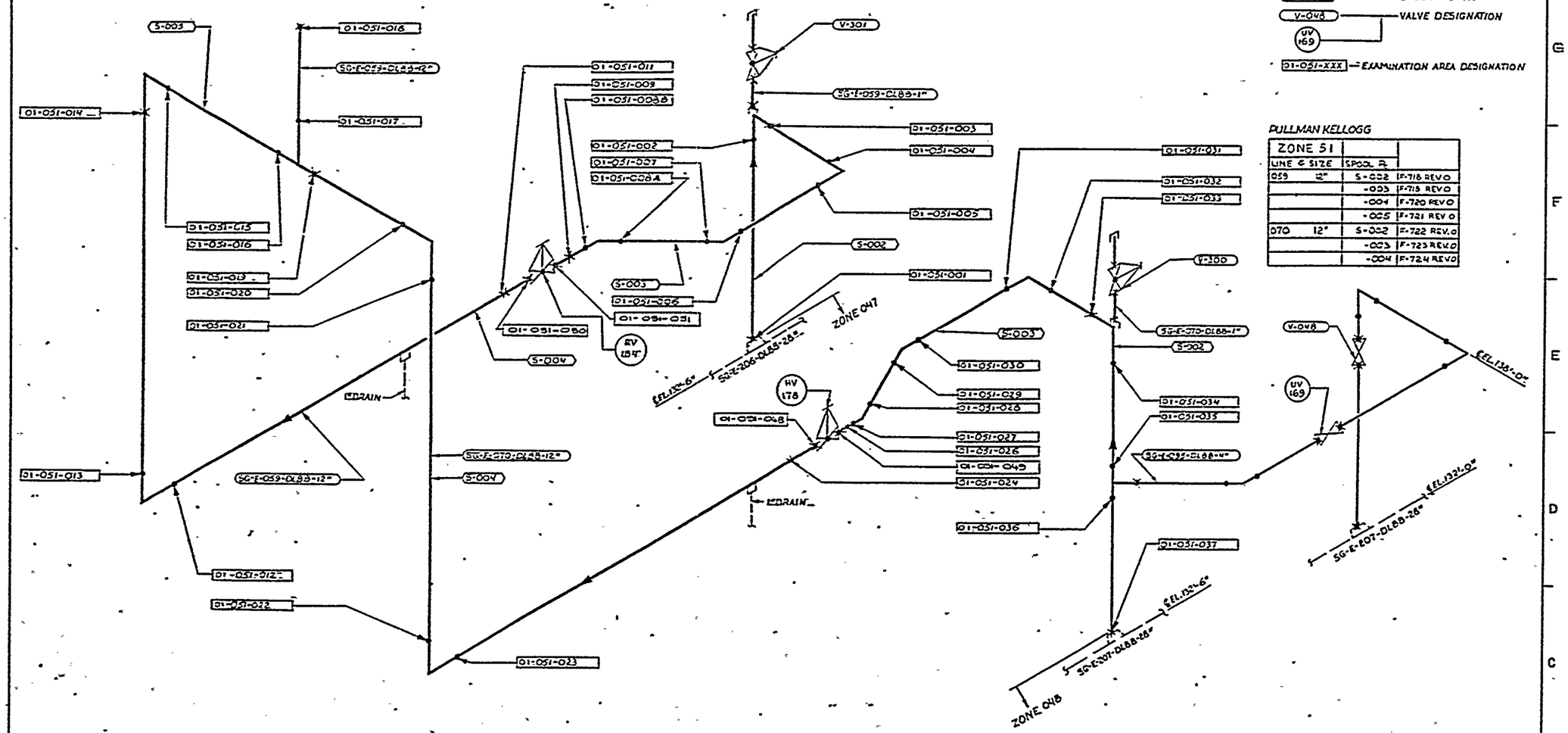
BECHTEL: 13-PSGF-158 REV.1 SK-MS-SGF-18 REV.1

13-SG-059-H-001 REV.0
13-SG-059-H-002 REV.0
13-SG-059-H-003 REV.0
13-SG-059-H-004 REV.1
13-SG-059-H-005 REV.0

13-SG-070-H-001 REV.0
13-SG-070-H-002 REV.0
13-SG-070-H-003 REV.0
13-SG-070-H-004 REV.1
13-SG-070-H-005 REV.0

LEGEND

● —— SHOP WELD
X —— FIELD WELD
SG-E-070-DL88-12" —— LINE DESIGNATION
S-001 —— SPOOL Pc No
V-048 —— VALVE DESIGNATION
UV 169
01-051-XXX —— EXAMINATION AREA DESIGNATION



PULLMAN KELLOGG

ZONE 51		
LINE & SIZE	SPOOL #	
059 12"	S-002	F-718 REV.0
	-003	F-719 REV.0
	-004	F-720 REV.0
	-005	F-721 REV.0
070 12"	S-002	F-722 REV.0
	-003	F-723 REV.0
	-004	F-724 REV.0

E-9678-501-054 03

APPROVED
REFERENCE
DESIGN !

ZONE 51

UNIT 1

REV	DESCRIPTION	DATE	BY	CHK	APP
V	GENERALLY REVISED PER REV REQ No 9678-252				
V	UPGRADE TO APPROVED RSE DESIGN PER REV REQ No 9678-253				
V	1. ADDED HANGER, HANGER CALLOUTS 2. HANGER LEGEND IZ-ADDED REF DWG 3. DELETED EXAM CALL OUT ON PIPE 4. DELETED LINE DES SG-E-070-DL88-1" PER REV REQ 9678-531				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

ZONE 51 MAIN STEAM
STEAM GEN No 1
ATMOSPHERIC DUMP

E-9678-501-054 03

8 7 6 5 4 3 2 1

A B C D E F G H

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 52 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-053 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-052-001	12" Sweepolet to 12" Sch 100 Pipe	SG-103-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-002	12" Sch 100 Pipe to Elbow	SG-103-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-003	12" Sch 100 Elbow to Pipe	SG-103-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-004	12" Sch 100 Pipe to Elbow	SG-103-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-005	12" Sch 100 Elbow to Pipe	SG-103-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-006	12" Sch 100 Pipe to Elbow	SG-103-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-007	12" Sch 100 Elbow to Pipe	SG-103-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 52 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-053 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-052-008	12" Sch 100 Pipe to Elbow	SG-103-S003-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-009	12" Sch 100 Elbow to Pipe	SG-103-S003-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-010	12" Sch 100 Pipe to Valve HV179	SG-103-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-011	NOT USED					
01-052-012	Valve HV179 to 12" Sch 100 Pipe	SG-103-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-013	12" Sch 100 Pipe to Elbow	SG-103-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-014	12" Sch 100 Elbow to Pipe	SG-103-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 52 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-053 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-052-015	12" Sch 100 Pipe to Elbow	SG-103-S004-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-016	12" Sch 100 Elbow to Pipe	SG-103-S004-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-017	12" Sch 100 Pipe to Tee	SG-103-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-018	12" Sch 100 Tee to Pipe	SG-084-S005-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-019	12" Sch 100 Pipe to Atmospheric Dump Outlet	SG-084-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-020	12" Sch 100 Tee to Pipe	SG-084-S005-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-021	12" Sch 100 Pipe to Elbow	SG-084-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 52 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-053 Rev. 03

TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-052-022	12" Sch 100 Elbow to Pipe	SG-084-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-023	12" Sch 100 Pipe to Elbow	SG-084-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-024	12" Sch 100 Elbow to Pipe	SG-084-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-025	12" Sch 100 Pipe to Valve HV185	SG-085-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-026	NOT USED					
01-052-027	Valve HV185 to 12" Sch 100 Pipe	SG-084-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-028	12" Sch 100 Pipe to Elbow	SG-084-S003-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 52 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

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TITLE: MAIN STEAM, STEAM GENERATOR NO. 2 ATMOSPHERIC DUMP

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-052-029	12" Sch 100 Elbow to Pipe	SG-084-S003-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-030	12" Sch 100 Pipe to Elbow	SG-084-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-031	12" Sch 100 Elbow to Pipe	SG-084-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-032	12" Sch 100 Pipe to Elbow	SG-084-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-033	12" Sch 100 Elbow to Pipe	SG-084-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-034	12" Sch 100 Pipe to Elbow	SG-084-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-035	12" Sch 100 Elbow to Pipe	SG-084-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 52 CLASS 2

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-052-036	12" Sch 100 Pipe to Tee	SG-084-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-037	12" Sch 100 Tee to Pipe	SG-084-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-038	12" Sch 100 Pipe to Sweepolet	SG-084-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-049	Valve Pipe to Valve	Valve W2	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-050	Valve Pipe to Valve	Valve W1	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-051	Valve Pipe to Valve	Valve W2	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A
01-052-052	Valve Pipe to Valve	Valve W1	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-74 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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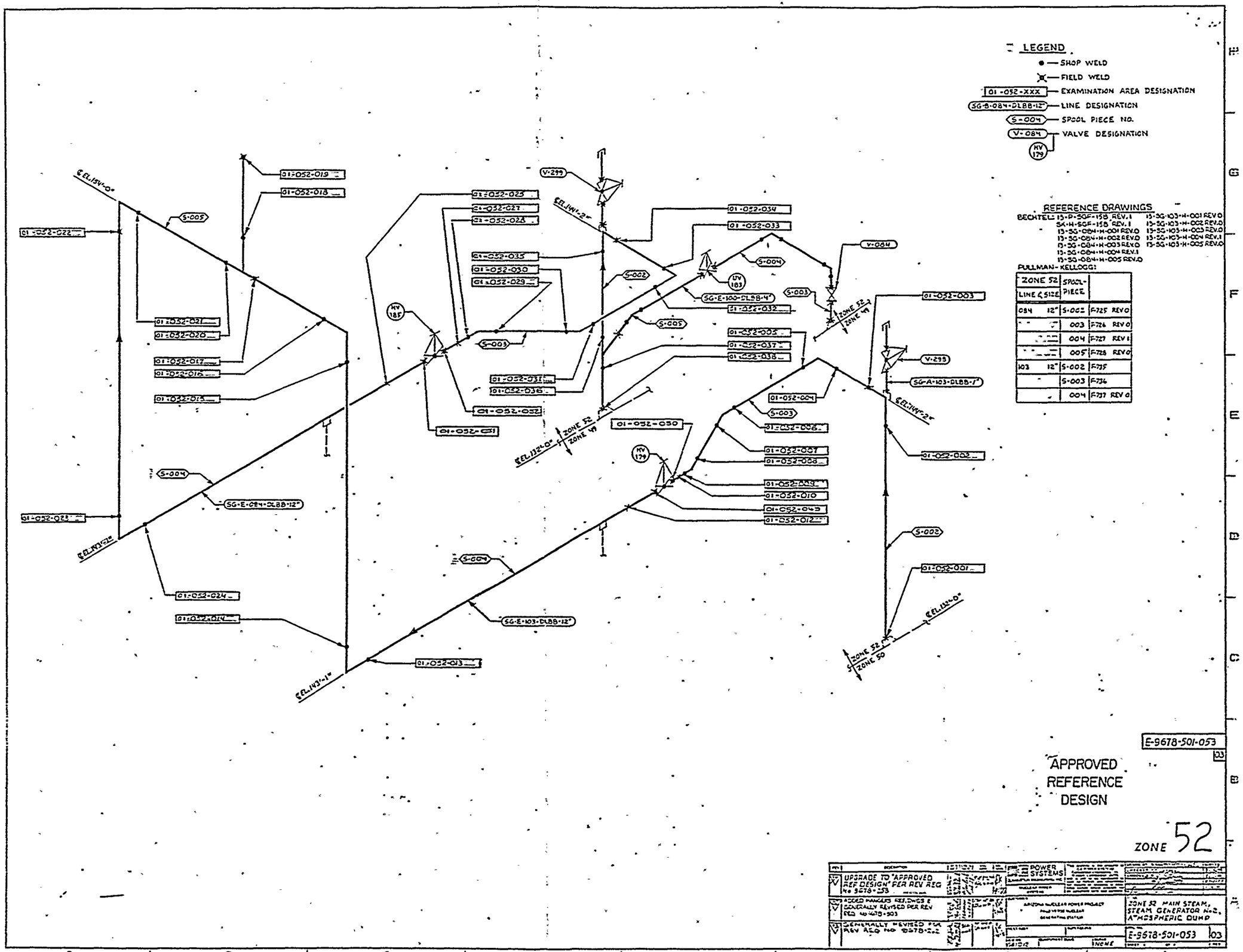
LEGEND
SHOP WELD
FIELD WELD
01-052-XXX — EXAMINATION AREA DESIGNATION
SG-B-084-DLBB-12" — LINE DESIGNATION
S-004 — SPOOL PIECE NO.
V-084 — VALVE DESIGNATION
HV 179
REFERENCE DRAWINGS
BECHTEL: 13-P-SGF-158 REV. 1
SK-H-SGF-158 REV. 1
13-SG-084-H-001 REV.0
13-SG-084-H-002 REV.0
13-SG-084-H-003 REV.0
13-SG-084-H-004 REV.1
13-SG-084-H-005 REV.0
13-SG-103-H-001 REV.0
13-SG-103-H-002 REV.0
13-SG-103-H-003 REV.0
13-SG-103-H-004 REV.1
13-SG-103-H-005 REV.0
PULLMAN-KELLOGG:
ZONE 52 LINE & SIZE | SPOOL-PIECE
084 12" S-002 F-725 REV 0
003 F-726 REV 0
004 F-727 REV 1
005 F-728 REV 0
103 12" S-002 F-735
S-003 F-736
004 F-737 REV 0
℄ EL.154'-0"
℄ EL.144'-2"
℄ EL.132'-0"
℄ EL.143'-1"
ZONE 52
ZONE 49
ZONE 50
V-299
V-084
V-295
HV 185
HV 183
HV 179
S-002
S-003
S-004
S-005
SG-E-100-DLBB-4"
SG-A-103-DLBB-7"
SG-E-084-DLBB-12"
SG-E-103-DLBB-12"
01-052-001
01-052-002
01-052-003
01-052-004
01-052-005
01-052-006
01-052-007
01-052-008
01-052-009
01-052-010
01-052-011
01-052-012
01-052-013
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01-052-039
01-052-040
01-052-041
01-052-042
01-052-043
01-052-050
01-052-051
01-052-052
E-9678-501-053
03
APPROVED
REFERENCE
DESIGN
ZONE 52
UPGRADE TO "APPROVED REF DESIGN" PER REV REQ No 9678-553
ADDED HANGERS REF. DWGS & GENERALLY REVISED PER REV REQ No 9678-503
GENERALLY REVISED PER REV REQ No 9678-502
POWER SYSTEMS
ARIZONA NUCLEAR POWER PROJECT
ZONE 52 MAIN STEAM, STEAM GENERATOR No 2, ATMOSPHERIC DUMP
E-9678-501-053
03
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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 53 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-055 Rev. 03
TITLE: STEAM TO AUXILIARY FEEDWATER SYSTEM

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-053-001	Sweepolet to 6" Sch 80 Pipe (Note 2)	SG-081-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-002	6" Sch 80 Pipe to Elbow (Note 2)	SG-081-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-003	NOT USED					
01-053-004	6" Sch 80 Elbow to Pipe (Note 2)	SG-081-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-005	6" Sch 80 Pipe to Elbow (Note 2)	SG-081-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-006.	6" Sch 80 Elbow to Pipe (Note 2)	SG-081-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-007	6" Sch 80 Pipe to Elbow (Note 2)	SG-081-S002-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 53 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-055 Rev. 03

TITLE: STEAM TO AUXILIARY FEEDWATER SYSTEM

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-053-008	6" Sch 80 Elbow to Pipe (Note 2)	SG-081-S002-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-009	6" Sch 80 Pipe to Elbow (Note 2)	SG-081-S002-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-010	6" Sch 80 Elbow to Pipe (Note 2)	SG-081-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-011	6" Sch 80 Pipe to Tee (Note 2)	SG-081-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-012	6" Sch 80 Tee to Pipe (Note 2)	SG-081-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-013	6" Sch 80 Pipe-to-Valve UV-134 (Note 2)	SG-081-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-014	6" Sch 80 Tee to Pipe (Note 2)	SG-081-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 53 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-055 Rev. 03 TITLE: STEAM TO AUXILIARY FEEDWATER SYSTEM

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-053-015	6" Sch 80 Pipe to Sch 80 Weld Cap (Note 2)	SG-081-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-016	NOT USED					
01-053-017	NOT USED					
01-053-018	NOT USED					
01-053-019	NOT USED					
01-053-020	NOT USED					
01-053-021	6" Sch 80 Pipe to Sch 80 Weld Cap (Note 2)	SG-083-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-022	6" Sch 80 Tee to Pipe (Note 2)	SG-083-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 53 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-055 Rev. 03

TITLE: STEAM TO AUXILIARY FEEDWATER SYSTEM

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-053-023	6" Sch 80 Tee to Pipe (Note 2)	SG-083-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-024	6" Pipe to Valve UV-138 (Note 2)	SG-083-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-025	6" Sch 80 Pipe-to-Tee (Note 2)	SG-083-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-026	6" Sch 80 Elbow-to-Pipe (Note 2)	SG-083-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-027	6" Sch 80 Pipe-to-Elbow (Note 2)	SG-083-S002-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-028	6" Sch 80 Elbow-to-Pipe (Note 2)	SG-083-S002-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-029	6" Sch 80 Pipe-to-Elbow (Note 2)	SG-083-S002-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 53 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-055 Rev. 03

TITLE: STEAM TO AUXILIARY FEEDWATER SYSTEM

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-053-030	6" Sch 80 Elbow-to-Pipe (Note 2)	SG-083-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-031	6" Sch 80 Pipe-to-Elbow (Note 2)	SG-083-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-032	6" Sch 80 Pipe-to-Elbow (Note 2)	SG-083-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-033	NOT USED					
01-053-034	6" Sch 80 Pipe-to-Elbow (Note 2)	SG-083-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-053-035	Sweepolet-to-6" Sch 80 Pipe (Note 2)	SG-083-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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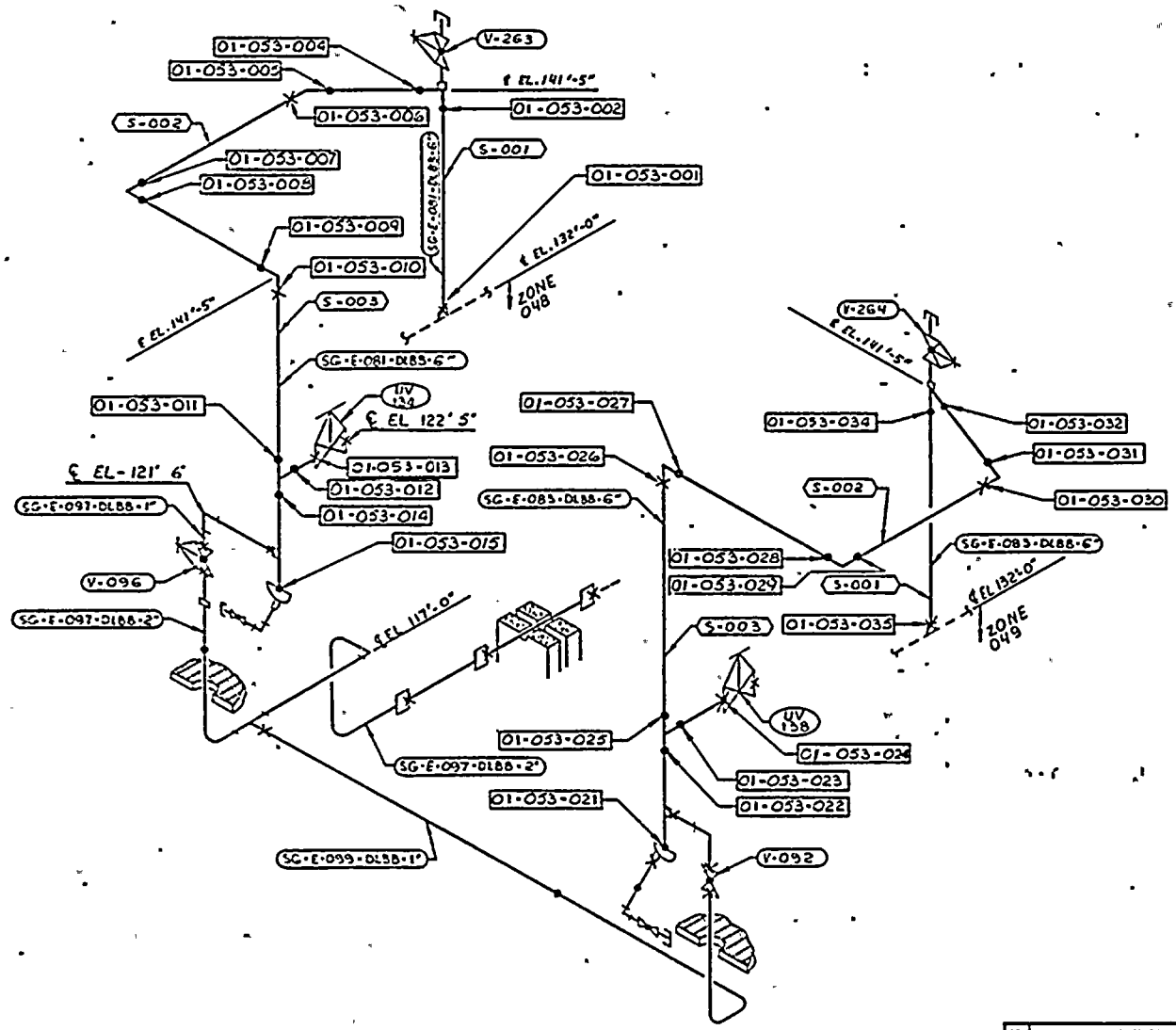


LEGEND

- • SHOP WELD
- X FIELD WELD
- 01-053-XXX EXAMINATION AREA DESIGNATION
- SG-E-081-DL88-6" LINE DESIGNATION
- S-001 SPOOL PIECE NO.
- V-264, UV 138 VALVE DESIGNATION

REFERENCE DRAWINGS

BECHTEL : 13-P-AFF-131 REV. 2

PULLMAN-KELLOGG :

ZONE 53 LINE & SIZE		SPOOL PIECE	
081	6"	S-001	F-549
081	6"	S-002	F-398
081	6"	S-003	F-550
083	6"	S-001	F-551
083	6"	S-002	F-371 REV. 3
083	6"	S-003	F-552

D-9678-501-055 03

APPROVED REFERENCE DESIGN

UNIT 1 - ZONE 53

REV	DESCRIPTION	DATE	CHK'D	APPD	CHG
02	UPGRADE TO APPROVED REF DESIGN PER REV REQ # 9678-255				
01	1-DELETED SPOOL PC NO'S N 00A THRU N-00E (2-ADDED ELAM AREAS 23-053-027 THRU 23-053-029 PER REV REQ 9678-503				
00	GENERALLY REVISED PER REV. REQ # 9678-262				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

STEAM TO AUX FEEDWATER SYSTEM ZONE 53

D-9678-501-055 03

NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-001	Steam Generator No. 1 to 14" Sch 100 Pipe	SG-013-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-002	14" Sch 100 Pipe to Elbow	SG-013-S002-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-003	14" Sch 100 Elbow to Pipe	SG-013-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-004	14" Sch 100 Pipe to Elbow	SG-013-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-005	14" Sch 100 Elbow to Pipe	SG-013-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-006	14" Sch 100 Pipe to Elbow	SG-013-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-007	14" Sch 100 Elbow to Pipe	SG-013-S001-P	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-008	14" Sch 100 Pipe to Elbow	SG-013-S001-N	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-009	14" Sch 100 Elbow to Pipe	SG-013-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-010	14" Sch 100 Pipe to Reducer	SG-013-S001-M	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-011A	Reducer to 16" Sch 80 Pipe	SG-013-S001-L	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-054-011B	16" Sch 80 Pipe to Pipe	SG-013-S001-FW301	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-054-012	16" Sch 80 Pipe to Reducer	SG-013-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-054-013	Reducer to 24" Sch 80 Pipe	SG-002-S010-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-014	24" Sch 80 Pipe to Tee	SG-002-S010-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-015	Steam Generator No. 1 to 14" Sch 100 Pipe	SG-002-W017	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-016	14" Sch 100 Pipe to Elbow	SG-002-S012-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-017	14" Sch 100 Elbow to Pipe	SG-002-S012-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-018	14" Sch 100 Pipe to Elbow	SG-002-S012-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-019	14" Sch 100 Elbow to Pipe	SG-002-S012-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-020	14" Sch 100 Pipe to Elbow	SG-002-W016	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-021	14" Sch 100 Elbow to Pipe	SG-002-S011-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-022	14" Sch 100 Pipe to Elbow	SG-002-S011-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-023	14" Sch 100 Elbow to Pipe	SG-002-S011-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-024	14" Sch 100 Pipe to Reducer	SG-002-S011-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-054-025A	Reducer to 16" Sch 80 Pipe	SG-002-S011-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-054-025B	16" Sch 80 Pipe to pipe	SG-002-S011-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-054-026	16" Sch 80 Pipe to Reducer	SG-002-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-027	Reducer to 24" Sch 80 Pipe	SG-002-S010-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-028	24" Sch 80 Pipe to Tee	SG-002-S010-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-029	Tee to 24" Sch 80 Pipe	SG-002-S010-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-029A	24" Sch 80 Pipe to Pipe	SG-002-S010-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-029B	24" Sch 80 Pipe to Pipe	SG-002-S010-H	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-030	24" Sch 80 Pipe to Elbow	SG-002-S010-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-031	24" Sch 80 Elbow to Pipe	SG-002-W014	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-032	24" Sch 80 Pipe to Elbow	SG-002-S009-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-033	24" Sch 80 Elbow to Pipe	SG-002-S009-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-034	24" Sch 80 Pipe to Elbow	SG-002-S009-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-035	24" Sch 80 Elbow to Pipe	SG-002-W013	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-036	24" Sch 80 Pipe to Elbow	SG-002-S008-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-037	24" Sch 80 Elbow to Pipe	SG-002-S008-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-038	24" Sch 80 Pipe to Elbow	SG-002-S008-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 54 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-039	24" Sch 80 Elbow to Pipe	SG-002-S008-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-040	NOT USED					
01-054-041	24" Sch 80 Pipe to Valve	SG-002-W012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-042	NOT USED					
01-054-043	Valve to 24" Sch 80 Pipe	SG-002-W011	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-044	NOT USED					
01-054-045	24" Sch 80 Pipe to Valve	SG-002-W010	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9578-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-046	NOT USED					
01-054-047	Valve to 24" Sch 80 Pipe	SG-002-W009	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-048	NOT USED					
01-054-049	24" Sch 80 Pipe to Elbow	SG-002-S006-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-050	24" Sch 80 Elbow to Pipe	SG-002-W008	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-051	24" Sch 80 Pipe to Elbow	SG-002-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-052	24" Sch 80 Elbow to Pipe	SG-002-S004-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-053	24" Sch 80 Pipe to Elbow	SG-002-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-054	24" Sch 80 Elbow to Pipe	SG-002-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-055	24" Sch 80 Pipe to Pipe	SG-002-W018	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-056	24" Sch 80 Pipe to Elbow	SG-002-S013-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-057	24" Sch 80 Elbow to Pipe	SG-002-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-058	24" Sch 80 Pipe to Pipe	SG-002-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-059	24' Sch 80 Pipe to Elbow	SG-002-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 54 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-052 Rev. 04

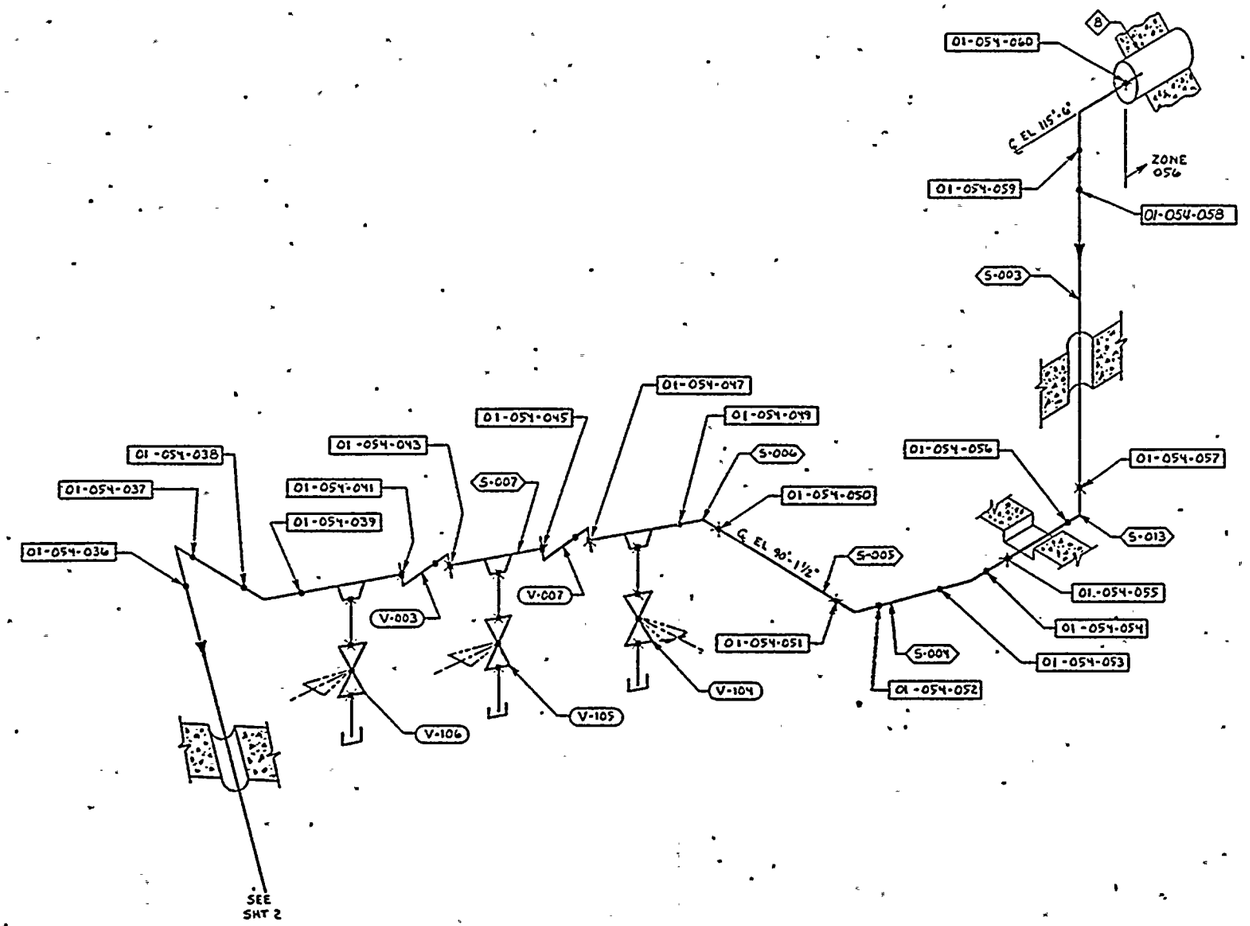
TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-054-060	24" Sch 80 Elbow to Pipe (Penetration 8)	SG-002-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-061	24" Sch 80 Pipe to Pipe	SG-013-FW300	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-054-062	24" Sch 80 Pipe to Pipe	SG-002-FW300	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- • SHOP WELD
- X FIELD WELD
- 01-054-XXX — EXAMINATION AREA
- E-002-DLBB-29 — LINE DESIGNATION
- S-001 — SPOOL PIECE NO.
- V-007 — VALVE DESIGNATION
- B — PENETRATION NO.

REFERENCE DWGS.

BECHTEL: 13-P-SGF-119 REV 6
PULLMAN-KELLOGG:

ZONE 54 LINE & SIZE	SPOOLPIECE	DWG NO.
002 24"W.P.	S-003	5-26 REV 0
	004	5-26
	005	5-27 REV 0
	006	5-25 REV 0
	007	5-43 REV 0
	008	5-33 REV 0
	009	5-44 REV 0
	010	5-34 REV 1
	011	5-40 REV 0
	012	5-26 REV 0
	013	5-679 REV 0
013 14"W.P.	S-001	5-38 REV 0
	002	5-282 REV 0

E-9678-501-052
SHEET 1 OF 2 04

APPROVED
REFERENCE
DESIGN-

UNIT 1 ZONE 54

REV	DESCRIPTION					
0	1. REVISED & REDESIGNED 2. ADDED SHT 2 PER REV REQ'TS NO 9678-282					

POWER SYSTEMS

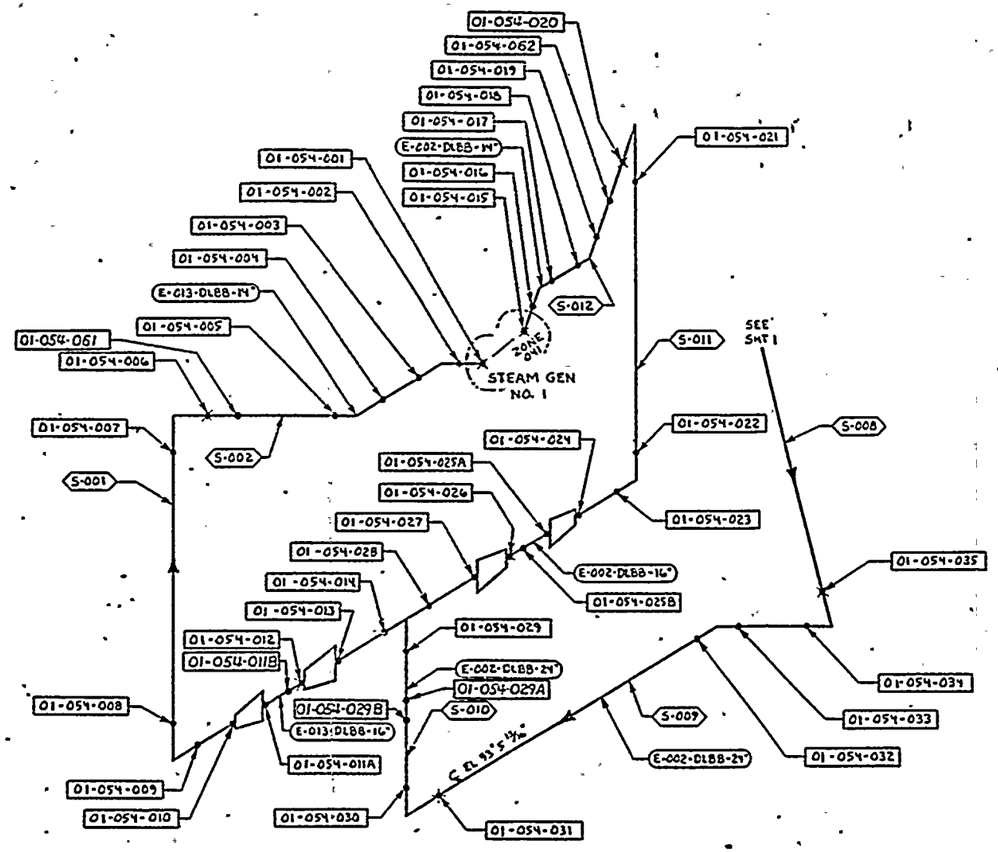
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

MAIN FEEDWATER STEAM GENERATOR #1 INSIDE CONTAINMENT

E-9678-501-052 04

JOB NO 66012 | SCALE NONE | SHEET 1 OF 2

8 7 6 5 4 3 2 1



E-9678-501-052
SHEET 2 OF 2 04

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 54

REV	DESCRIPTION				
04	THIS SHEET ADDED PER REV REQ #9678-262				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT

MAIN FEEDWATER STEAM GENERATOR #1 INSIDE CONTAINMENT

E-9678-501-052 04

SCALE: NONE

8 7 6 5 4 3 2 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 55 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-001	Steam Generator No. 2 to 14" Sch 100 Pipe	SG-014-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-002	14" Sch 100 Pipe to Elbow	SG-014-S002-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-003	14" Sch 100 Elbow to Pipe	SG-014-S002-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-004	14" Sch 100 Pipe to Elbow	SG-014-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-005	14" Sch 100 Elbow to Pipe	SG-014-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-006	14" Sch 100 Pipe to Elbow	SG-014-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-007	14" Sch 100 Elbow to Pipe	SG-014-S001-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-008	14" Sch 100 Pipe to Elbow	SG-014-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-009	14" Sch 100 Elbow to Pipe	SG-014-S001-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-010	14" Sch 100 Pipe to Reducer	SG-014-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-011	Reducer to 16" Sch 80 Pipe	SG-014-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-055-012	16" Sch 80 Pipe to Reducer	SG-014-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-055-013	Reducer to 24" Sch 80 Pipe	SG-005-S010-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-014	24" Sch 80 Pipe to Tee	SG-005-S010-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-015	Steam Generator No. 1 to 14" Sch 100 Pipe	SG-005-W017	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-016	14" Sch 100 Pipe to Elbow	SG-005-S012-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-017	14" Sch 100 Elbow to Pipe	SG-005-S012-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-018	14" Sch 100 Pipe to Elbow	SG-005-S012-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-019	14" Sch 100 Elbow to Pipe	SG-005-S012-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-020	14" Sch 100 Pipe to Elbow	SG-005-W016	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-021	14" Sch 100 Elbow to Pipe	SG-005-S011-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-022	14" Sch 100 Pipe to Elbow	SG-005-S011-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-023	14" Sch 100 Elbow to Pipe	SG-005-S011-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-024	14" Sch 100 Pipe to Reducer	SG-005-S011-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-75 N/A
01-055-025	Reducer to 16" Sch 80 Pipe	SG-005-S011-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-055-026	16" Sch 80 Pipe to Reducer	SG-005-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A
01-055-027	Reducer to 24" Sch 80 Pipe	SG-005-S010-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-028	24" Sch 80 Pipe to Tee	SG-005-S010-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-029	Tee to 24" Sch 80 Pipe	SG-005-S010-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-030	24" Sch 80 Pipe to Elbow	SG-005-S010-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-031	24" Sch 80 Elbow to Pipe	SG-005-W014	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-032	24" Sch 80 Pipe to Elbow	SG-005-S009-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-033	24" Sch 80 Elbow to Pipe	SG-005-S009-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-034	24" Sch 80 Pipe to Elbow	SG-005-S009-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-035	24" Sch 80 Elbow to Pipe	SG-005-W013	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-036	24" Sch 80 Pipe to Elbow	SG-005-S008-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-037	24" Sch 80 Elbow to Pipe	SG-005-S008-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-038	24" Sch 80 Pipe to Elbow	SG-005-S008-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-039	24" Sch 80 Elbow to Pipe	SG-005-S008-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-040	NOT USED					
01-055-041	24" Sch 80 Pipe to Valve	SG-005-W012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-042	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE ____ CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-043	Valve to 24" Sch 80 Pipe	SG-005-W011	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-044	NOT USED					
01-055-045	24" Sch 80 Pipe to Valve	SG-005-W010	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-046	NOT USED					
01-055-047	Valve to 24" Sch 80 Pipe	SG-005-W009	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-048	NOT USED					
01-055-049	24" Sch 80 Pipe to Elbow	SG-005-S006-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-050	24" Sch 80 Elbow to Pipe	SG-005-W008	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-051	24" Sch 80 Pipe to Elbow	SG-005-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-052	24" Sch 80 Elbow to Pipe	SG-005-S004-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-053	24" Sch 80 Pipe to Elbow	SG-005-S004-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-054	24" Sch 80 Elbow to Pipe	SG-005-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-055	24" Sch 80 Pipe to Pipe (Note (1))	SG-005-W018	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-056	24" Sch 80 Pipe to Elbow	SG-005-S013-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A

Note (1): Required if with three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 55 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-051 Rev. 04

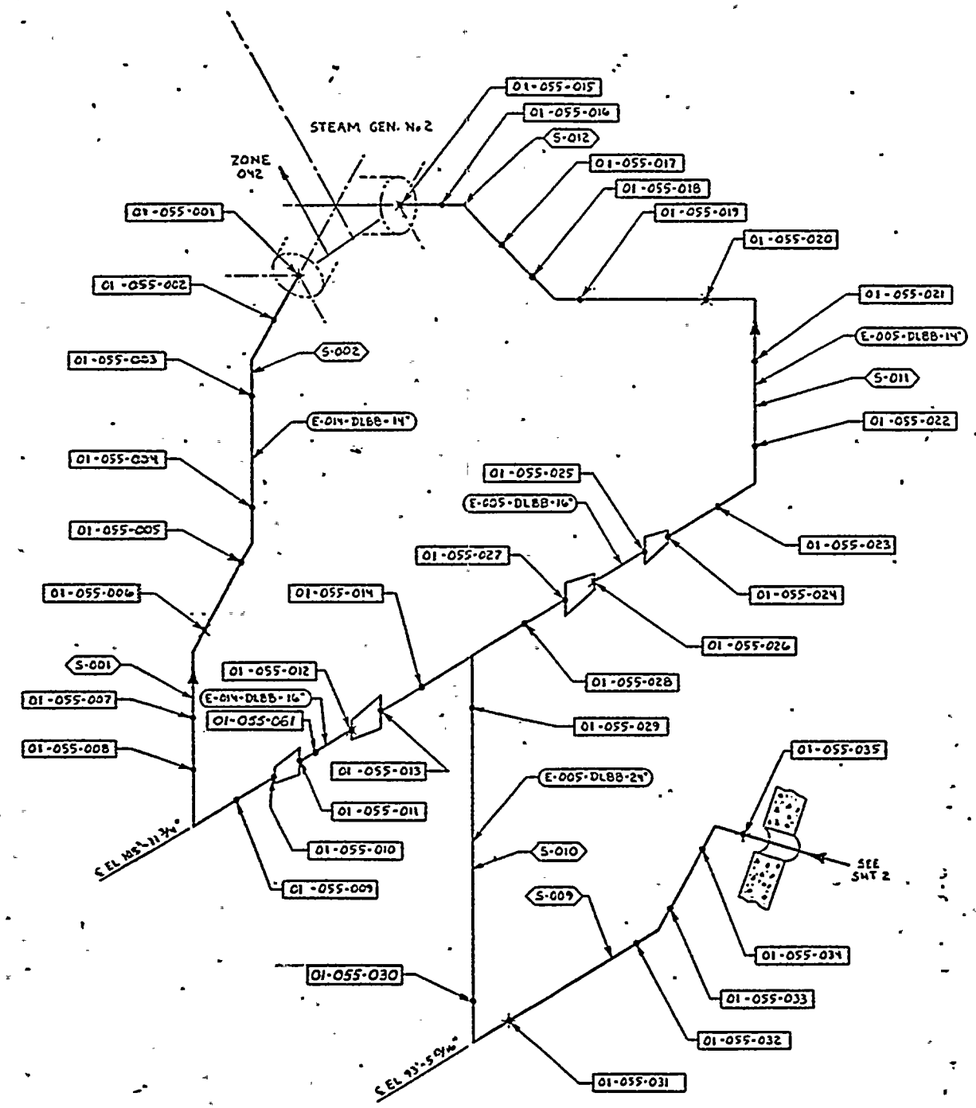
TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-055-057	24" Sch 80 Elbow to Pipe	SG-005-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-058	24" Sch 80 Pipe to Pipe	SG-005-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-059	24" Sch 80 Pipe to Elbow	SG-005-S003-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-060	24" Sch 80 Ell to Pipe (Penetration No. 10)	SG-005-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-73 N/A
01-055-061	24" Sch 80 Pipe to Pipe	SG-014-S001-FW300	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-72 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- ● SHOP WELD
- ✕ FIELD WELD
- 01-055-XXX — EXAMINATION AREA DESIGNATION
- E-005-DLBB-24" — LINE DESIGNATION
- S-001 — SPOOL PIECE No.
- V-114 — VALVE DESIGNATION
- ◇ — PENETRATION No.

REFERENCE DRAWINGS

BECHTEL: 13-P-SGF-119 REV 6
PULLMAN-KELLOGG:

ZONE 55 LINE & SIZE		SPOOLPIECE	DWG. No.
005	24", 16", 14"	S-003	F-30 REV 0
		004	F-29 REV 0
		005	F-31 REV 0
		006	F-28 REV 0
		007	F-42 REV 0
		008	F-33 REV 0
		009	F-29 REV 0
		010	F-35 REV 1
		011	F-34 REV 0
		012	F 287
		013	F-650 REV 0
014	16", 14"	001	F-37 REV 1
		002	F-28A REV 0

E-9678-501-051
SHEET 1 OF 2 04

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 55

NO.	DESCRIPTION					
1	REVISED & ADDRESSED SHT #2 ADDED SHT 2 REV 0					

POWER SYSTEMS

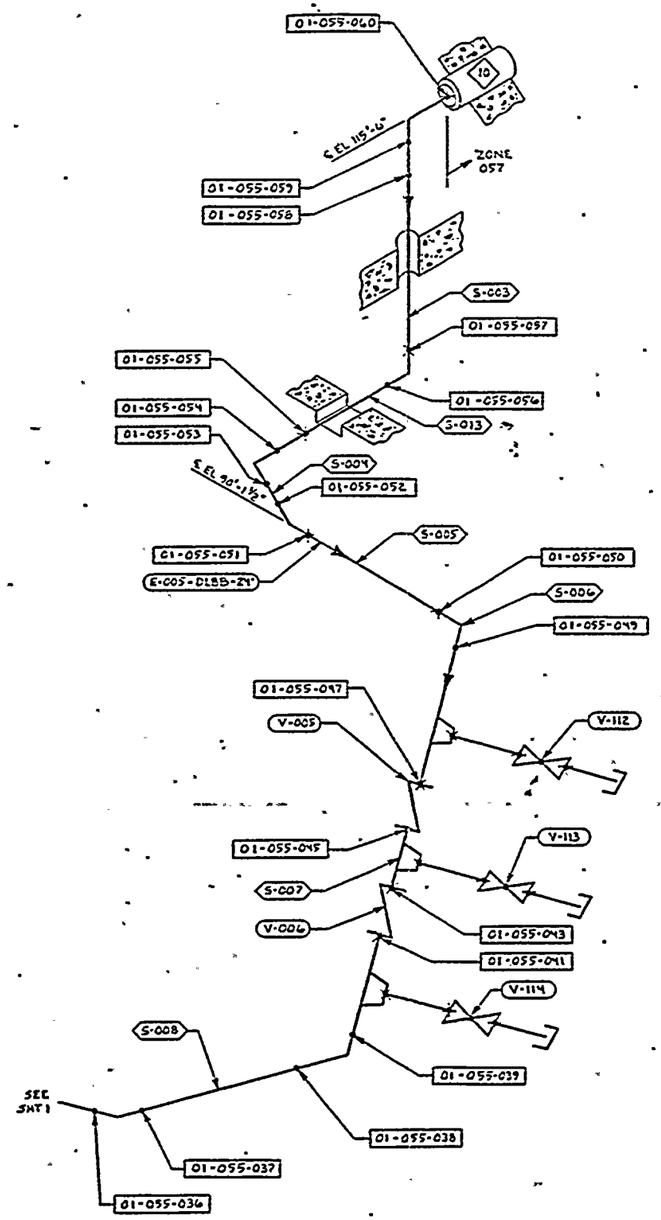
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

MAIN FEEDWATER STEAM GENERATOR #2 INSIDE CONTAINMENT

E-9678-501-051 04

661012 NONE

8 7 6 5 4 3 2 1



E-9678-501-051
SHEET 2 OF 2 04

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 55

REV	DESCRIPTION	DATE	BY	CHK	APP
04	SHT #2 ADDED PER REQ # 9678-262				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

MAIN FEEDWATER STEAM GENERATOR #2 INSIDE CONTAINMENT

E-9678-501-051 04

661012 NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 56 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

REFERENCE DRAWING NO.: C-9678-501-050 Rev. 04

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-056-001	Penetration No. 8 to 24" Sch 100 Pipe	SG-202-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-76 N/A
01-056-002	NOT USED					
01-056-003	24" Sch 100 Pipe to Pipe	SG-205-S001-A and B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-76 N/A
01-056-004	24" Sch 100 Pipe to Valve	SG-202-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-76 N/A
01-056-005	NOT USED					
01-056-006	Valve to 24" Sch 120 Pipe	SG-201-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A
01-056-007	24" Sch 120 Pipe to Valve	SG-201-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 56 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: C-9678-501-050 Rev. 04

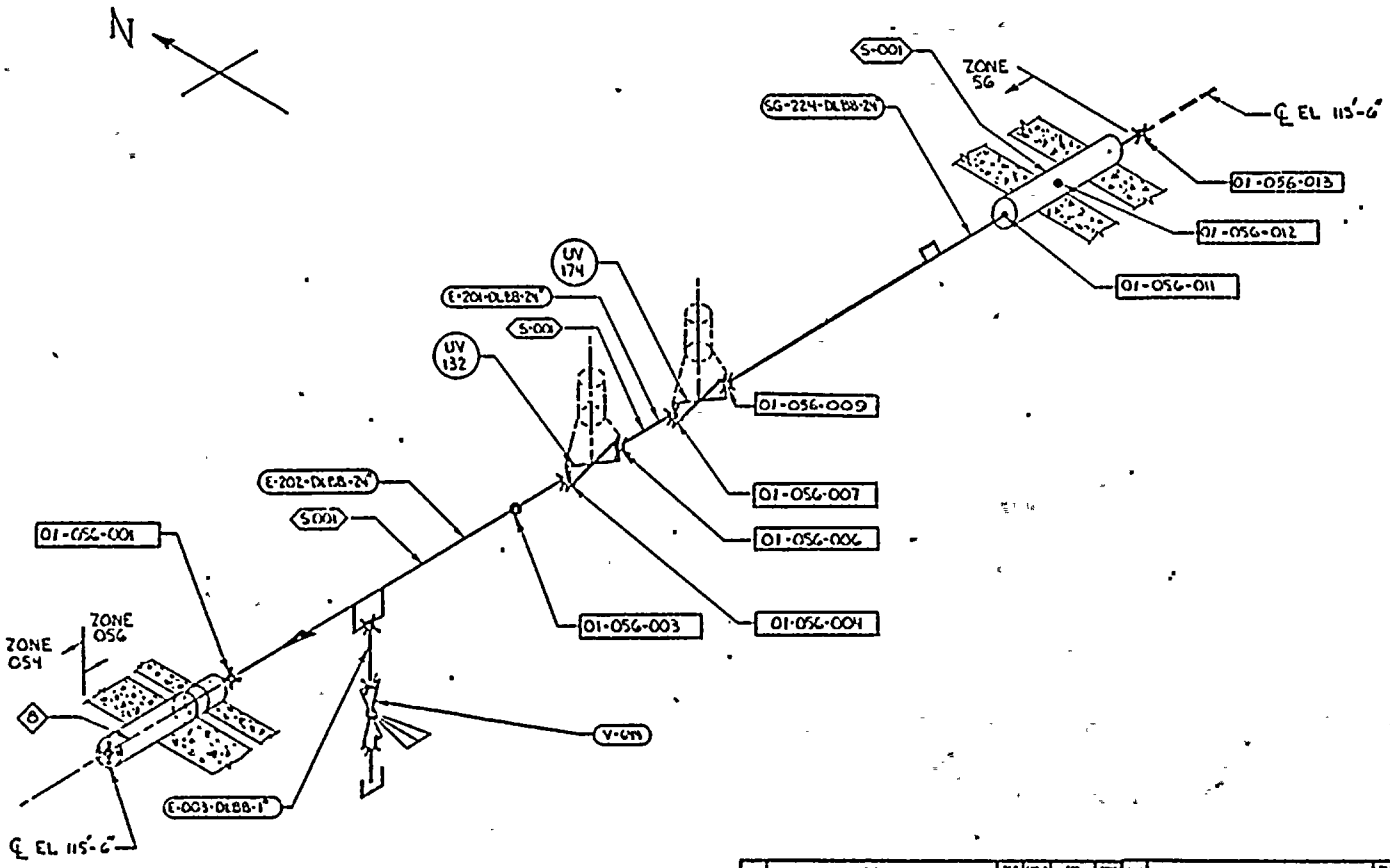
TITLE: MAIN FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-056-008	NOT USED					
01-056-009	Valve to 24" Sch 120 Pipe	SG-224-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A
01-056-010	NOT USED					
01-056-011	24" Sch 120 Pipe to Special Forged Cylinder	SG-224-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A
01-056-012	24" Special Forged Cylinder to Special Forged Cylinder	SG-224-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-90 N/A
01-056-013	24" Special Forged Cylinder to 24" Pipe	SG-224-W001	C-G	UT Surf.	NIP-456 525115-ESS-093	UT-78 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- SHOP WELD
- FIELD WELD
- 01-056-XXX — EXAMINATION AREA DESIGNATION
- E-201-DLBB-24" — LINE DESIGNATION
- S-001 — SPOOL PIECE No.
- V-699 — VALVE DESIGNATION
- UV 132 — PENETRATION No.

REFERENCE DRAWINGS

BECHTEL: 13-P-SGF-119 REV. 6
13-P-FWF-105 REV 4
13-SG-202-11-001 REV. 1
5K-H-SGF-119 REV. 6

PULLMAN-KELLOGG:

ZONE 56 LINE & SIZE		SPOOLPIECE	
201	24"	S-001	[illegible]
202	24"	S-001	[illegible]
224	24"	S-001	[illegible]

D-9678-S01-050

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 56

REV	DESCRIPTION
4	1-GENERALLY REVISED PER REV REQ #9678-262
3	1-REVISED & REDRAWN - WAS "C" SIZE PER REV REQ #9678-258 1-DELETED EXAM AREA DESIGN. (005A, -005B, -008A, -008B) (2-ADDED EXAM AREA -003) 3-ADDED REF DWGS 13-SG-202-11-001 REV 1 & 5K-H-SGF-119 REV 6 (4-DELETED TOLERANCE BLOCK) PER REV REQ #9678-505

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT

MAIN FEEDWATER STEAM GENERATOR #1 OUTSIDE CONTAINMENT

D-9678-S01-050 04

SCALE NONE

8 7 6 5 4 3 2 1

H G F E D C B A

COMBUSTION ENGINEERING, INC

ZONE 57 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

REFERENCE DRAWING NO.: D-9678-501-049 Rev. 04

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-057-001	Penetration No. 10 to 24" Sch 100 Pipe	SG-205-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-76 N/A
01-057-002	NOT USED					
01-057-003	24" Sch 100 Pipe to Pipe	SG-202-S001-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-76 N/A
01-057-004	24" Sch 100 Pipe to Valve	SG-205-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-76 N/A
01-057-005	NOT USED					
01-057-006	Valve to 24" Sch 120 Pipe	SG-204-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A
01-057-007	24" Sch 120 Pipe to Valve	SG-204-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 57 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN MAIN FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

REFERENCE DRAWING NO.: D-9678-501-049 Rev. 04

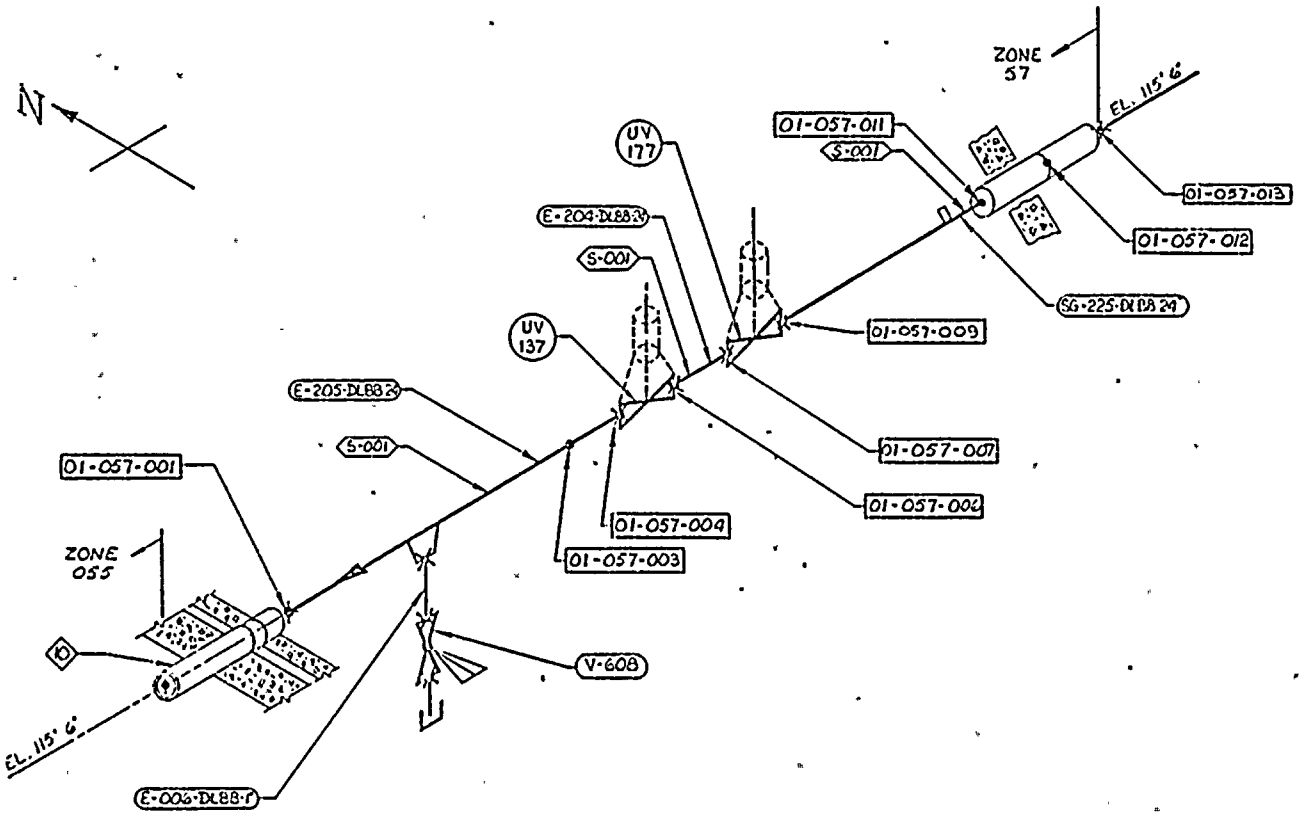
TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-057-008	NOT USED					
01-057-009	Valve to Sch 120 Pipe	SG-225-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A
01-057-010	NOT USED					
01-057-011	Sch 120 Pipe to Special Forged Cylinder	SG-225-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A
01-057-012	Special Forged Cylinder to Special Forged Cylinder	SG-225-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-90 N/A
01-057-013	Special Forged Cylinder to 24" Sch 120 Pipe	SG-225-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-78 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- SHOP WELD
- FIELD WELD
- 01-057-XXX — EXAMINATION AREA DESIGNATION
- E-205-DLB8-24" — LINE DESIGNATION
- S-001 — SPOOL PIECE NO.
- V-608 / UV 137 — VALVE DESIGNATION
- 10 — PENETRATION NO.

REFERENCE DRAWINGS

BECHTEL: 13-P-SGF-119 REV. 6
13-P-FWF-403 REV. 4

PULLMAN-KELLOGG

ZONE 57 LINE & SIZE		SPOOL PIECE	
204	24"	S-001	F-283 REV 0
205	24"	S-001	F-284 REV 1
225	24"	S-001	F-355 REV 0

D-9678-501-049

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 57

REV	DESCRIPTION
04	1-GENERALLY REVISED PER REV REQ #5633-262
05	REVISED & REDRAWN WAS C SIZE, PER. REV. REQ #9678-417 1-IN TABULATION-ADDED LATEST REV NO TO REF DWG 2-EXAM AREA-013 & DELETED EXAM AREAS-005A, 005B, 006A, 006B PER REV REQ #9678-503

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

MAIN FEEDWATER STEAM GENERATOR #2 OUTSIDE CONTAINMENT

D-9678-501-049 04

NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 58 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-045 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-058-001	6" Sch 80 LR 90 Degrees Ell-to-Steam Generator No. 1 Nozzle (Note 2)	SG-008-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-058-002	6" Sch 80 LR 90 Degrees Ell-to-6" Sch 80 Pipe (Note 2)	SG-008-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-058-003	6" Sch 80 Pipe-to-6" X 8" Reducer (Note 2)	SG-008-S009-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-058-004	6" X 8" Reducer-to-8" Sch 80 Pipe (Note 2)	SG-008-S009-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-005	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-008-W012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-006	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-S008-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-007	8" Sch 80 Pipe-to-8" Sch 80 LR 60 Degree Ell (Note 2)	SG-008-W011	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 58 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-045 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-058-008	8" Sch 80 LR 60 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-S007-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-009	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-008-S007-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-010	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-W010	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-011	8" Sch 80 Pipe-to-8" Sch 80 LR 45 Degree Ell (Note 2)	SG-008-S006-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-012	8" Sch 80 LR 45 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-W009	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-013	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-008-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-014	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-W008	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 58 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-045 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-058-014A	8" Sch 80 Pipe to Pipe (Note 2)	SG-008-W300	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-015	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-008-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-016	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-016A	8" Sch 80 Pipe to Tee (Note 2)	SG-008-S004-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-016B	8" x 8" x 6" Tee to 8" Sch 80 Pipe (Note 2)	SG-008-S018-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-017	8" Sch 80 Pipe-to-8" Valve V-652 (Note 2)	SG-008-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-018	8" Valve V-652-to-8" Sch 80 Pipe (Note 2)	SG-008-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 58 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-045 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-058-019	8" x 8" x 6" Reducing Tee to 6" Sch 120 Pipe	SG-008-W013	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-68 N/A
01-058-020	6" Sch 120 Pipe to 90 Degree Elbow	AF-004-S012-FW302	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-68 N/A
01-058-020A	90 Degree Elbow to 6" Sch 120 Pipe	AF-004-S012-FW300	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-68 N/A
01-058-021	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-008-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-022	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-023	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-008-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-024	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-008-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 58 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-045 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-058-025	8" Sch 80 Pipe-to-Penetration (Note 2)	SG-008-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-058-026	6" Sch 120 Pipe to 90 Degree Elbow	AF-004-S012-FW301	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-027	90 Degree Elbow to 6" Sch 120 Pipe	AF-004-W014	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-027A	6" Sch 120 Pipe to Pipe	AF-004-S011-G	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-028	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-004-S011-D	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-029	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-004-S011-C	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-030	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-004-S011-B	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

PAGE: V-58.5

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 58 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-045 Rev. 03

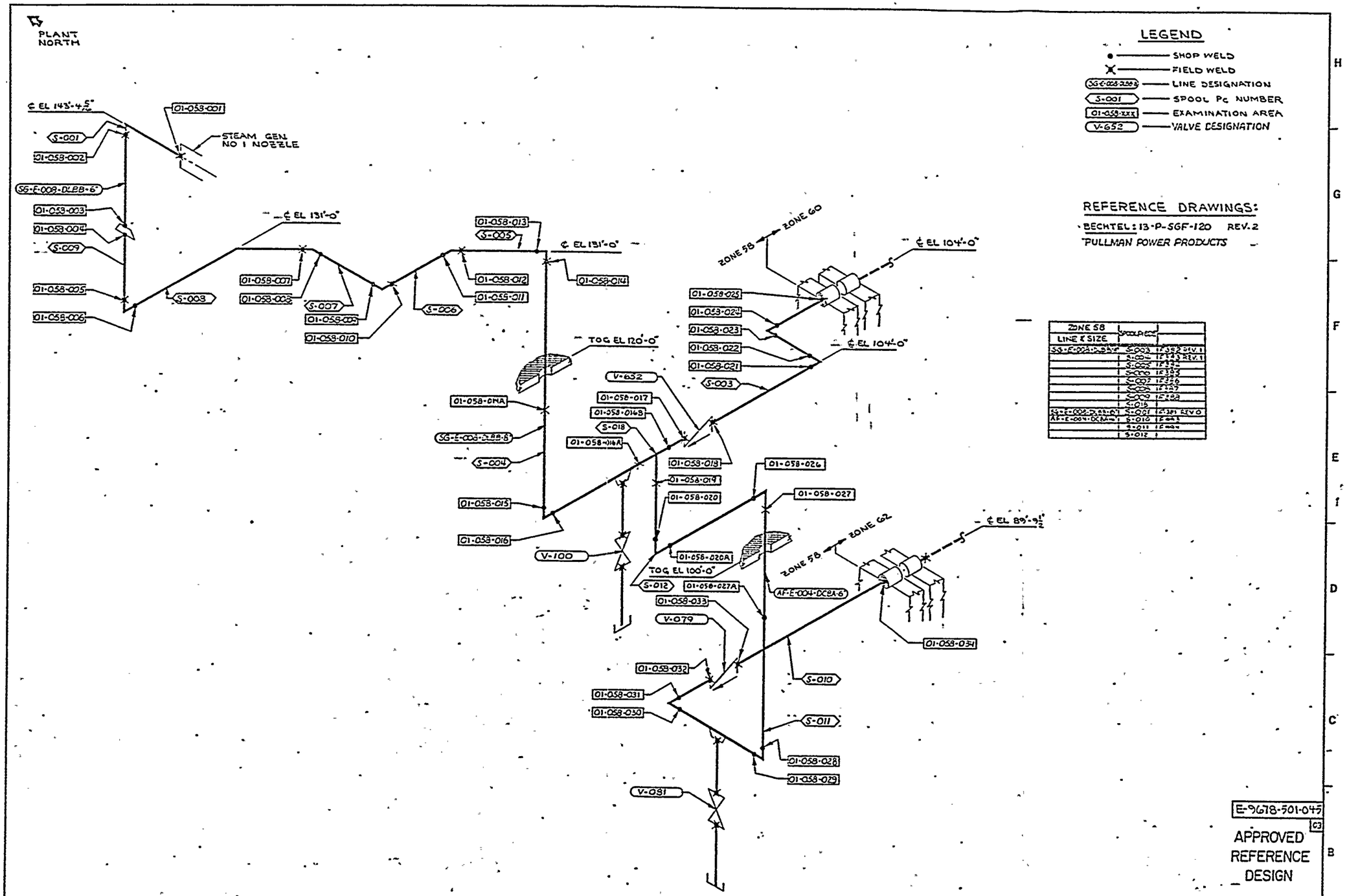
TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 1 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD - IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-058-031	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-004-S004-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-032	6" Sch 120 Pipe to 6" Check Valve V-079	AF-004-W012	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-033	6" Check Valve V-079-to-6" Sch 120 Pipe	AF-004-W011	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-058-034	6" Sch 120 Pipe to Containment Penetration	AF-004-W010	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- ● —— SHOP WELD
- X —— FIELD WELD
- SG-E-008-DLBB-6 —— LINE DESIGNATION
- S-001 —— SPOOL PC NUMBER
- 01-058-XXX —— EXAMINATION AREA
- V-652 —— VALVE DESIGNATION

REFERENCE DRAWINGS:

BECHTEL: 13-P-SGF-120 REV. 2
PULLMAN POWER PRODUCTS

ZONE 58 LINE & SIZE	SPOOL PC	
SG-E-008-DLBB-6"	S-003	12-381 REV. 1
	S-004	12-383 REV. 1
	S-005	12-384
	S-006	12-385
	S-007	12-386
	S-008	12-387
	S-009	12-388
	S-010	
SG-E-008-DLBB-6"	S-001	12-381 REV. 0
AF-E-004-DCBA-6"	S-010	12-[illegible]
	S-011	12-[illegible]
	S-012	

E-9678-501-045 03

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 58

REV	DESCRIPTION			
1	UP GRADED TO APPROVED REFERENCE DESIGN PER REV REQ 9678-255		POWER SYSTEMS	
2	MIN TABULATION ADDED LATEST REV No. TO REF DWGS (2-DELETED EXAM AREA DESIGNS -035, -036, -037, -038) PER REV REQ 9678-203		ARIZONA NUCLEAR POWER PROJECT PALO VERDE NUCLEAR GENERATING STATION	ZONE 58 AUX FEEDWATER STEAM GEN 1001
3	GENERALLY REVISED PER REV REQ NO 9678-222		1 NONE	E-9678-501-045 03

DNA 79 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 59 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-046 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-059-001	Steam Generator No. 2 Nozzle-to-6" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-059-002	6" Sch 80 LR 90 Degree Ell-to-6" Sch 80 Pipe (Note 2)	SG-011-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-059-003	6" Sch 80 Pipe-to-8" x 6" Sch 80 Reducer (Note 2)	SG-011-S009-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-70 N/A
01-059-004	8" x 6" Sch 80 Reducer-to-8" Sch 80 Pipe (Note 2)	SG-011-S009-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-005	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-W012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-006	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-S008-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-007	8" Sch 80 Pipe-to-8" Sch 80 LR 60 Degree Ell (Note 2)	SG-011-W011	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 59 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-046 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-059-008	8" Sch 80 LR 60 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-S007-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-009	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-S007-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-010	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-W010	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-011	8" Sch 80 Pipe-to-8" Sch 80 LR 45 Degree Ell (Note 2)	SG-011-S006-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-012	8" Sch 80 LR 45 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-W009	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-013	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-014	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-W008	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 59 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

REFERENCE DRAWING NO.: E-9678-501-046 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-059-015	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-016	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-016A	8" Sch 80 Pipe to Tee (Note 2)	SG-011-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-016B	8" x 8" x 6" Tee to 8" Sch 80 Pipe (Note 2)	SG-011-S018-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-016C	8" x 8" x 6" Reducing Tee to 6" Sch 120 Pipe	SG-011-W013	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-017	8" Sch 80 Pipe-to-Check Valve V-653 (Note 2)	SG-011-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-018	Check Valve V-653-to-8" Sch 80 Pipe (Note 2)	SG-011-W016	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 59 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-046 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-059-019	90 Degree Elbow to 6" Sch 120 Pipe	AF-006-W014	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-020	6" Sch 120 Pipe to 90 Degree Elbow	AF-006-S012-FW302	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-020A	90 Degree Elbow to 6" Sch 120 Pipe	AF-006-S012-FW301	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-021	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-S003-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-022	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-023	8" Sch 80 Pipe-to-8" Sch 80 LR 90 Degree Ell (Note 2)	SG-011-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-024	8" Sch 80 LR 90 Degree Ell-to-8" Sch 80 Pipe (Note 2)	SG-011-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 59 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-046 Rev. 03

TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-059-025	8" Sch 80 Pipe-to-8" Penetration (Note 2)	SG-011-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-059-026	6" Sch 120 Pipe to 90 Degree Elbow	AF-006-FW300	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-027	NOT USED					
01-059-028	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-006-S011-D	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-029	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-006-S011-C	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-030	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-006-S011-B	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-031	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-006-S011-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 59 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-046 Rev. 03

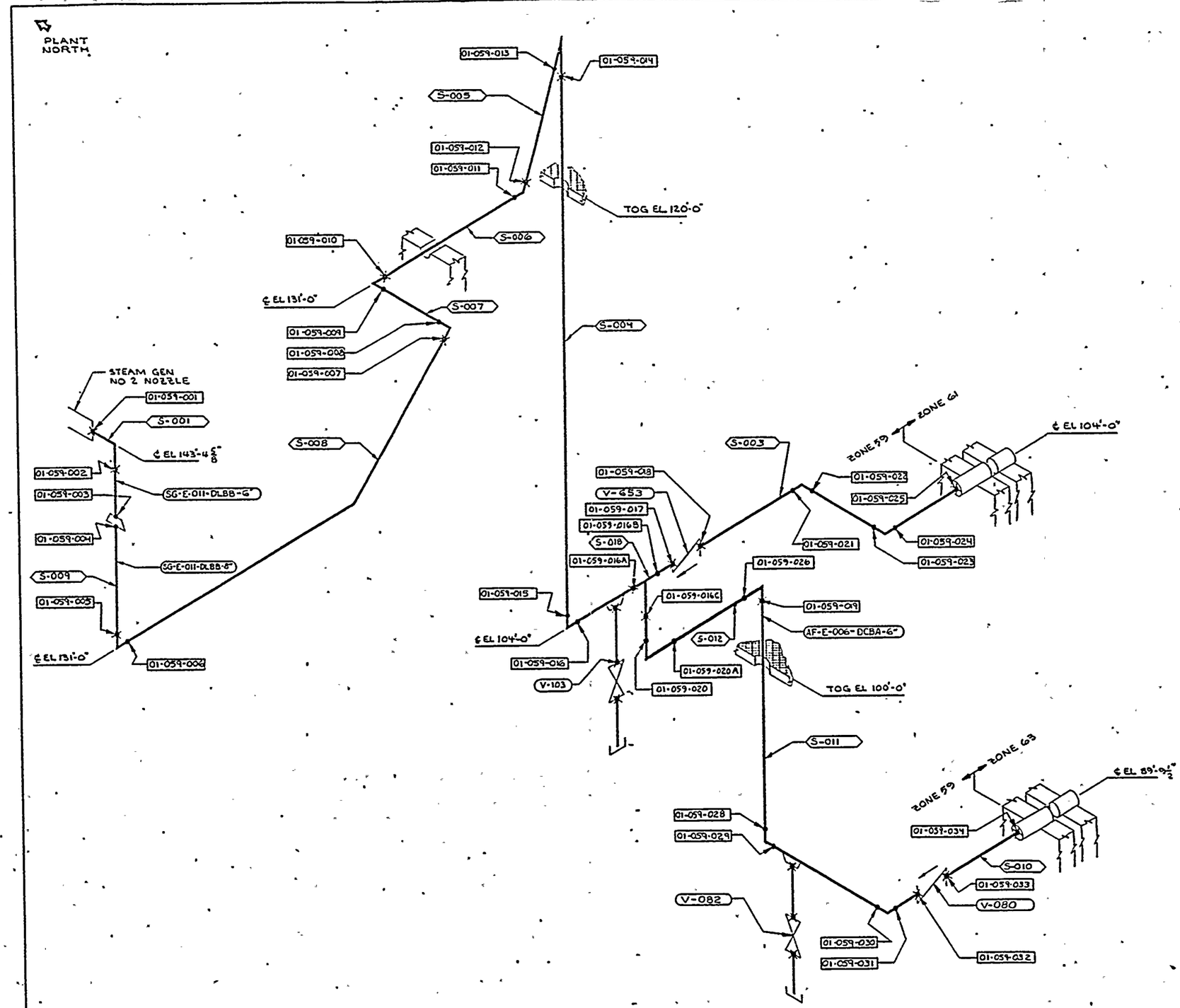
TITLE: AUXILIARY FEEDWATER TO STEAM GENERATOR NO. 2 INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-059-032	6" Sch 120 Pipe-to-Valve V-080	AF-006-W012	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-033	Valve V-080-to-6" Sch 120 Pipe	AF-006-W011	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-059-034	6" Sch 120 Pipe-to-6" Penetration	AF-006-W010	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- ● —— SHOP WELD
- X —— FIELD WELD
- SG-E-011-DLBB-8 —— LINE DESIGNATION
- S-001 —— SPOOL Pc NUMBER
- 01-059-001 —— EXAMINATION AREA DESIGNATION
- V-653 —— VALVE DESIGNATION

REFERENCE DRAWINGS:

BECHTEL: 13-P-SGF-120 REV 2

PULLMAN-KELLOGG:

ZONE 059 LINE & SIZE	SPOOL-PIECE	
SG-E-011-DLBB-6	S-001	F-373
SG-E-011-DLBB-8	S-003	F-374 REV 1
	S-004	F-375
	S-005	F-376
	S-006	F-377
	S-007	F-378
	S-008	F-379 REV 1
	S-009	F-380 REV 1
	S-010	
AF-E-006-DCBA-6"	S-010	F-991
	S-011	F-992
	S-012	

E-9678-501-046 03

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 59

REV	DESCRIPTION
03	UPGRADED TO APPROVED REFERENCE DESIGN PER REV REQ 9678-258
02	1. DELETED STEAM AREA DES 01-059-035 THRU 038 (2-REV 1 AND 0001) PER REV REQ. 9678-503
01	GENERALLY REVISED PER REV REQ NO. 9678-262

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

ZONE 59
AUX FEEDWATER
STEAM GEN NO 2 INSIDE

E-9678-501-046 03

NONE

DNA 79

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 60 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR>ESS>069

REFERENCE DRAWING NO.: D>9678>501>048 Rev. 03

TITLE: DOWNCOMER FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01>060>001	8" Sch 120 to 8" Sch 160 Pipe	SG>200>W001	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>001A	8" Sch 160 Pipe to 2" Thk. X 10" x 10" Plate	SG>200>S002>A	C>E>1	Surf.	525115>ESS>093	N/A
01>060>001B	2" Thk. X 10" X 10" Plate to 8" Sch 160 Pipe	SG>200>S002>B	C>E>1	Surf.	525115>ESS>093	N/A
01>060>001C	8" Sch 160 Pipe to 2" Thk. X 10" x 10" Plate	SG>200>S002>C	C>E>1	Surf.	525115>ESS>093	N/A
01>060>001D	2" Thk. X 10" X 10" Plate to 8" Sch 160 Pipe	SG>200>S002>D	C>E>1	Surf.	525115>ESS>093	N/A
01>060>002	8" Sch 160 Pipe to 8" Sch 120 Pipe	SG>200>W002	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>003	8" Sch 120 Pipe to 8" Sch 120 LR 90 Degree Ell	SG>200>S003>A	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 60 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR>ESS>069

REFERENCE DRAWING NO.: D>9678>501>048 Rev. 03

TITLE: DOWNCOMER FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01>060>004	8" Sch 120 LR 90 Degree Ell to 8" Sch 120 Pipe	SG>200>S003>B	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>005	8" Sch 120 Pipe to 8" Sch 120 LR 45 Degree Ell	SG>200>S003>C	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>006	8" Sch 120 LR 45 Degree Ell to 8" Sch 120 Pipe	SG>200>W003	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>007	8" Sch 120 Pipe to 8" Sch 120 90 Degree Ell	SG>200>S004>A	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>008	8" Sch 120 90 Degree Ell to 8" Sch 120 Pipe	SG>200>S004>B	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>009	8" Sch 120 Pipe to Valve UV>172	SG>200>W004	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>060>010	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 60 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-048 Rev. 03

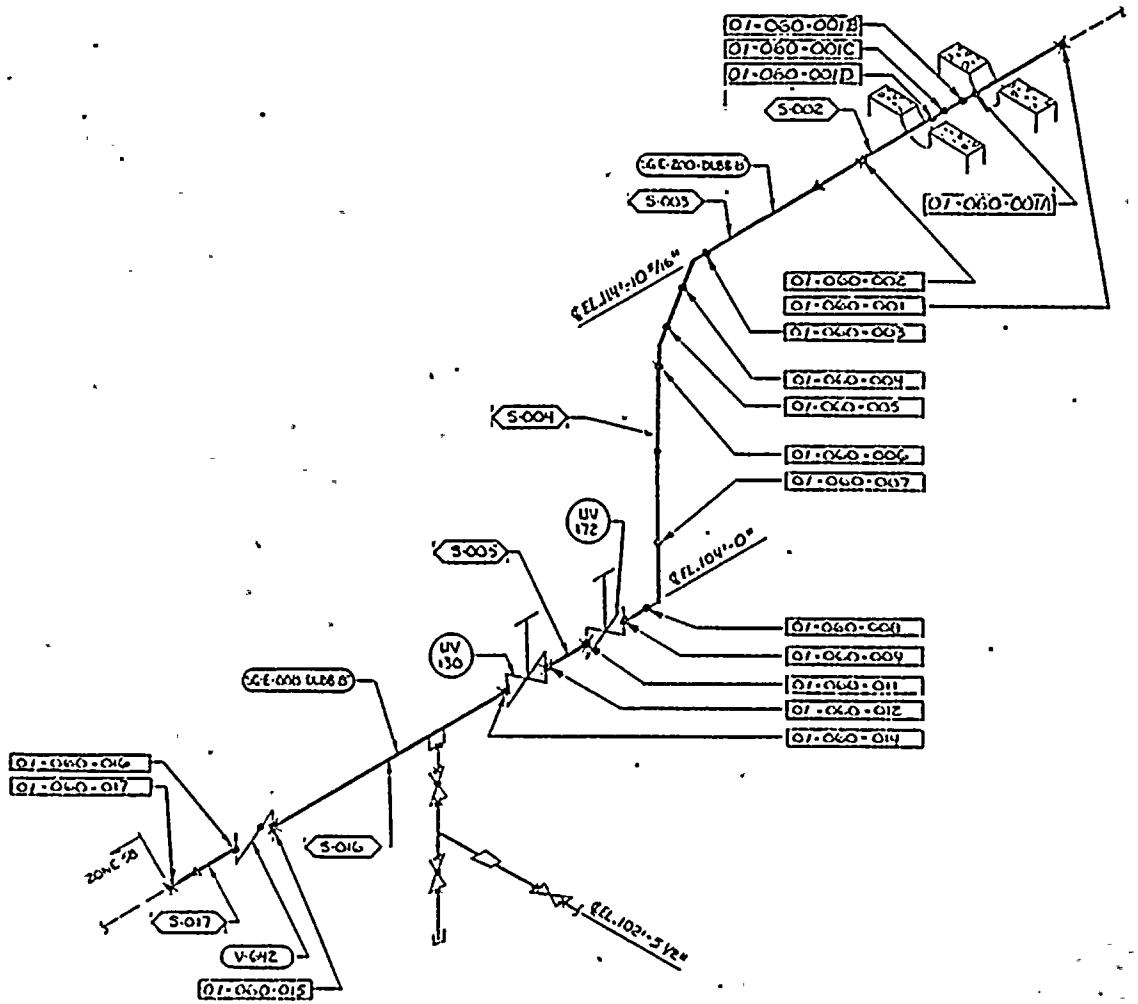
TITLE: DOWNCOMER FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-060-011	Valve UV-172 to 8" Sch 120 Pipe	SG-200-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-060-012	8" Sch 120 Pipe to Valve UV-130	SG-200-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-060-013	NOT USED					
01-060-014	Valve UV-130 to 8" Sch 120 Pipe	SG-008-W030	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-060-015	8" Sch 80 Pipe to Valve V-642	SG-008-W031	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-71 N/A
01-060-016	Valve V-642 to 8" Sch 120 Pipe	SG-008-W032	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-060-017	8" Sch 120 Pipe to Penetration	SG-008-W033	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- ● —— SHOP WELD
- X —— FIELD WELD
- 01-060-001 —— EXAMINATION AREA DESIGNATION
- SGE 200-DL88 B —— LINE DESIGNATION
- S-002 —— SPOOL PIECE NO.
- V-642 —— VALVE DESIGNATION
- UV 172 —— VALVE DESIGNATION

REFERENCE DRAWINGS
BECHTEL: 15-P-SGF-15G-REV 1
PULLMAN - KELLOGG:

ZONE 60	SPOOL PIECE	
LINE & SIZE		1
SG E-200-DL88-8"	S-002	1-1 REV 0
	S-003	2-1 REV 0
	S-004	1-2 REV 0
	S-005	2-2 REV 0
SG-E-000-DL88-8"	S-016	2-3 REV 03
	S-017	1-3 REV 03

D-9678-501-048
03

APPROVED :
REFERENCE
DESIGN
UNIT 1 ZONE 60

REV	DESCRIPTION
02	1-GENERALLY REVISED PER REV. REQ #9678-202
03	UPGRADE TO APPROVED REF DESIGN PER REV REQ No 9678-208 1-IN TABULATION ADDED LATEST REV No TO REF DWG 2-DELETED EXAM AREA DESIGN'S -010-010A, -015, -013A, -018, -011 PER REV REQ #9678-205

POWER SYSTEMS
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

ZONE 60 DOWNCOMER FEEDWATER STM GEN No 1 OUTSIDE CONTAINMENT

D-9678-501-048 03

SCALE NONE

8 7 6 5 4 3 2 1
H G F E D C B A

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 61 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-043 Rev. 03

TITLE: DOWNCOMER FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-061-001	8" Sch 120 to 8" Sch 160 Pipe	SG-203-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-001A	8" Sch 120 Pipe to 2" thk. X 10" X 10" Plate	SG-203-S002-A	C-E-1	Surf.	525115-ESS-093	N/A
01-061-001B	2" Thk. X 10" X 10" Plate to 8" Sch 160 Pipe	SG-203-S002-B	C-E-1	Surf.	525115-ESS-093	N/A
01-061-001C	8" Sch 160 Pipe to 2" Thk. X 10" X 10" Plate	SG-203-S002-C	C-E-1	Surf.	525115-ESS-093	N/A
01-061-001D	2" Thk. X 10" X 10" Plate to 8" Sch 160 Pipe	SG-203-S002-D	C-E-1	Surf.	525115-ESS-093	N/A
01-061-002	8" Sch 160 Pipe to 8" Sch 120 Pipe	SG-203-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-003	8" Sch 120 Pipe to 8" Sch 120 LR 90 Degree Ell	SG-203-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 61 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR>ESS>069

REFERENCE DRAWING NO.: D>9678>501>043 Rev. 03

TITLE: DOWNCOMER FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01>061>004	8" Sch 120 LR 90 Degree Ell to 8" Sch 120 Pipe	SG>203>S003>B	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>061>005	8" Sch 120 Pipe to 8" Sch 120 LR 45 Degree Ell	SG>203>S003>C	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>061>006	8" Sch 120 LR 45 Degree Ell to 8" Sch 120 Pipe	SG>203>W003	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>061>007	8" Sch 120 Pipe to 8" Sch 120 90 Degree Ell	SG>203>S004>A	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>061>008	8" Sch 120 90 Degree Ell to 8" Sch 120 Pipe	SG>203>S004>B	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>061>009	8" Sch 120 Pipe to Valve UV>175	SG>203>W004	C>G	UT Surf.	NIP>956 525115>ESS>093	UT>77 N/A
01>061>010	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 61 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-043 Rev. 03

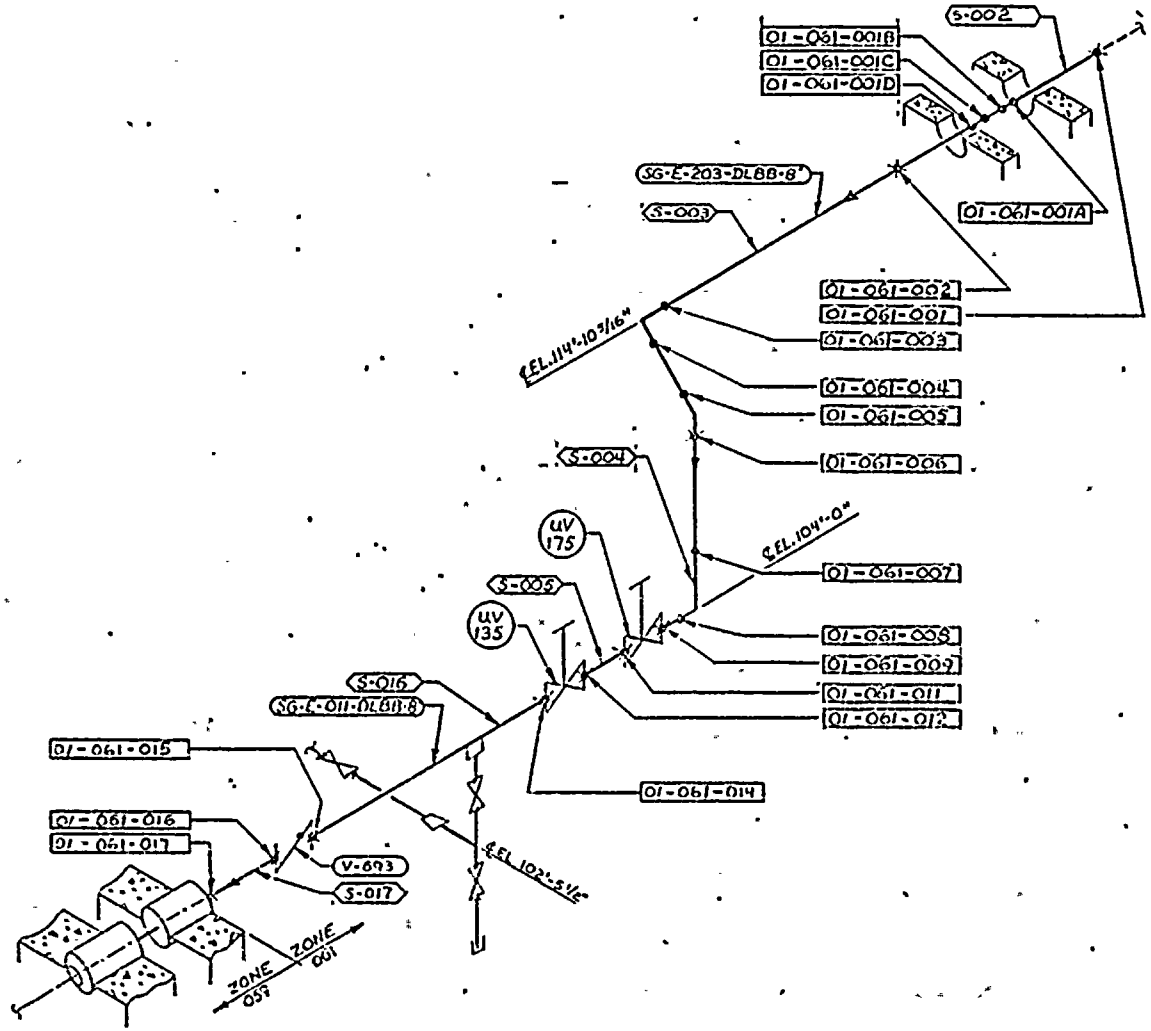
TITLE: DOWNCOMER FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-061-011	Valve UV-175 to 8" Sch 120 Pipe	SG-203-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-012	8" Sch 120 Pipe to Valve UV-135	SG-203-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-013	NOT USED					
01-061-014	Valve UV-135 to 8" Sch 80 Pipe	SG-011-W030	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-015	8" Sch 80 Pipe to Valve V-693	SG-011-W031	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-016	Valve V-693 to 8" Sch 80 Pipe	SG-011-W032	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A
01-061-017	8" Sch 120 Pipe to Penetration	SG-011-W033	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-77 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- SHOP WELD
- FIELD WELD
- SG-E-203-DLBB-8" — LINE DESIGNATION
- S-003 — SPOOL Pc NUMBER
- 01-061-001 — EXAM AREA DESIGNATION
- V-693 — VALVE DESIGNATION
- UV 175

REFERENCE DRAWINGS
BECHTEL: 13-P-SGF-156 REV 1
PULLMAN KELLOGG

ZONE 61 LINE & SIZE	SPOOL Pc	1
SG-E-203-DLBB-8"	S-002	FAB REV 0
	S-003	FAB REV 0
	S-004	FAB REV 1
	S-005	FAB REV 1
SG-E-011-DLBB-8"	S-016	FAB REV 0
	S-017	FAB REV 0

D-9678-501-043
03

APPROVED
REFERENCE
DESIGN
UNIT 1 ZONE 61

REV	DESCRIPTION
03	GENERALLY REVISED PER REV REQ # 9678-262
02	UPGRADE TO APPROVED REF DESIGN PER REV REQ No 9678-255 ADDED SPOOL Pc No S-002 (2-DELETED EXAM AREA CALLOUTS -006, -010A, -013, -013A -016, -017) PER REV REQ # 9678-202

POWER SYSTEMS

ZONE 61 DOWNCOMER FEEDWATER STM GEN No 2 OUTSIDE CONTAINMENT

D-9678-501-043 03

SCALE NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 62 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-081 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-062-001	NOT USED					
01-062-002	NOT USED					
01-062-003	NOT USED					
01-062-004	Valve UV-34-to-6" Sch 120 Pipe	AF-018-W001	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-005	6" Sch 120 Pipe-to-6" Sch 120 90 Degree LR Ell	AF-018-S001-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-006	6" Sch 120 90 Degree LR Ell-to-6" Sch 120 Pipe	AF-018-S001-B	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-007	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-018-W002	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 62 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-081 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-062-008	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-018-S002-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-009	6" Sch 120 Pipe-to-6" Sch 120 Pipe (Note (1))	AF-018-W003	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-010	6" Sch 120 Pipe-to-6" Sch 120 45 Degree LR Ell	AF-018-S003-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-011	6" Sch 120 45 Degree Ell-to-6" Sch 120 Pipe	AF-018-S003-B	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-012	6" Sch 120 Pipe-to-6" Sch 120 90 Degree LR Ell	AF-018-W004	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-013	6" Sch 120 90 Degree LR Ell-to-6" Sch 120 Pipe	AF-018-S004-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-014	6" Sch 120 Pipe-to-6" Sch 120 Str. Tee	AF-018-W005	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 62 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-081 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-062-015	NOT USED					
01-062-016	NOT USED					
01-062-017	NOT USED					
01-062-018	Valve UV-36-to-6" Sch 120 Pipe	AF-004-W001	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-019	6" Sch 120 Pipe-to-6" Sch 120 Str. Tee	AF-004-S001-D	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-020	6" Sch 120 Str. Tee-to-6" Sch 120 Pipe	AF-004-S001-E	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-021	6" Sch 120 Pipe-to-6" Sch 120 Pipe (Flow Nozzle)	AF-004-S001-C	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 62 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-081 Rev. 03

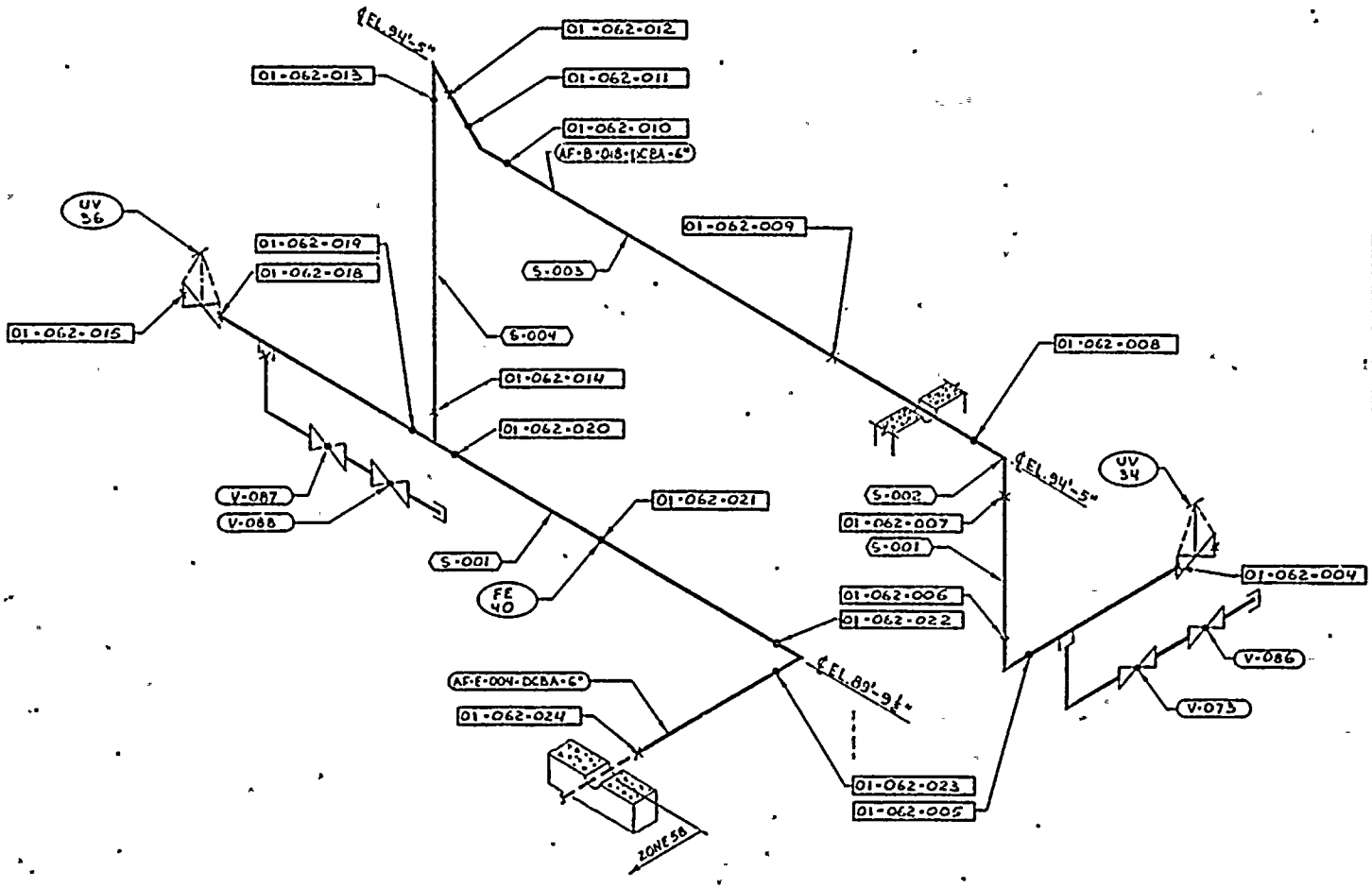
TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-062-022	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-004-S001-F	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-023	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-004-S001-G	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-062-024	6" Sch 120 Pipe-to-Penetration	AF-004-W002	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

•	SHOP WELD
X	FIELD WELD
AF-E-004-DCBA-6"	LINE DESIGNATION
S-001	SPOOL Pc NUMBER
01-062-XXX	EXAMINATION AREA
V-073	VALVE DESIGNATION

REFERENCE DRAWINGS:

BECHTEL: 13-P-AFF-133 REV 2
13-P-AFF-132 REV 1
PULLMAN-KELLOGG:

ZONE 62		
LINE & SIZE	SPOOL Pc	
AF-E-004-DCBA-6"	S-001	F-628
AF-B-018-1CBA-6"	S-004	F-1038
	S-003	F-1037
	S-002	
	S-001	F-640

D-9678-501-081 03

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 62

REV	DESCRIPTION				
03	UPGRADE TO APPROVED REF DESIGN PER REV REQ #9678-258				
02	1-DELETED EXTRA CALLOUTS ON 003, 004 & 011 2-REVISED TAG BLOCK PER REQ 9678-501				
01	GENERALLY REVISED PER REV REQ # 9678-202				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

AUXILIARY FEEDWATER STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT
ZONE 62

D-9678-501-081 03

SCALE NONE

COMBUSTION ENGINEERING, INC.

ZONE 63 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-047 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-063-001	NOT USED					
01-063-002	NOT USED					
01-063-003	NOT USED					
01-063-004	Valve UV-35-to-6" Sch 120 Pipe	AF-006-W001	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-005	NOT USED					
01-063-006	NOT USED					
01-063-007	NOT USED					
01-063-008	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 63 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-047 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-063-009	NOT USED					
01-063-010	NOT USED					
01-063-011	NOT USED					
01-063-012	NOT USED					
01-063-013	NOT USED					
01-063-014	6" Sch 120 Pipe-to-6" Sch 120 Strt. Tee	AF-006-S001-D	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-015	NOT USED					
01-063-016	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 63 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-047 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-063-017	NOT USED					
01-063-018	Valve UV-37-to-6" Sch 120 Pipe	AF-016-W001	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-018A	6" Sch 120 Pipe-to-6" Sch 120 Pipe	AF-016-W002	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-019	6" Sch 120 Pipe-to-6" Sch 120 Strt. Tee	AF-016-W003	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-020	6" Sch 120 Strt. Tee-to-6" Sch 120 Pipe	AF-016-S001-E	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-021	6" Sch 120 Pipe-to-6" Sch 120 Pipe (Flow Nozzle)	AF-006-S001-C	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-022	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-006-S001-F	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 63 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-047 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-063-023	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-006-S001-G	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-024	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-006-S001-H	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-025	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-006-W002	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-026	6" Sch 120 Pipe-to-6" Sch 120 LR 45 Degree Ell	AF-006-S002-A	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-027	6" Sch 120 LR 45 Degree Ell-to-6" Sch 120 Pipe	AF-006-S002-B	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-028	6" Sch 120 Pipe-to-6" Sch 120 LR 90 Degree Ell	AF-006-S002-C	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A
01-063-029	6" Sch 120 LR 90 Degree Ell-to-6" Sch 120 Pipe	AF-006-S002-D	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 63 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-047 Rev. 03

TITLE: AUXILIARY FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

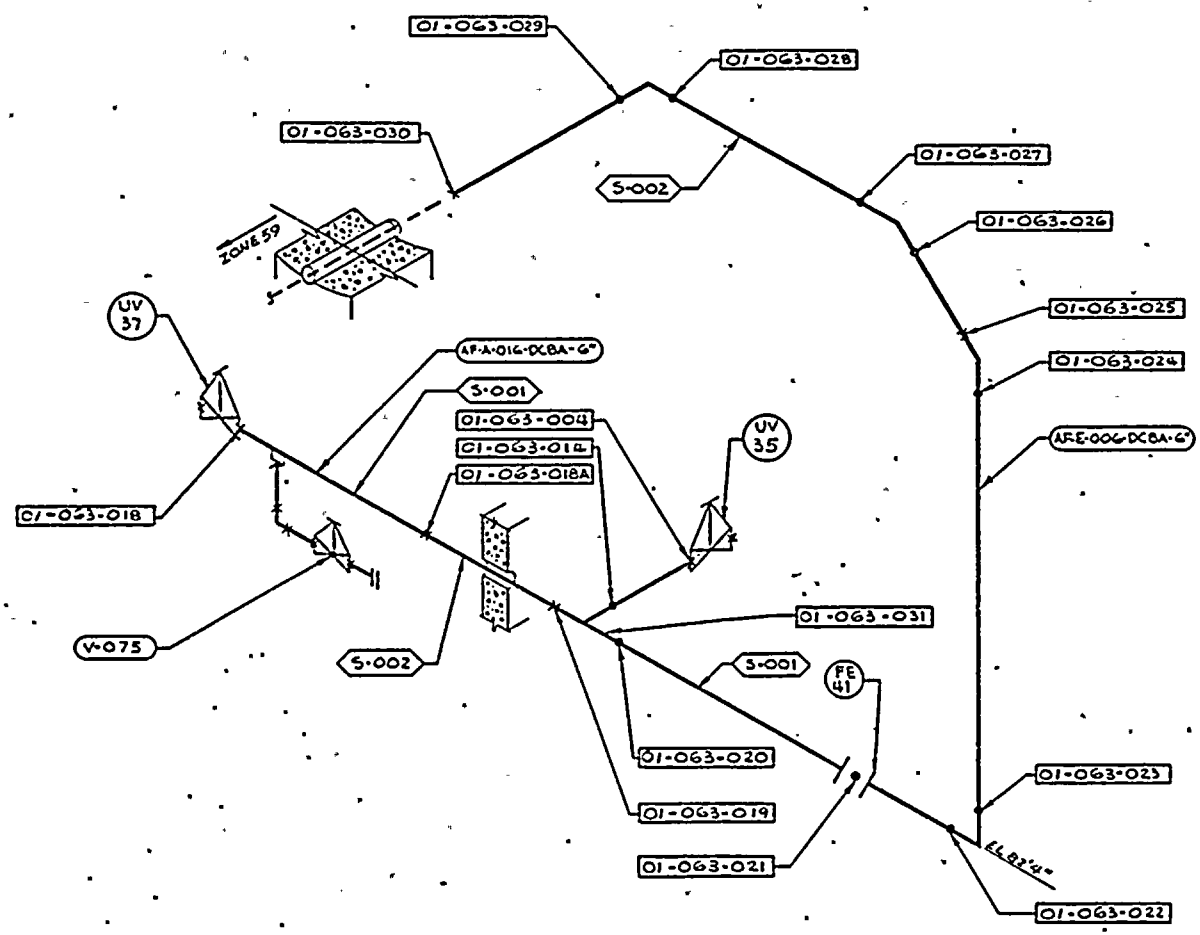
AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-063-030	6" Sch 120 Pipe-to-Cont. Penetration	AF-006-W003	C-G	UT Surf.	NIP-954 525115-ESS-093	UT-68 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

PAGE: V-63.5

C-E 0090287 (Rev. 7/80)



LEGEND

- X FIELDWELD
- • SHOPWELD
- 01-063-AAA — EXAMINATION AREA DESIGNATION
- AF-E-006-DCBA-6" — LINE DESIGNATION
- S-001 — SPOOL PIECE NO
- V-075 — VALVE DESIGNATION
- UV 35
- FE 41 — FLOW NOZZLE

REFERENCE DWG'S

BECHTEL 13-P-AFF-132 REV1
13-P-AFF-133 REV2

PULLMAN-KELLOGG

ZONE 63 LINE & SIZE	SPOOL PIECE	
AF-E-006-DCBA-6"	S-001	P-[illegible] REV0
	S-002	P-[illegible]
AF-A-016-DCBA-6"	S-001	P-[illegible]
	S-002	P-650

D-9678-501-047 03

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 63

REV	DESCRIPTION
V	1-GENERALLY REVISED PER REV REQ # 9678-262
V	UPGRADE TO APPROVED REF DESIGN PER REV REQ # 9678-258
V	1-IN TABULATION: -016 WAS 006 (2-EXAM AREA -019 WAS -015) 3-DELETED EXAM AREA DESIGN'S -002, -003, -014, 017 PER REV REQ # 9678-503

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

AUXILIARY FEEDWATER STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT ZONE 63

D-9678-501-047 03

SCALE NONE

8 7 6 5 4 3 2 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 64 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-001	6" Sch 120 Pipe to Steam Generator #1	SG-053-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-002	6" Sch 120 Pipe to 6" Sch 120 Str. Tee	SG-053-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-003	6" Sch 120 Str. Tee to 6" Sch 120 End Cap	SG-053-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-004	6" Sch 120 Pipe to 6" Sch 120 Str. Tee	SG-053-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-005	6" Sch 120 Pipe to 6" Sch 120 Str. Tee	SG-053-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-006	6" Sch 120 Str. Tee to 6" Sch 120 End Cap	SG-053-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-007	6" Sch 120 Pipe to 6" Sch 120 Str. Tee	SG-053-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 64 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-008	6" Sch 120 Pipe to 6" Sch 120 Straight Tee	SG-053-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-009	6" Sch 120 Str. Tee to 6" Sch 120 End Cap	SG-053-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-010	6" Sch 120 Str. Tee to 6" Sch 120 Pipe	SG-053-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-011	6" Sch 120 Pipe to Valve HV-41	SG-053-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-012	Valve HV-41 to 6" Sch 120 Pipe	SG-053-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-013	NOT USED					
01-064-014	6" Sch 120 Pipe to 6" Sch 120 Cross	SG-039-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 64 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-015	6" Sch 120 Cross to 6" Sch 120 Pipe	SG-039-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-016	6" Sch 120 Cross to 6" Sch 120 Pipe	SG-039-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-017	NOT USED					
01-064-018	6" Sch 120 Pipe to Valve HV-43	SG-039-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-019	Valve HV-43 to 6" Sch 120 Pipe	SG-039-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-020	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-039-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-021	6" Sch 120 Strt. Tee to 6" Sch 120 End Cap	SG-039-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 64 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-022	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-039-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-023	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-039-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-024	6" Sch 120 Strt. Tee to 6" Sch 120 End Cap	SG-039-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-025	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-039-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-026	NOT USED					
01-064-027	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-039-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-028	6" Sch 120 Strt. Tee to 6" Sch 120 End Cap	SG-039-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 64 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-029	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-039-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-030	6" Sch 120 Pipe to Steam Generator #1	SG-039-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-031	6" Sch 120 Strt. Tee to 6" Sch 120 End Cap	SG-039-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-032	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-039-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-033	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-039-W008	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-034	NOT USED					
01-064-035	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-039-W009	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 64 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-036	6" Sch 120 Pipe to 6" Sch 160 LR 90 Degree Ell	SG-039-S007-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-037	6" Sch 160 LR 90 Degree Ell to 6" Sch 120 Pipe	SG-039-S007-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-038	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-039-W010	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-039	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-039-S008-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-040	6" Sch 120 Pipe to 6" x 6" Sch 120 x 3" Sch 160 Reducing Tee	SG-039-S009-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-041	6" x 6" Sch 120 x 3" Sch 160 Reducing Tee to 6" Sch 120 Pipe	SG-039-S009-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-042	6" Sch 120 Pipe to Valve V-289	SG-039-W012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 64 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-043	Valve V-289 to 6" Sch 120 Pipe	SG-093-W013	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-044	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-039-S010-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-045	6" Sch 120 Strt. Tee to 6" Sch 120 Weld Cap	SG-039-S010-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-046	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-039-S010-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-047	NOT USED					
01-064-048	NOT USED					
01-064-049	6" Sch 120 Pipe to 6" Sch 160 LR 90 Degree Ell	SG-039-S010-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 64 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-042 Rev. 03

TITLE: STEAM GENERATOR NO. 1 BLOWDOWN PIPING INSIDE CONTAINMENT

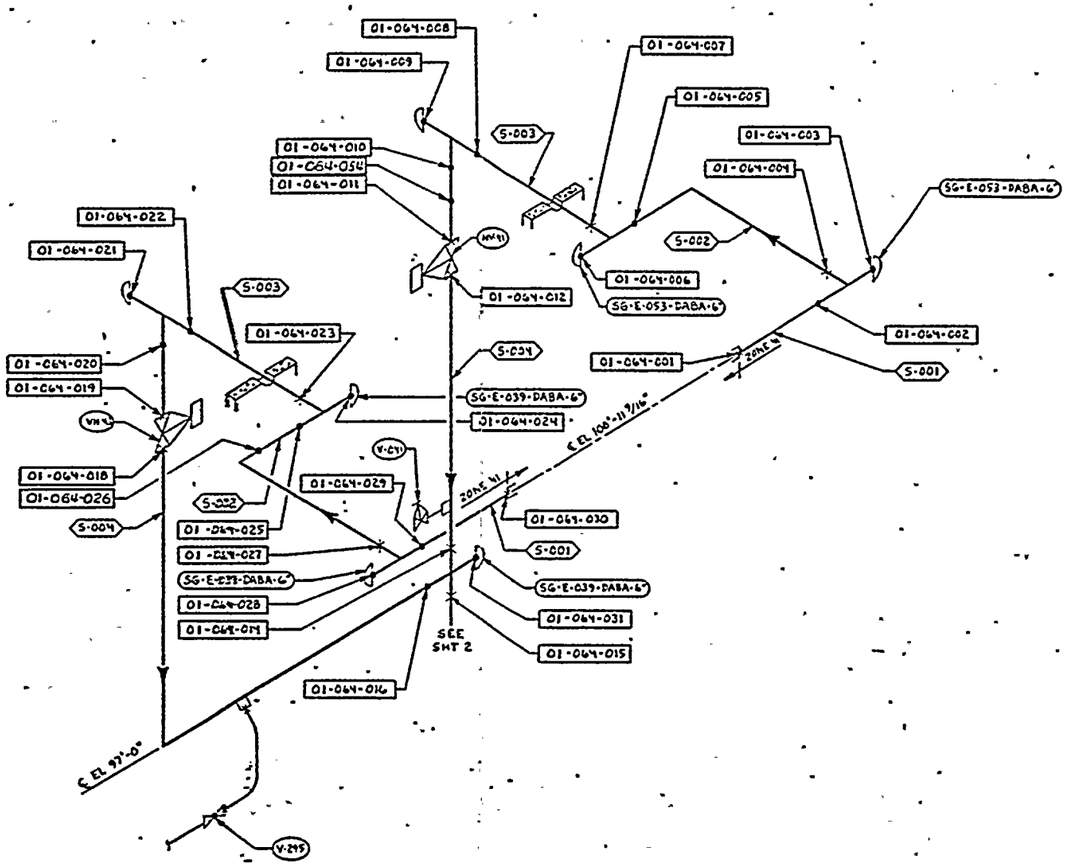
AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-064-050	6" Sch 160 LR 90 Degree Ell to 6" Sch 120 Pipe	SG-039-S010-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-051	6" Sch 120 Pipe to Valve UV-500P	SG-039-W014	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-052	Valve UV-500P to 6" Sch 120 Pipe	SG-039-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-053	6" Sch 120 Pipe to 6" Cont. Penetration	SG-039-W016	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-064-054	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-053-FW302	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- ● —— SHOP WELD
- × —— FIELD WELD
- (SG-E-053-DABA-6") —— LINE DESIGNATION
- (S-006) —— SPOOL Pc No
- (V-284) —— VALVE ID No
- [01-064-006] —— EXAMINATION DESIGNATION LOCATION

REFERENCE DRAWINGS

BECHTEL: 13-P-SGF-122
PULLMAN:

ZONE 64 LINE & SIZE	SPOOL Pc	DWG No	
SG-E-039-DABA-6"	S-003	E-9677 REV	0
	S-002	E-9676	1
	S-001	E-9675	0
SG-E-053-DABA-6"	S-003	E-9673	1
	S-002	E-9672	0
	S-001	E-9671	0
SG-E-039-DABA-6"	S-004	E-9678	1
	S-005	E-9679	0
	S-006	E-9680	0
	S-007	E-9681	0
	S-008	E-9682	0
	S-009	E-9683	0
	S-010	E-9684	0
	S-011	E-9685	0
SG-E-053-DABA-6"	S-004	E-9674	1

E-9678-501-042
SHEET 1 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 64

REV	DESCRIPTION	DRAWN	CHK'D	APPD	DATE
1	1) REVISED & REDRAWN 2) ADDED SHT 2) PER REV REQ 9678-501				

POWER SYSTEMS

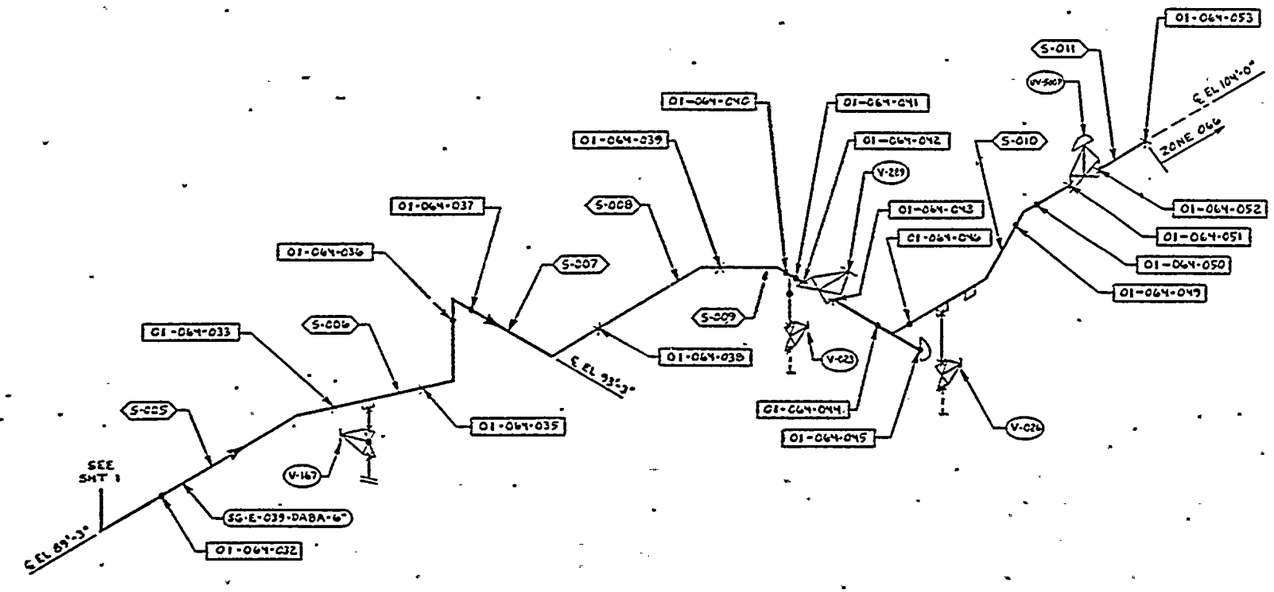
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

BLOWDOWN STM GEN No1 INSIDE CONTAINMENT ZONE 64

E-9678-501-042 03

SCALE NONE

8 7 6 5 4 3 2 1



E-9678-501-042
SHEET 2 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 64

REV	DESCRIPTION				
03	THIS SHT ADDED PER REV REQ 9678-222				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT

BLOWDOWN STM GEN No 1
INSIDE CONTAINMENT
ZONE 64

E-9678-501-042 | 03

NONE

8 7 6 5 4 3 2 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-001	Steam Generator No. 2 to 6" Sch 120 Pipe	SG-048-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-002	6" Sch 120 Pipe to 6" Sch. 120 Strt. Tee	SG-048-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-003	6" Sch 120 Strt. Tee to 6" Sch 120 Weld Cap	SG-048-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-004	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-048-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-005	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-048-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-006	6" Sch 120 Strt. Tee to 6" Sch 120 End Cap	SG-048-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-006A	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-048-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-007	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-048-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-008	6" Sch 120 Strt. Tee to 6" Sch 120 Weld Cap	SG-048-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-009	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-048-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-010	6" Sch 120 Pipe to Valve HV-44	SG-048-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-011	Valve HV-44 to 6" Sch 120 Pipe	SG-048-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-012	NOT USED					
01-065-013	6" Sch 120 Pipe to 6" Sch 120 Strt. Cross	SG-048-S004-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03 TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-014	6" Sch 120 Strt. Cross to 6" Sch 120 Weld Cap	SG-048-S004-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-015	6" Sch 120 Strt. Cross to 6" Sch 120 Pipe	SG-048-W006	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-65-016	NOT USED					
01-065-017	6" Sch 120 Pipe to Valve HV-42	SG-052-W005	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-018	Valve HV-42 to 6" Sch 120 Pipe	SG-052-W004	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-019	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-052-S003-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-020	6" Strt. Tee to 6" Sch 120 Weld Cap	SG-052-S003-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-021	6" Strt Tee to 6" Sch 120 Pipe	SG-052-S003-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-022	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-052-W003	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-023	6" Sch 120 Strt. Tee to 6" Sch 120 Weld Cap	SG-052-S002-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-024	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-052-S002-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-025	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-052-W002	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-026	6" Sch 120 Strt. Tee to 6" Sch 120 Weld Cap	SG-052-S001-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-027	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-052-S001-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-028	6" Sch 120 Pipe to Steam Generator No. 2	SG-052-W001	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-029	6" Sch 120 Strt. Cross to 6" Sch 120 Pipe	SG-052-W007	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-030	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-S005-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-031	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-W008	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-032	NOT USED					
01-065-033	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-W009	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-034	6" Sch 120 Pipe to 6" Sch 160 LR 90 Degree Ell	SG-048-S007-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-035	6" Sch 160 LR 90 Degree Ell to 6" Sch 120 Pipe	SG-048-S007-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-036	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-W010	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-037	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-W011	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-038	6" Sch 120 Pipe to 6" x 6" (Sch 120) X 3" Sch 160 Red. Tee	SG-048-S009-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-039	NOT USED					
01-065-040	6" x 6" (Sch 120) X 3" (Sch 160) Reducing Tee to 6" Sch 120 Pipe	SG-048-S009-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-041	6" Sch 120 Pipe to Valve V-290	SG-048-W012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

PAGE: V-65.6

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-042	Valve V-290 to 6" Sch 120 Pipe	SG-048-W013	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-043	6" Sch 120 Pipe to 6" Sch 120 Strt. Tee	SG-048-S010-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-044	6" Sch 120 Strt. Tee to 6" Sch 120 Weld Cap	SG-048-S010-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-045	6" Sch 120 Strt. Tee to 6" Sch 120 Pipe	SG-048-S010-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-046	NOT USED					
01-065-047	NOT USED					
01-065-048	6" Sch 120 Pipe to 6" Sch 160 LR 90 Degree Ell	SG-048-S010-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 65 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-041 Rev. 03

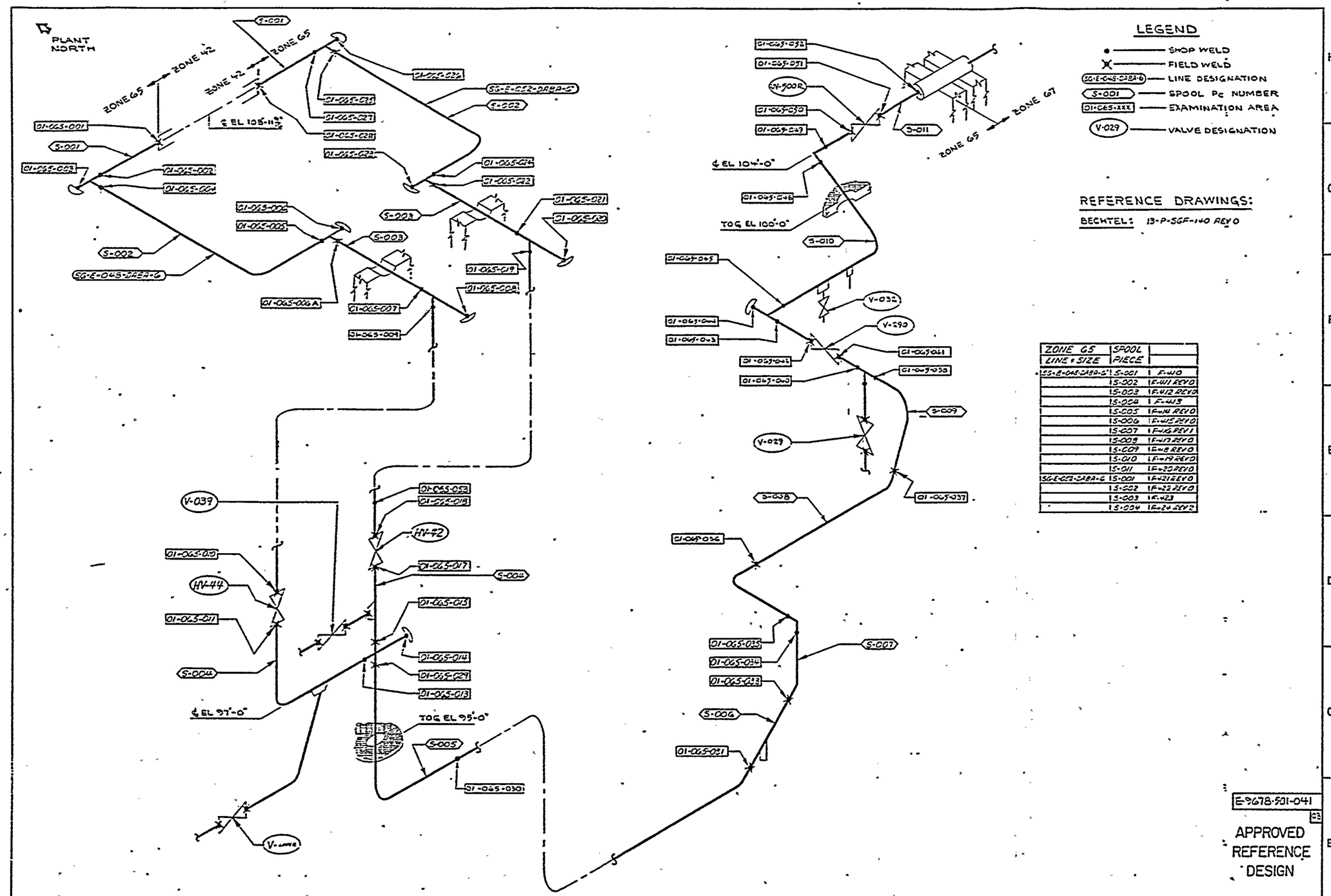
TITLE: STEAM GENERATOR NO. 2 BLOWDOWN PIPING INSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-065-049	6" Sch 160 LR 90 Degree Ell to 6" Sch 120 Pipe	SG-048-S010-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-050	6" Sch 120 Pipe to Valve UV-500R	SG-048-W014	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-051	Valve UV-500R to 6" Sch 120 Pipe	SG-048-W015	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-052	6" Sch 120 Pipe to Containment Penetration	SG-048-W016	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-065-053	6" Sch 120 Pipe to Pipe	SG-052-S003-	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- ● —— SHOP WELD
- X —— FIELD WELD
- SG-E-045-DAEA-6 —— LINE DESIGNATION
- S-001 —— SPOOL Pc NUMBER
- 01-065-XXX —— EXAMINATION AREA
- V-029 —— VALVE DESIGNATION

REFERENCE DRAWINGS:

BECHTEL: 13-P-SGF-140 REV 0

ZONE 65 LINE + SIZE	SPOOL PIECE	
SG-E-045-DAEA-6	S-001	1 F-410
	S-002	1 F-411 REV 0
	S-003	1 F-412 REV 0
	S-004	1 F-413
	S-005	1 F-414 REV 0
	S-006	1 F-415 REV 0
	S-007	1 F-416 REV 1
	S-008	1 F-417 REV 0
	S-009	1 F-418 REV 0
	S-010	1 F-419 REV 0
	S-011	1 F-420 REV 0
SG-E-022-DAEA-6	S-001	1 F-421 REV 0
	S-002	1 F-422 REV 0
	S-003	1 F-423
	S-004	1 F-424 REV 2

E-9678-501-041 03

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 65

NO	REVISION	DATE	BY	CHK	APP
V	UPGRADED TO "APPROVED REFERENCE DESIGN" PER REV REQ				
V	IN TABULATION: ADDED LATEST REV No TO REF DWGS (2-ADDED EXAM AREA DESIGNS -001, -003-009) PER REV REQ 86-8-503				
V	GENERALLY REVISED PER REQ 9678-242				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

ZONE 65 BLOWDOWN STEAM GEN No 2 INSIDE CONTAINMENT

E-9678-501-041 03

NONE

DNA 79

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 66 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-040 Rev. 03

TITLE: BLOWDOWN STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-066-001	Containment Penetration to 6" Sch 120 Pipe	SG-039-S012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-002	6" Sch 120 Pipe to Valve UV-5000	SG-039-S012	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-003	Valve UV-5000 to 6" Sch 120 Pipe	SG-039-W019	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-004	NOT USED					
01-066-005	6" Sch 120 Pipe to 6" Sch 160 LR 90 Degree Ell (Sch 120 Side)	SG-039-W020	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-006	6" Sch 160 LR 90 Degree Ell to 6" Sch 120 Pipe (Sch 120 Side)	SG-039-S014-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-007	6" Sch 120 Pipe to 6" Sch 120 Str. Tee	SG-039-S014-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 66 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: D-9678-501-040 Rev. 03

TITLE: BLOWDOWN STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-066-008	6" Sch 120 Str. Tee to 6" Sch 120 Cap	SG-039-S014-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-009	6" Sch 120 Str. Tee to 6" Sch 120 Pipe	SG-039-S014-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-010	6" Sch 120 Pipe to 6" Sch 160 LR 45 Degree Ell (Sch 120 Side)	SG-039-S014-E	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-011	6" Sch 160 LR 45 Degree Ell to 6" Sch 120 Pipe (Sch 120 Side)	SG-039-S014-F	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-012	6" Sch 120 Pipe to 6" Sch 160 LR 45 Degree Ell (Sch 120 Side)	SG-030-S014-G	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-013	6" Sch 160 LR 45 Degree Ell to 6" Sch 120 Pipe (Sch 120 Side)	SG-039-W021	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-014	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-039-W022	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 66 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-040 Rev. 03

TITLE: BLOWDOWN STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-066-015	6" Sch 120 Pipe to 6" XXS Pipe (Sch 120 Side)	SG-039-W023	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-016	6" XXS Pipe to 2" Thick X 19" x 10" Plate	SG-039-S017-A	C-E-1	Surf.	525115-ESS-093	N/A
01-066-017	2" Thick X 10" X 10" Plate to 6" XXS Pipe	SG-039-S017-B	C-E-1	Surf.	525115-ESS-093	N/A
01-066-018	6" XXS Pipe to 2" Thick X 10" X 10" Plate	SG-039-S017-C	C-E-1	Surf.	525115-ESS-093	N/A
01-066-019	2" Thick X 10" X 10" Plate to 6" XXS Pipe	SG-039-S017-D	C-E-1	Surf.	525115-ESS-093	N/A
01-066-020	6" XXS Pipe to 2" Thick X 10" X 10" Plate	SG-039-S017-E	C-E-1	Surf.	525115-ESS-093	N/A
01-066-021	2" Thick X 10" X 10" Plate to 6" XXS Pipe	SG-039-S017-F	C-E-1	Surf.	525115-ESS-093	N/A
01-066-022	6" XXS Pipe to 2" Thick X 10" X 10" Plate	SG-039-S017-G	C-E-1	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 66 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: ~~TR-ESS-069~~
REFERENCE DRAWING NO.: D-9678-501-040 Rev. 03

TITLE: BLOWDOWN STEAM GENERATOR NO. 1 OUTSIDE CONTAINMENT

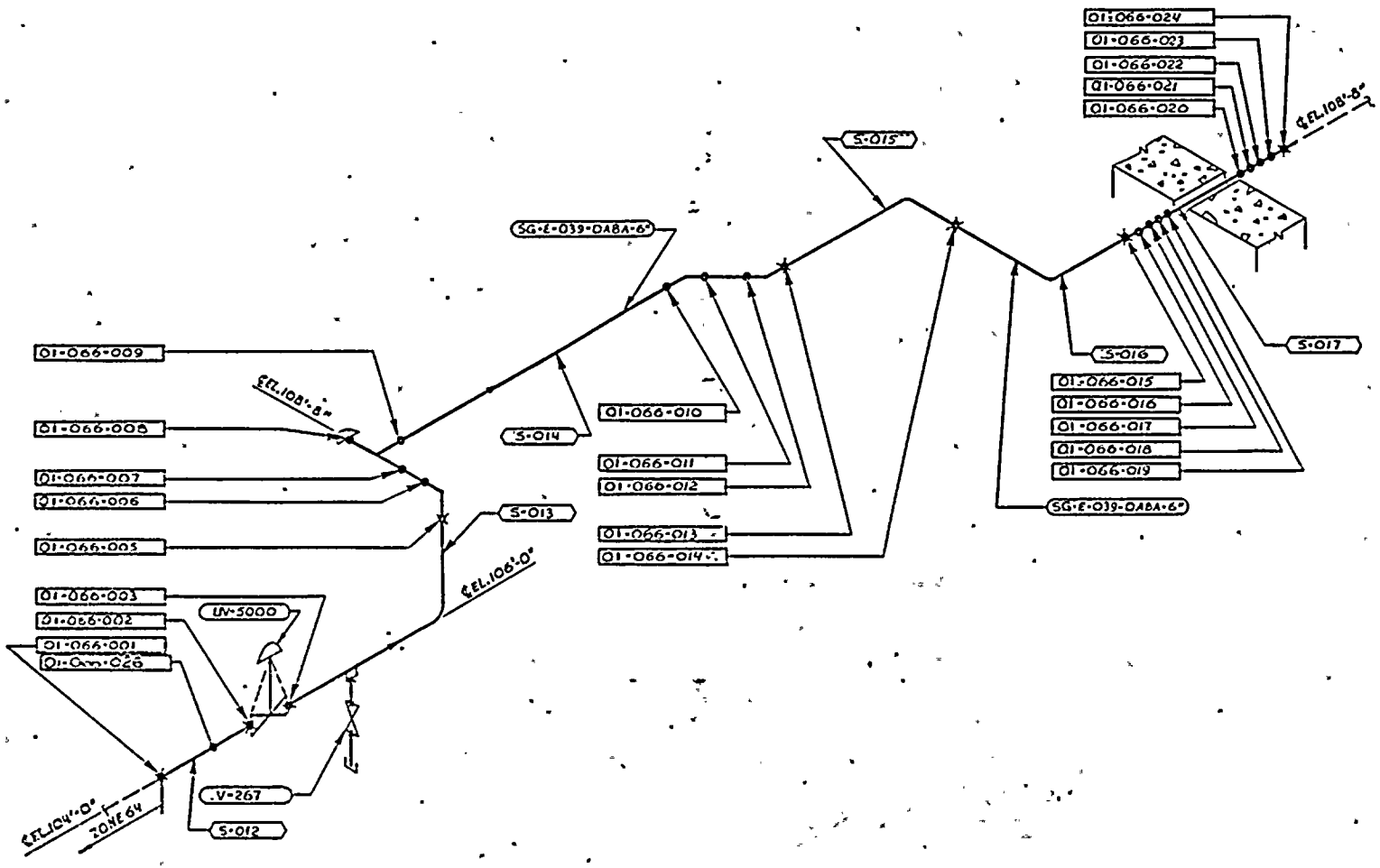
AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-066-023	2" Thick X 10" X 10" Plate to 6" XXS Pipe	SG-039-S017-H	C-E-1	Surf.	525115-ESS-093	N/A
01-066-024	6" XXS Pipe to 6" Sch 120 Pipe (Sch 120 Side)	SG-039-W024	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-066-025	NOT USED					
01-066-026	6" Sch 120 Seamless Pipe	SG-034-S012 FW301	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

PAGE: V-66.4

C-E 0090287 (Rev. 7/80)



LEGEND

- ● SHOP WELD
- ✱ FIELD WELD
- (S-XXX) SPOOL PIECE NUMBER
- (V-XXX) VALVE IDENTIFICATION
- (01-066-XXX) EXAMINATION DESIGNATION
- (SG-E-039-0ABA-6") LINE IDENTIFICATION

REFERENCES

BECHTEL: 150 13-P-SGF-157 REV 0
PULLMAN POWER PRODUCTS

ZONE 066 LINE # SIZE	SPOOL #	
SG-E-039-0ABA-6"	S-012	F-691
	S-013	F-692
	S-014	F-693 REV 0
	S-015	F-694
	S-016	F-695
	S-017	F-696

D-9678-501-040 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 66

REV	DESCRIPTION
3	UPGRADE TO APPROVED REF DESIGN PER REV REQ No 9678-258
2	1-IN TABULATION: ADDED LATEST REV No TO REF DWG PER REV REQ #9678-503
1	1-GENERALLY REVISED PER REV REQ #9678-262

POWER SYSTEMS
NUCLEAR POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

BLOWDOWN STM GEN No 1
OUTSIDE CONTAINMENT
ZONE 66

D-9678-501-040 03

681012 SCALE NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 67 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-039 Rev. 03

TITLE: BLOWDOWN STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-067-001	Containment Penetration to 6" Sch 120 Pipe	SG-048-W017	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-002	6" Sch 120 Pipe to Valve UV-5005	SG-048-W018	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-003	Valve UV-5005 to 6" Sch 120 Pipe	SG-048-W019	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-003A	6" Sch 120 Pipe to Pipe	SG-048-S013-FW300	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-004	NOT USED					
01-067-005	6" Sch 120 Pipe to 6" Sch 160 LR 90 Degree Ell (Sch 120 Side)	SG-048-W020	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-006	6" Sch 160 LR 90 Degree Ell to 6" Sch 120 Pipe (Sch 120 Side)	SG-048-S014-A	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 67 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-039 Rev. 03

TITLE: BLOWDOWN STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-067-007	6" Sch 120 Pipe to 6" Sch 120 Str. Tee	SG-048-S014-B	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-008	6" Sch 120 Str. Tee to 6" Sch 120 Cap	SG-048-S014-D	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-009	6" Sch 120 Str. Tee to 6" Sch 120 Pipe	SG-048-S014-C	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-010	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-W021	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-011	6" Sch 120 Pipe to 6" Sch 120 Pipe (Note (1))	SG-048-W022	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-012	6" Sch 120 Pipe to 6" XXS Pipe (Sch 120 Side)	SG-048-W023	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A
01-067-013	6" XXS Pipe to 2" Thk x 10" x 10" Plate	SG-048-S017-A	C-E-1	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 67 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-039 Rev. 03

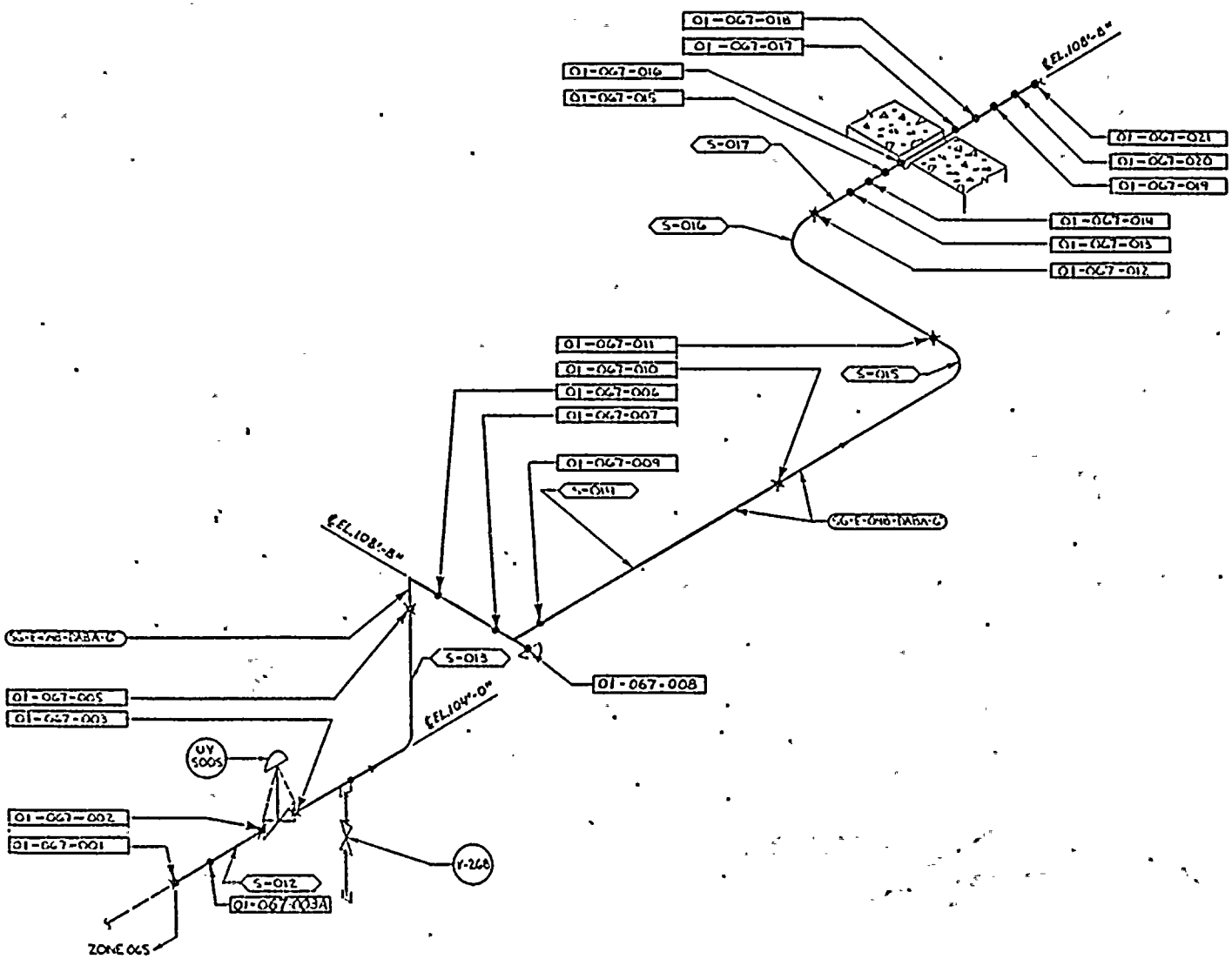
TITLE: BLOWDOWN STEAM GENERATOR NO. 2 OUTSIDE CONTAINMENT

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD. IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-067-014	2" Thk. x 10" x 10" Plate to 6" XXS Pipe	SG-048-S017-B	C-E-1	Surf.	525115-ESS-093	N/A
01-067-015	6" XXS Pipe to 2" Thk. x 10" x 10" Plate	SG-048-S017-C	C-E-1	Surf.	525115-ESS-093	N/A
01-067-016	2" Thk. x 10" x 10" Plate to 6" XXS Pipe	SG-048-S017-D	C-E-1	Surf.	525115-ESS-093	N/A
01-067-017	6" XXS Pipe to 2" Thk. x 10" x 10" Plate	SG-048-S017-E	C-E-1	Surf.	525115-ESS-093	N/A
01-067-018	2" Thk. x 10" x 10" Plate to 6" XXS Pipe	SG-048-S017-F	C-E-1	Surf.	525115-ESS-093	N/A
01-067-019	6" XXS Pipe to 2" Thk. x 10" x 10" Plate	SG-048-S017-G	C-E-1	Surf.	525115-ESS-093	N/A
01-067-020	2" Thk. x 10" x 10" Plate to 6" XXS Pipe	SG-048-S017-H	C-E-1	Surf.	525115-ESS-093	N/A
01-067-021	6" XXS Pipe to 6" Sch 120 Pipe (Sch 120 Side)	SG-048-W024	C-G	UT Surf.	NIP-956 525115-ESS-093	UT-83 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

01-067-001	EXAMINATION DESIGNATION
36-E-048-1A1A-G	LINE IDENTIFICATION
S-012	SPOOLPIECE IDENTIFICATION
UV 5005	VALVE IDENTIFICATION

REFERENCE DWGS:

BECHTEL: 13-P-SGF-157
PULLMAN-KELLOGG:

ZONE 067 LINE & SIZE	SPOOL-PIECE	
36-E-048-1A1A-G	S-012	F-005
	S-013	F-006 REV 0
	S-014	F-007 REV 0
	S-015	F-008 REV 0
	S-016	F-001 REV 0
	S-017	F-010 REV 1

D-9678-501-039
03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 67

REV	DESCRIPTION						
03	UPGRADE TO APPROVED REF DESIGN PER REV REQ N-9678-258						
02	1-IN TABULATION ADDED LATEST REV No. TO REF DWGS PER REV REQ # 9678-503						
01	1-GENERALLY REVISED PER REV REQ # 9678-262						

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

BLOWDOWN STM GEN No 2
OUTSIDE CONTAINMENT
ZONE 67

D-9678-501-039 03

561012 NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 68 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-109 Rev. 02

TITLE: REGENERATIVE HEAT EXCHANGER

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-068-001	Pipe to Tube Sheet 8" Sch 160	L-27681-16F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-002	Tube Sheet to Pipe 8" Sch 160	L-27681-4F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-003	Pipe to Tee 8" Sch 160	L-27681-5F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-004	Tee to Cap 8" Sch 160	L-27681-14F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-005	Tee to Tee 8" Sch 160	L-27681-10F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-006	Tee to Cap 8" Sch 160	L-27681-13F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-007	Tee to Pipe 8" Sch 160	L-27681-6F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 68 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-109 Rev. 02

TITLE: REGENERATIVE HEAT EXCHANGER

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-068-008	Pipe to Tube Sheet 8" Sch 160	L-27681-3F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-009	Tube Sheet to Pipe 8" Sch 160	L-27681-15F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-95 N/A
01-068-010	Pipe to Sleeve	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-011	Sleeve to Pipe	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-012	Pipe to Sleeve	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-013	Sleeve to Pipe	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-014	Pipe to Sleeve	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-015	Sleeve to Pipe	N/A	C-C	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 68 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-109 Rev. 02

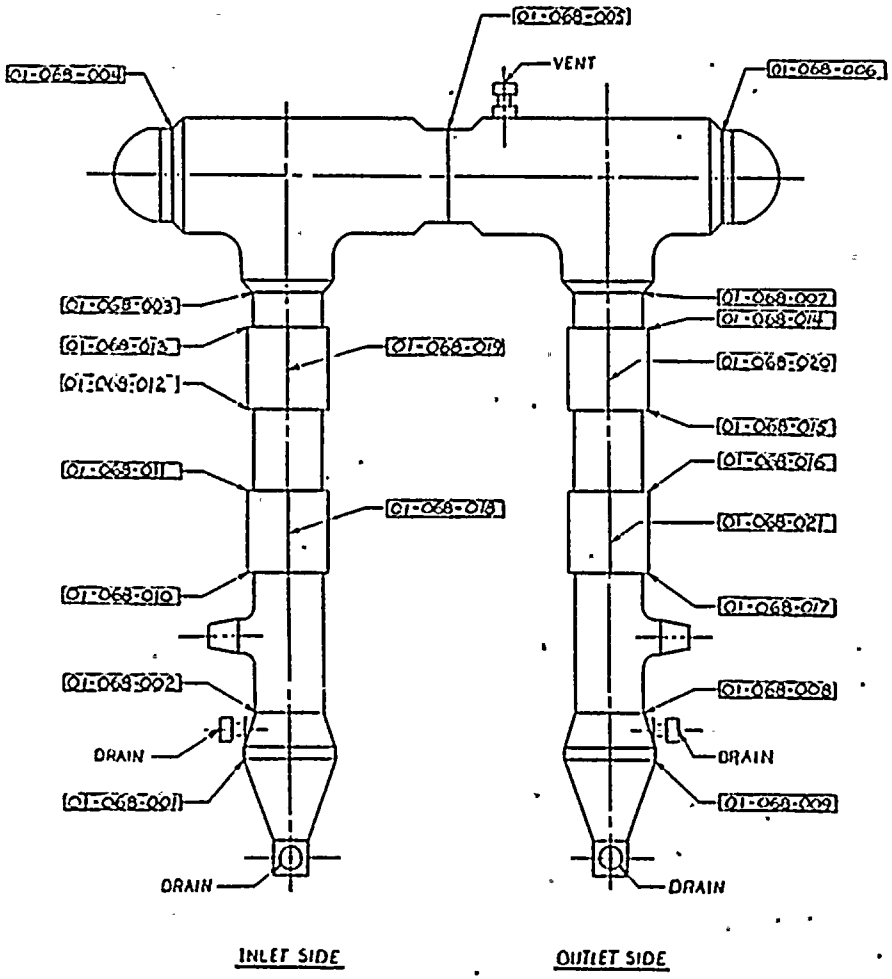
TITLE: REGENERATIVE HEAT EXCHANGER

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-068-016	Pipe to Sleeve	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-017	Sleeve to Pipe	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-018	Sleeve Long Seam	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-019	Sleeve Long Seam	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-020	Sleeve Long Seam	N/A	C-C	Surf.	525115-ESS-093	N/A
01-068-021	Sleeve Long Seam	N/A	C-C	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

01-068-001 — EXAMINATION AREA

REFERENCE DRAWINGS

AMETEK

L-27681 REV 3

D-9678-501-109 02

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 68

REV	DESCRIPTION					
01	UPGRADE TO APPROVED REF. DESIGN PER REV. REQ. No 9678-258					
02	GENERALLY REVISED PER REV REQ # 9678-262					

POWER SYSTEMS

ZONE 68 REGENERATIVE HEAT EXCHANGER

D-9678-501-109 02

NONE

8 7 6 5 4 3 2 1

H G F E D C B A

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 69 CLASS 2
PROGRAM PLAN

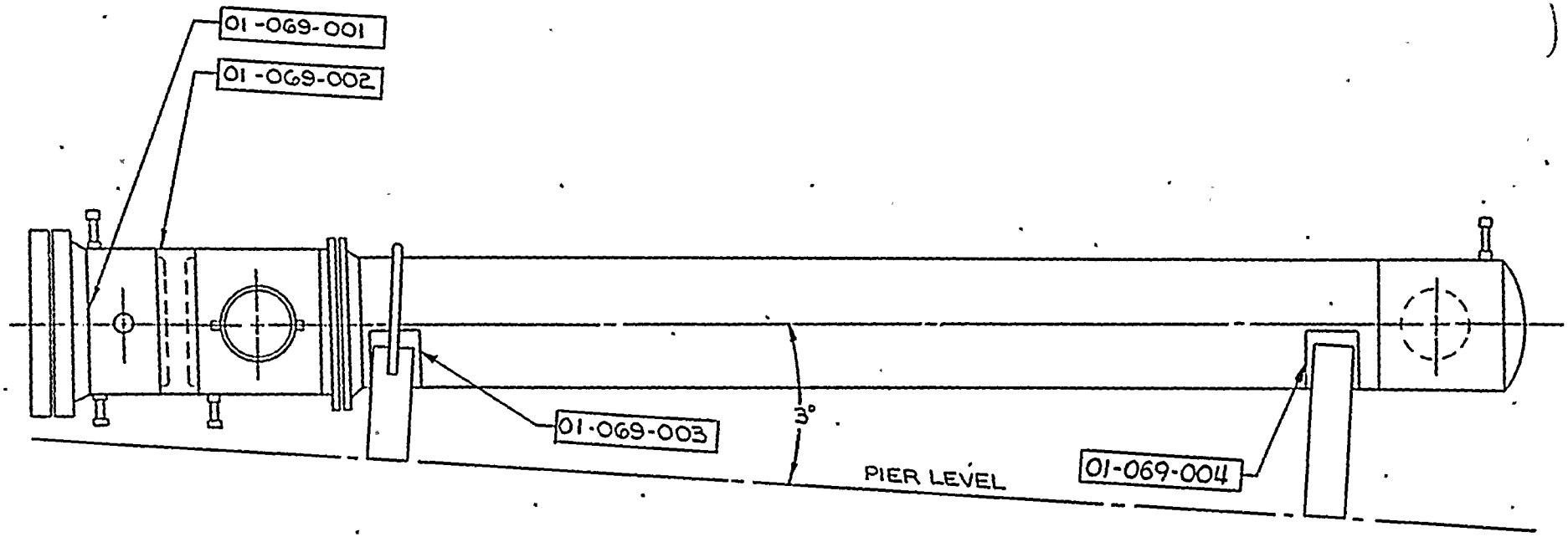
DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: C-9678-501-106 Rev. 02
TITLE: LETDOWN HEAT EXCHANGER

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-069-001	Girth Weld - Flange End	D-77-450-2	C-A	UT	NIP-945	UT-96
01-069-002	Girth Weld - Shell End	D-77-450-1	C-A	UT	NIP-945	UT-96
01-069-003	(Class 3) Support - Flange End	N/A	IWD 2600 (C)	Vis.	525115-ESS-091	N/A
01-069-004	(Class 3) Support - Shell End	N/A	IWD 2600 (C)	Vis.	525115-ESS-091	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

01-069-001 — EXAMINATION AREA

REFERENCE DRAWINGS
RICHMOND ENGINEERING CO, INC.
D-77-450 REV 10
D-77-451 REV 6
D-77-452 REV 4

C-9678-501-106
02

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 69

REV.	DESCRIPTION	BY & DATE	CHK & DATE	ENG APPD	PROJ APPD
02	1- REVISED & REDRAWN, PER REV REQ 9678-262				

POWER SYSTEMS
COMBUSTION ENGINEERING INC
NUCLEAR POWER SYSTEMS

DRAWN BY
CHECKER
APPROVALS

CUSTOMER
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR
GENERATING STATION

TITLE
ZONE 69
LETDOWN HEAT
EXCHANGER DESIGNATION

NEXT ASSY
SUPERSEDES
JOB NO 66-1012
COMPONENT CODE
SCALE NONE
DWG NO C-9678-501-106
REV 02
SHEET 1 OF 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-001	Containment Penetration 27 to 16" Sch 20 SS Pipe (Note 2)	SI-241-W022	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-002	16" Sch Sch 20 SS Pipe to Elbow (Note 2)	SI-241-S011-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-003A	Elbow Longitudinal Weld (Outside Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-003B	Elbow Longitudinal Weld (Inside Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-004	Elbow to 16" Sch 20 SS Pipe (Note 2)	SI-241-S011-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-005	16" Sch 20 SS Pipe to Tee (Note 2)	SI-241-W023	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-006A	Tee Longitudinal Weld (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-007	Tee to 16" Sch 20 SS Pipe (Note 2)	SI-241-S012-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-008	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-S012-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-009A	Elbow Longitudinal Weld (Outside Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-009B	Elbow Longitudinal Weld (Inside Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-010	Elbow to 16" Sch 20 SS Pipe (Note 2)	SI-241-S012-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-011	16" Sch 20 SS Pipe to Valve (Note 2)	SI-241-W024	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-012	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-013	Valve to 16" Sch 20 SS Pipe	SI-241-W025	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-014	16" Sch 20 SS Pipe to 16" x 18" Reducer	SI-241-S013-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-015A	Reducer - Longitudinal	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-016	Reducer to 18" Sch 20 SS Pipe	SI-241-S013-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-016A	12" Sch 20 Sweepolet on 18" Sch 20 SS Pipe	SI-241-S013-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-017	18" Sch 20 SS Pipe to Elbow	SI-241-S013-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-018A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-018B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-019	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S013-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-020	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-W026	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-021A	Elbow Longitudinal Weld (Outside Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-021B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-022	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S014-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-023	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-241-W027	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

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PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-024	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-241-W028	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-025	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-S016-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-026A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-026B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-027	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S016-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-028	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-S016-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-029A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

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PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-029B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-030	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S016-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-031	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-W029	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-032A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-032B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-033	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S017-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-034	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-W030	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

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N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-035A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-035B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-036	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S018-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-037	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-W031	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-038A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-038B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-039	Elbow to 18" Sch 20 SS Pipe (Note 2)	SI-241-S019-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

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N/A NOT APPLICABLE
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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

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PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-040	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-241-W032	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-041	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-241-S020-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-042A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-042B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-043	Elbow to 18" Pipe (Note 2)	SI-241-W033	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-044	18" Sch 20 SS Pipe to Tee (Note 2)	SI-241-W034	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-045A	Tee Longitudinal Weld (Right Side Looking Downstream) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

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REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-045B	Tee Longitudinal Weld (Left Side Looking Upstream) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-046	Tee to 18" Sch 20 SS Pipe (Note 2)	SI-241-S022-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-047	18" Sch 20 SS Pipe to Tee (Note 2)	SI-241-W035	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-070-048	NOT USED					
01-070-049	Valve to 20" Sch 20 SS Pipe (Note 2)	SI-307-W018	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-050	20" Sch 20 SS Pipe to Elbow (Note 2)	SI-307-S012-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-051A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-051B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-052	Elbow to 20" Sch 20 SS Pipe (Note 2)	SI-307-S012-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-053	20" Sch 20 SS Pipe to Tee (Note 2)	SI-307-S012-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-054A	Tee Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-055	Tee to 20" Sch 20 SS Pipe (Note 2)	SI-307-S012-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-056	20" Sch 20 SS Pipe to Elbow (Note 2)	SI-307-S012-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-057A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

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TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-057B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-058	Elbow to 20" Sch 20 SS Pipe (Note 2)	SI-307-S012-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-059	20" Sch 20 SS Pipe to Flange (Note 2)	SI-307-S012-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-060	Flange to 20" Sch 20 Pipe (Note 2)	SI-307-S013-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-061	20" Sch 20 SS Pipe to Reducer (Note 2)	SI-307-S013-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-062A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-070-063	Sch 20 14" x 20" Reducer to Sch 20 SS Pipe (Note 2)	SI-307-S013-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-31)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

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REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-064	14" Sch 20 SS Pipe to Flange (Note 2)	SI-307-S013-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-065	Flange to 14" Pipe (Note 2)	SI-307-S014-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-066	14" Sch 20 SS Pipe to Elbow (Note 2)	SI-307-S014-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-067A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-068	14" Sch 20 SS Elbow to 14" Sch 40 Pipe (Note 2)	SI-307-S014-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-069	14" Sch 20 SS Pipe to LPSI Pump (Note 2)	SI-307-W019	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-070	10" Tee Branch to 10" Sch 20 SS Pipe (Note 2)	SI-241-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

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PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-071	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-239-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-072A	Elbow Longitudinal Weld (Weld Not Discernable - Examine Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-073	10" Sch 20 Elbow to Pipe (Note 2)	SI-239-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-074	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-239-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-075A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-076	10" Sch 20 Elbow to Pipe (Note 2)	SI-239-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-077	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-239-S001-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-078A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-079	10" Sch 20 Elbow to Pipe (Note 2)	SI-239-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-080	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-239-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-081A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-082A	10" Sch 20 Elbow to 10" Sch 40 Pipe (Sch 20 Side) (Note 2)	SI-239-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-083	10" Sch 40 Pipe to Valve (Note 2)	SI-239-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-070-084	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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PROGRAM PLAN

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TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-085	12" Sweepolet to 12" Sch 20 SS Pipe (Note 2)	SI-002-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-086	12" Sch 20 SS Pipe to Elbow (Note 2)	SI-002-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-087A	Elbow Longitudinal Weld (Longitudinal) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-088	12" Sch 20 SS Elbow to Pipe (Note 2)	SI-002-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-089	12" Sch 20 SS Pipe to Elbow (Note 2)	SI-002-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-090A	Elbow Longitudinal Weld (Weld Not Discernable - Inspect Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-091	12" Sch 20 Elbow to Pipe (Note 2)	SI-002-S001-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-092	12" Sch 20 SS Pipe to Elbow (Note 2)	SI-002-S001-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-093A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-094	12" Sch 20 Elbow to Pipe (Note 2)	SI-002-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-094A	12" Sch 20 Pipe to Pipe (Note 2)	SI-002-FW003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/a
01-070-095	12" Sch 20 SS Pipe to Elbow (Note 2)	SI-002-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-096A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-097	12" Sch 20 Elbow to Pipe (Note 2)	SI-002-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-037

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-098	12" Sch 20 SS Pipe to Valve (Note 2)	SI-002-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-099	NOT USED					
01-070-100	Valve to Pipe (Note 2)	SI-002-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-101	12" Sch 20 SS Pipe to Valve (Note 2)	SI-002-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-070-102	NOT USED					
01-070-103	16" Tee Branch to 16" Sch 20 SS Pipe (Note 2)	SI-067-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-104	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-067-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

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DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-105A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-105B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-106	16" Sch 20 Elbow to Pipe (Note 2)	SI-067-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-107	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-067-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-108A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-108B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-109	16" Sch 20 Elbow to Pipe (Note 2)	SI-067-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-110	16" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-067-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/a
01-070-111	16" Sch 20 SS Pipe to 16" x 14" Sch 20 Reducer (Note 2)	SI-067-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-112A	Reducer Longitudinal Weld - Top (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-113	Reducer to 14" Sch 20 SS Pipe (Note 2)	SI-067-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-114	14" Sch 20 SS Pipe to Valve (Note 2)	SI-067-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-070-115	NOT USED					
01-070-116	Containment Penetration #27 to 16" Pipe (Note 2)	SI-241-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters or pipe support or rigid anchor.

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REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-117	16" Sch 20 SS Pipe to Tee (Note 2)	SI-241-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-118	NOT USED					
01-070-119	16" x 16" x 10" Tee to 16" Sch 20 Pipe (Note 2)	SI-241-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-070-120	16" Sch 20 SS Pipe to Pipe (Note (1))	SI-241-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64/56 N/A
01-070-121	16" Sch 20 SS Pipe to Valve	SI-241-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-56 N/A
01-070-122	10" Tee Branch to Pipe (Note 2)	SI-369-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-123	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-369-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

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DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-124A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-125	10" Sch 20 Elbow to Pipe (Note 2)	SI-369-S01-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-126	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-369-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-127A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-128	10" Sch 20 Elbow to Pipe (Note 2)	SI-369-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-129	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-369-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-130A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

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TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-131	10" Sch 20 Elbow to Pipe (Note 2)	SI-369-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-132	10" Sch 20 SS Pipe to 10" x 6" Reducer (Note 2)	SI-369-S002-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-133A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-070-134	10" x 6" Sch 20 Reducer to 6" 600# W.N. Flange (Note 2)	SI-369-S002-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-070-135L	NOT USED					
01-070-136L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-137L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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DOCUMENT NO.: TR-ESS-069

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REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-138L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-070-139L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-140L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-141L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-142L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-143L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-144L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-145L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 70 CLASS 2

DOCUMENT NO.: TR-ESS-069

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TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-146L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-147L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-148L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-149L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-150L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-151L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-152L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-153L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-154L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-155L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-156L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-157L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-158L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-159L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-160L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-161L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-162L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-163L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-164L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-165L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-166L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-167L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-168L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-169L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-070-170L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-171L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-172L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-173L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-174L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-175L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-176L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-177L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-070-178L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-179L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 70 CLASS 2
PROGRAM PLAN

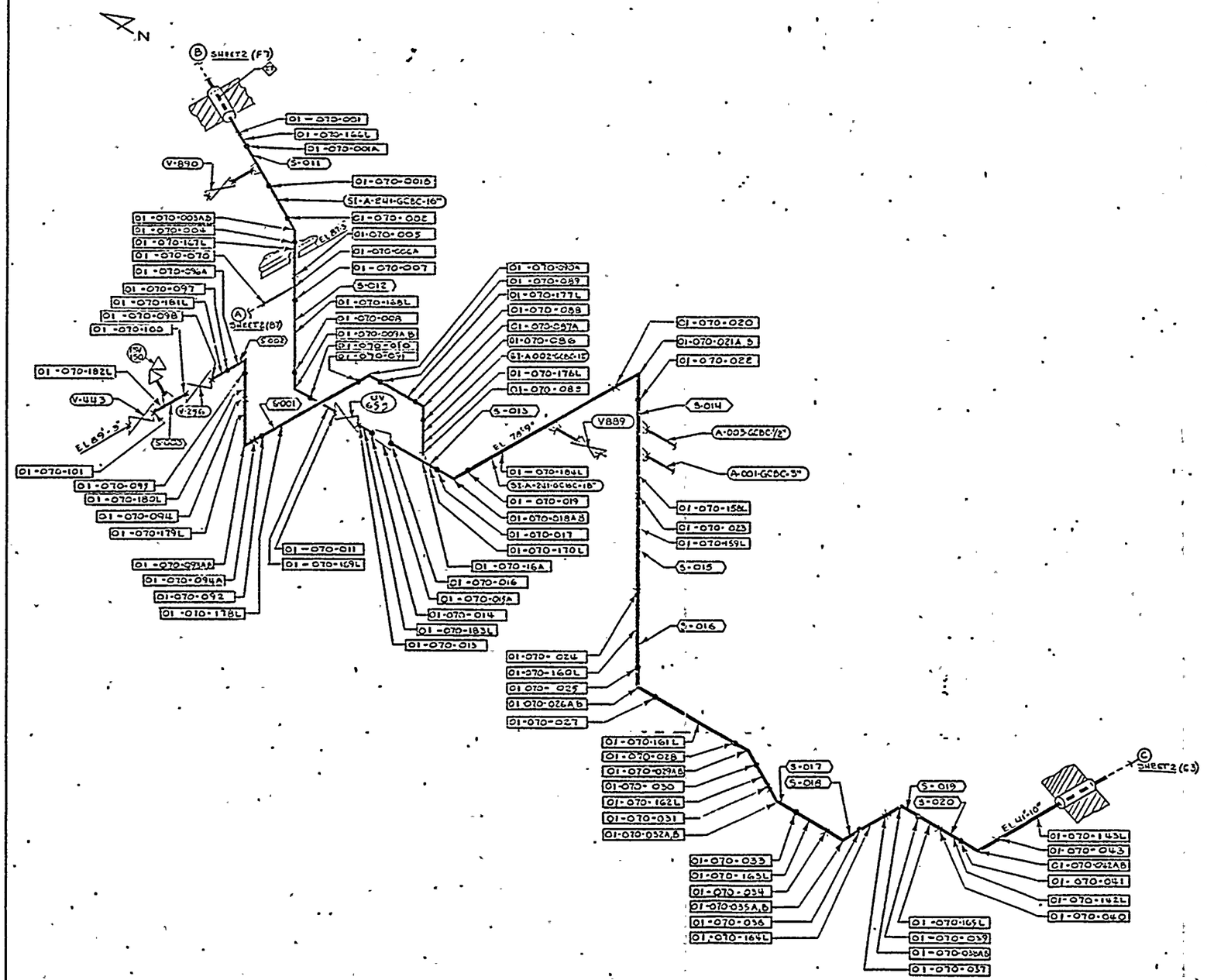
DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-037 Rev. 03
TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-070-180L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-181L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-182L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-070-183L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-070-184L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

•	SHOP WELD
x	FIELD WELD
S1-A-241-GCBC-20"	LINE DESIGNATION
S-001	SPOOL PL NO.
V-443	VALVE DESIGNATION
HV 691	VALVE DESIGNATION
01-070-XXX	EXAMINATION AREA DESIGNATION

REFERENCE DRAWINGS

BECHTEL: 13-P-SIF-201 REV. 6 SK-H-SIF-201 REV 6
" 01-P-SIF-105 REV. 0 SK-H-SIF-105 REV 3
" 13-P-SIF-151 REV. 0 SK-H-SIF-151 REV 1
" 13-P-SIF-207 REV. 6 SK-H-SIF-207 REV 6

PULLMAN-KELLOGG:

ZONE 70 SPOOL			UNIT
LINE & SIZE		PIECE	
002	12"	S-001	F-037
		S-002	F-380
		S-003	F-037
667		S-001	F-140
		S-002	F-123A
		S-003	F-428A
239	10"	S-001	F-563
		S-002	F-564
241	16"	S-011	F-392
		S-012	F-390
	18"	S-013	F-309
		S-014	F-419
		S-015	F-120
		S-016	F-424
		S-017	F-145A
		S-018	F-146
		S-019	F-133A
		S-020	F-142A
		S-021	S-140 REV 0
		S-022	F-134A
307	20"	S-012	F-141A
	14"	S-013	F-415A
		S-014	F-124, 125, 126
		S-016	N/A
869	10"	S-001	F-182
869	10"	S-002	F-181

E-9678-501-037
SHEET 1 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 70

REV	DESCRIPTION	DATE	BY	CHK	APP
03	REVISED & REORDERED - ADDED SHEET 2 PER REV REQ 9678-282				

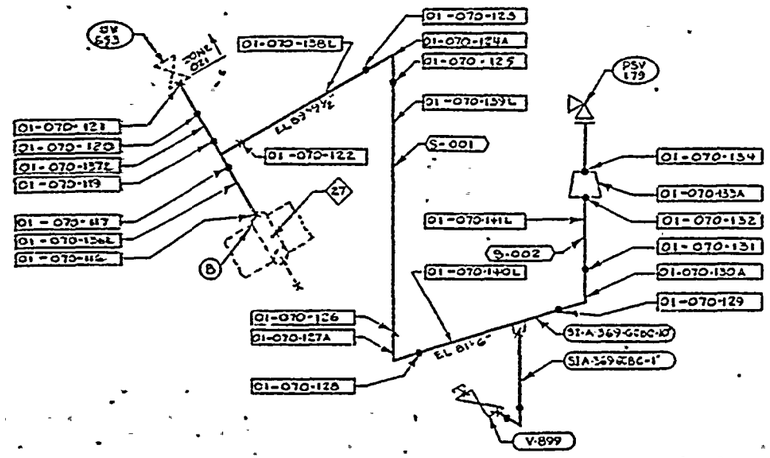
POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

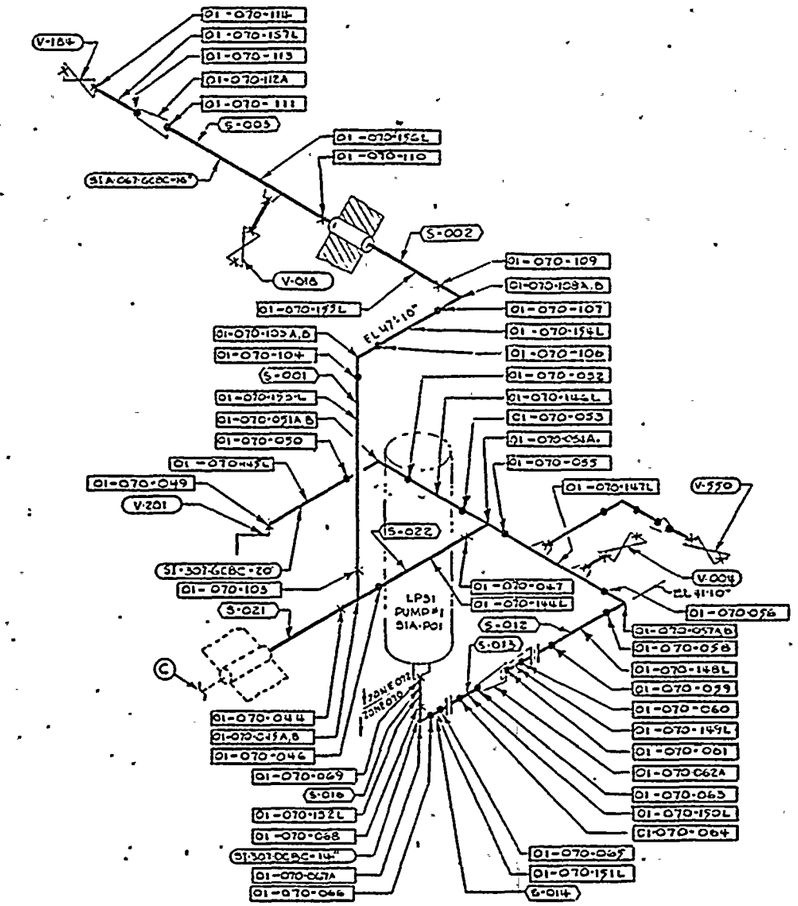
SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION ZONE 70

E-9678-501-037 03

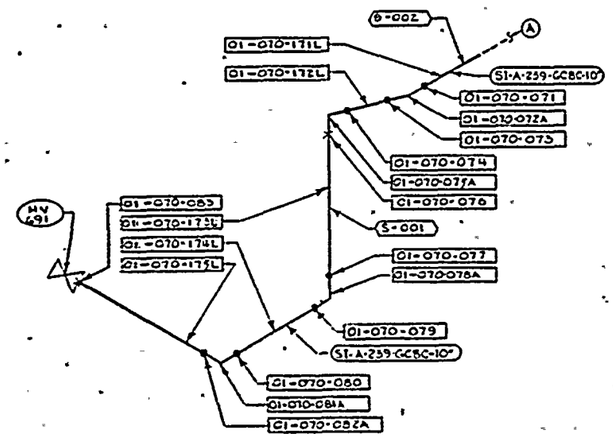
8 7 6 5 4 3 2 1



DETAIL "B"
SHEET 1 (H7)



DETAIL "C"
SHEET 1 (C5)



DETAIL "A"
SHEET 1 ZONE F7

E-9678-501-037
SHEET 2 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 70

REV	DESCRIPTION				
03	1. THIS SHT ADDED PER REV REQ # 9678-262				

C-E POWER SYSTEMS
COMBUSTION ENGINEERING, INC.
NUCLEAR POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

TITLE: SHUTDOWN COOLING LOOP 1 TO LPSI PUMP SUCTION ZONE 70

E-9678-501-037 03

NONE

8 7 6 5 4 3 2 1
H G F E D C B A

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-001	Containment Penetration No. 26 to 16" Sch 20 SS Pipe (Note 2)	SI-194-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-002	16" Sch 20SS Pipe to Tee (Note 2)	SI-194-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-003A	Tee Longitudinal Weld (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-004	16" Sch 20 Tee to Pipe (Note 2)	SI-194-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-005	16" Sch 20 SS Pipe to Valve (Note 2)	SI-194-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-006	NOT USED					
01-071-007	Valve to Pipe (Note 2)	SI-194-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-008	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-009A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-009B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-010	16" Sch 20 Elbow to Pipe (Note 2)	SI-194-S006-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-011	16" Sch 20 SS Pipe to 16" x 18" Reducer (Note 2)	SI-194-S006-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-012A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-013	16" x 18" Sch 20 Reducer to 18" Pipe (Note 2)	SI-194-S006-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-014	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-194-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-015	NOT USED					
01-071-016	12" Sch 20 Sweepolet on 18" Sch 20 Pipe (Note 2)	SI-194-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-017	NOT USED					
01-071-018	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-194-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-019	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-194-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-020	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S008-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-021A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-021B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-022	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-023	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S018-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-024A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-024B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-025	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-026	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-194-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-027	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S019-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-028A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-028B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-029	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-S019-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-030	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S019-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-031A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-031B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-032	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-033	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-194-W013	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-034	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S011-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-035A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-035B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-036	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-S011-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

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C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-037	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S011-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-038A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-038B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-039	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-W014	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-040	18" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-194-W015	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-041	18" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S013-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-042A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-042B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-043	18" Sch 20 Elbow to Pipe (Note 2)	SI-194-W016	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-044	18" Sch 20 SS Pipe to Tee (Note 2)	SI-194-W017	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-045A	Tee Longitudinal (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-046	18" x 18" x 16" Tee to 18" Sch 20 Pipe (Note 2)	SI-194-S015-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-047	18" Sch 20 SS Pipe to Tee Branch (Note 2)	SI-194-W018	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-65 N/A
01-071-048	NOT USED					

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03 TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-049	Valve to Pipe (Note 2)	SI-308-W019	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-050	20" Sch 20 SS Pipe to Elbow (Note 2)	SI-308-S014-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-051A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-051B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-052	20" Sch 20 Elbow to Pipe (Note 2)	SI-308-S014-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-053	20" Sch 20 SS Pipe to Tee (Note 2)	SI-308-S014-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-054A	Tee Longitudinal (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-055	20" x 20" x 18" Sch 20 Tee to Pipe (Note 2)	SI-308-S014-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-056	20" Sch 20 SS Pipe to Elbow (Note 2)	SI-308-S014-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-057A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-057B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-058	20" Sch 20 Elbow to Pipe (Note 2)	SI-308-S014-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-059	20" Sch 20 SS Pipe to Flange (Note 2)	SI-308-S014-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-060	Flange to Pipe (Note 2)	SI-308-S015-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

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PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-061	20" Sch 20 SS Pipe to Reducer (Note 2)	SI-308-S015-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-062A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-66 N/A
01-071-063	20" x 14" Eccentric Reducer to Pipe (Note 2)	SI-308-S015-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-064	14" Sch 20 SS Pipe to Flange (Note 2)	SI-308-S015-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-065	Flange to Pipe (Note 2)	SI-308-S016-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-066	14" Sch 20 SS Pipe to Elbow (Note 2)	SI-308-S016-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-067A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03 TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-068	14" Sch 20 Elbow to 14" Sch 40 Pipe (Note 2)	SI-308-W100	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-069	14" Sch 40 SS Pipe to LPSI Suction (Note 2)	SI-308-W020	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-070	16" x 16" x 16" Sch 20 Tee (Branch) to Pipe (Note 2)	SI-173-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-071	16" Sch 20 SS Pipe to Reducer (Note 2)	SI-173-S001-L	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-072A	Reducer Longitudinal Weld (Not Discernable Do Entire Circumference) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-073	10" x 10" Sch 20 Reducer to Elbow (Note 2)	SI-173-S001-K	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-074A	Elbow Longitudinal Weld (Weld Not Discernable Do Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

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N/A NOT APPLICABLE
(H) DURING HYDROTEST

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COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

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TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-075	10" Sch 20 Elbow to Pipe (Note 2)	SI-173-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-076	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-173-S001-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-077A	Elbow Longitudinal Weld (Not Discernable Examine Entire Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-078	10" Sch 20 Elbow to Pipe (Note 2)	SI-173-S001-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-079	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-173-S001-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-080A	Elbow Longitudinal Weld (Not Discernable Examine Entire Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-081	10" Sch 20 Elbow to Pipe (Note 2)	SI-173-S001-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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ZONE 71 CLASS 2

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REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-082	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-173-S001-H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-083A	Elbow Longitudinal Weld (Not Discernable Examine Entire Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-084	10" Sch 20 Elbow to Pipe (Note 2)	SI-173-S001-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-085	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-173-S001-K	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-086A	Elbow Longitudinal Weld (Not Discernable Examine Entire Circumference) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-087A	10" Sch 20 Elbow to 10" Sch 40 Pipe (Sch 20 Side) (Note 2)	SI-173-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-088	10" Sch 40 SS Pipe to Valve (Note 2)	SI-173-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

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N/A NOT APPLICABLE
(H) DURING HYDROTEST

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TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-089	NOT USED					
01-071-090	16" x 16" x 12" Tee (Branch) to Pipe (Note 2)	SI-038-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-091	12" Sch 20 SS Pipe to Elbow (Note 2)	SI-038-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-092A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-093	12" Sch 20 SS Elbow to Pipe (Note 2)	SI-038-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-094	12" Sch 20 SS Pipe to Valve (Note 2)	SI-038-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-095	NOT USED					

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N/A NOT APPLICABLE
(H) DURING HYDROTEST

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TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-096	Valve to to 12" Sch 20 SS Pipe (Note 2)	SI-038-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-097	12" Sch 20 SS Pipe to Valve (Note 2)	SI-038-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-81 N/A
01-071-098	NOT USED					
01-071-099	NOT USED					
01-071-100	Valve to 14" Sch 20 SS Pipe (Note 2)	SI-034-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-101	14" Sch 20 SS Pipe to Reducer (Note 2)	SI-034-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A
01-071-102A	Reducer Longitudinal Weld - Top (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-63 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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TITLE:

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01-071-103	14" x 16" Reducer to Pipe (Note 2)	SI-034-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-104	16" Sch 20 SS Pipe to Pipe (Note (1) & 2)	SI-034-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-105	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-034-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-106A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-106B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-107	16" Sch 20 Elbow to Pipe (Note 2)	SI-034-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-108	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-034-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-109A	Elbow Longitudinal (Outer Radius) (Note 2)	N/A.	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-109B	Elbow Longitudinal (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-110	16" Sch 20 Elbow to Pipe (Note 2)	SI-034-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-111	16" Sch 20 SS Pipe to Tee Branch (Note 2)	SI-034-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-112	Containment Penetration 26 to 16" Pipe (Note 2)	SI-194-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-113	16" Sch 20 SS Pipe to Tee (Note 2)	SI-194-S003-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-114	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-115	16" x 16" x 10" Sch 20 Tee to Pipe (Note 2)	SI-194-S003-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-116	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S003-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-117A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-117B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-118	16" Sch 20 Elbow to Pipe (Note 2)	SI-194-S003-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-118A	16" Sch 20 Pipe to Pipe (Note 2)	SI-194-S003-K	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-118B	16" Sch 20 Pipe to Pipe (Note 2)	SI-194-S003-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-119	16" Sch 20 SS Pipe to Elbow (Note 2)	SI-194-S003-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-120A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-120B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-121	16" Sch 20 Elbow to Pipe (Note 2)	SI-194-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-64 N/A
01-071-122	16" Sch 20 SS Pipe to 16" Sch 160 Pipe	SI-194-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-56/64 N/A
01-071-123	16" Sch 160 Pipe to Valve	SI-194-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-56 N/A
01-071-124	10" Tee Branch to Pipe (Note 2)	SI-368-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-125	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-368-S011-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-126A	Elbow Longitudinal Weld (Not Discernable Inspect the Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-127	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-S011-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-128	NOT USED					
01-071-129	NOT USED					
01-071-130	10" Sch 20 Pipe to Elbow (Note 2)	SI-368-S011-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-131	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-368-S012-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-132A	Elbow Longitudinal Weld (Not Discernable Inspect the Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-133	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-S012-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-134	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-368-S012-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-135A	Elbow Longitudinal Weld (Not Discernable Inspect the Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-136	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-S012-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-137	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-368-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-138A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-139	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-140	10" Sch 20 SS Pipe to Elbow (Note 2)	SI-368-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-141A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-142	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-S003-H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-143	10" Sch 20 SS Pipe to Reducer (Note 2)	SI-368-S003-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-144A	10" x 6" Sch 20 Reducer Longitudinal (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-145	Reducer to 6" 600# Flange (Note 2)	SI-368-S003-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-146	NOT USED					
01-071-147A	10" Sch 20 Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-148	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-S011-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-149	10" Sch 20 Pipe to Elbow (Note 2)	SI-368-S011-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-150A	10" Sch 20 Elbow Longitudinal (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-151	10" Sch 20 Elbow to Pipe (Note 2)	SI-368-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A
01-071-152	12" Sch 20 Sweepolet	SI-194-S007-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-62 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-153L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-154L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-155L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-156L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-157L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-158L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-159L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-160L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-161L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-162L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-163L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-164L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-165L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-166L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-167L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-168L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-169L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-170L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-171L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-172L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-173L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-174L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-175L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-176L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-177L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: ~~E-9678-501-038 Rev. 03~~

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-178L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-179L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-180L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-181L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	PT	525115-ESS-093	N/A
01-071-182L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-183L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-184L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-185L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-186L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-187L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-188L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-189L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-190L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-191L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-192L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-193L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-194L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-195L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-196L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-197L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-198L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-199L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-200L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-201L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-202L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-203L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 71 CLASS 2

DOCUMENT NO.: TR-ESS-069

PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-038 Rev. 03

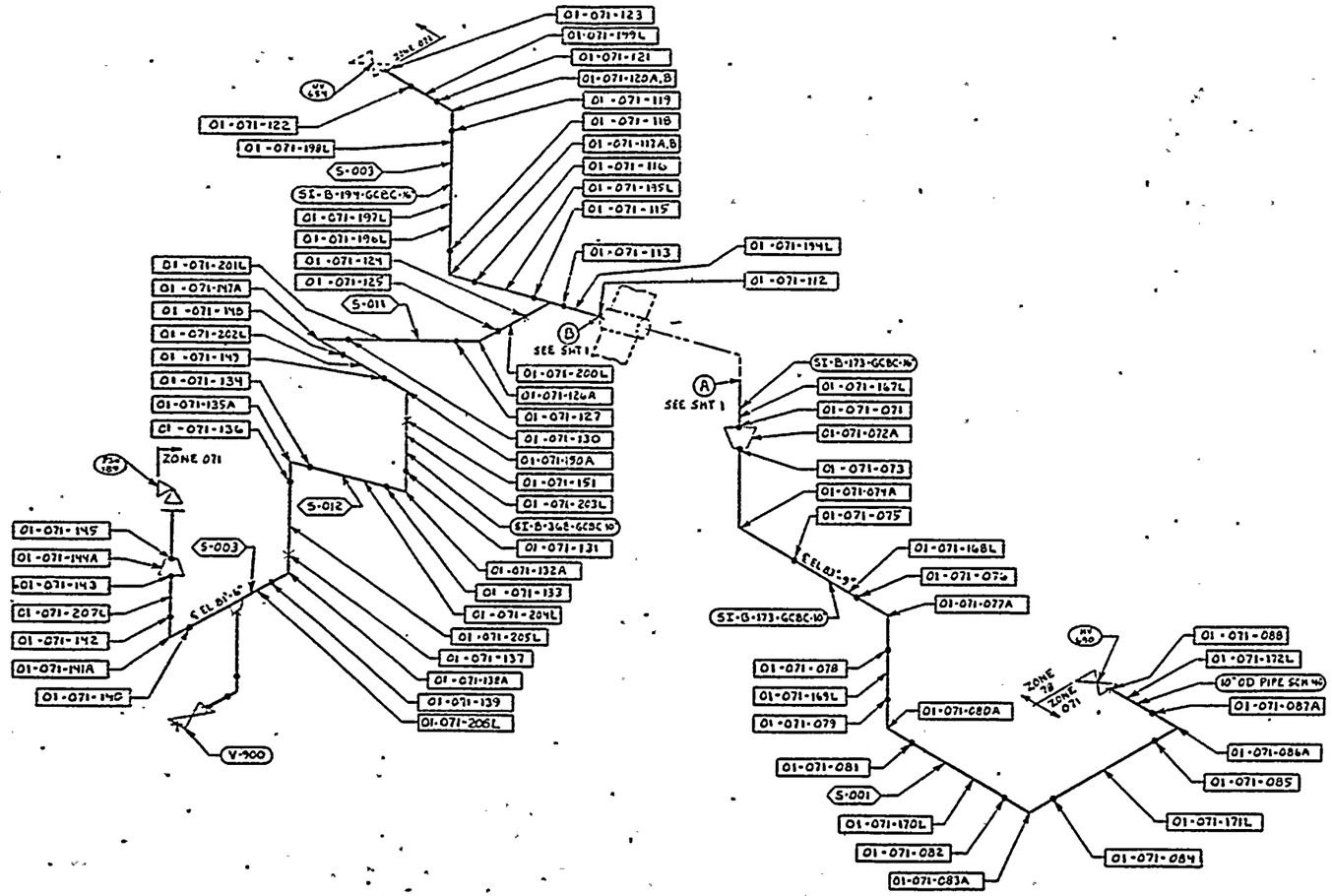
TITLE: SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-071-204L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-205L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-206L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-071-207L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



E-9678-501-038
SHEET 2 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 71

REV	DESCRIPTION				
3	SHEET 2 ADDED PER ALT REQ NO 9678-762				

POWER SYSTEMS

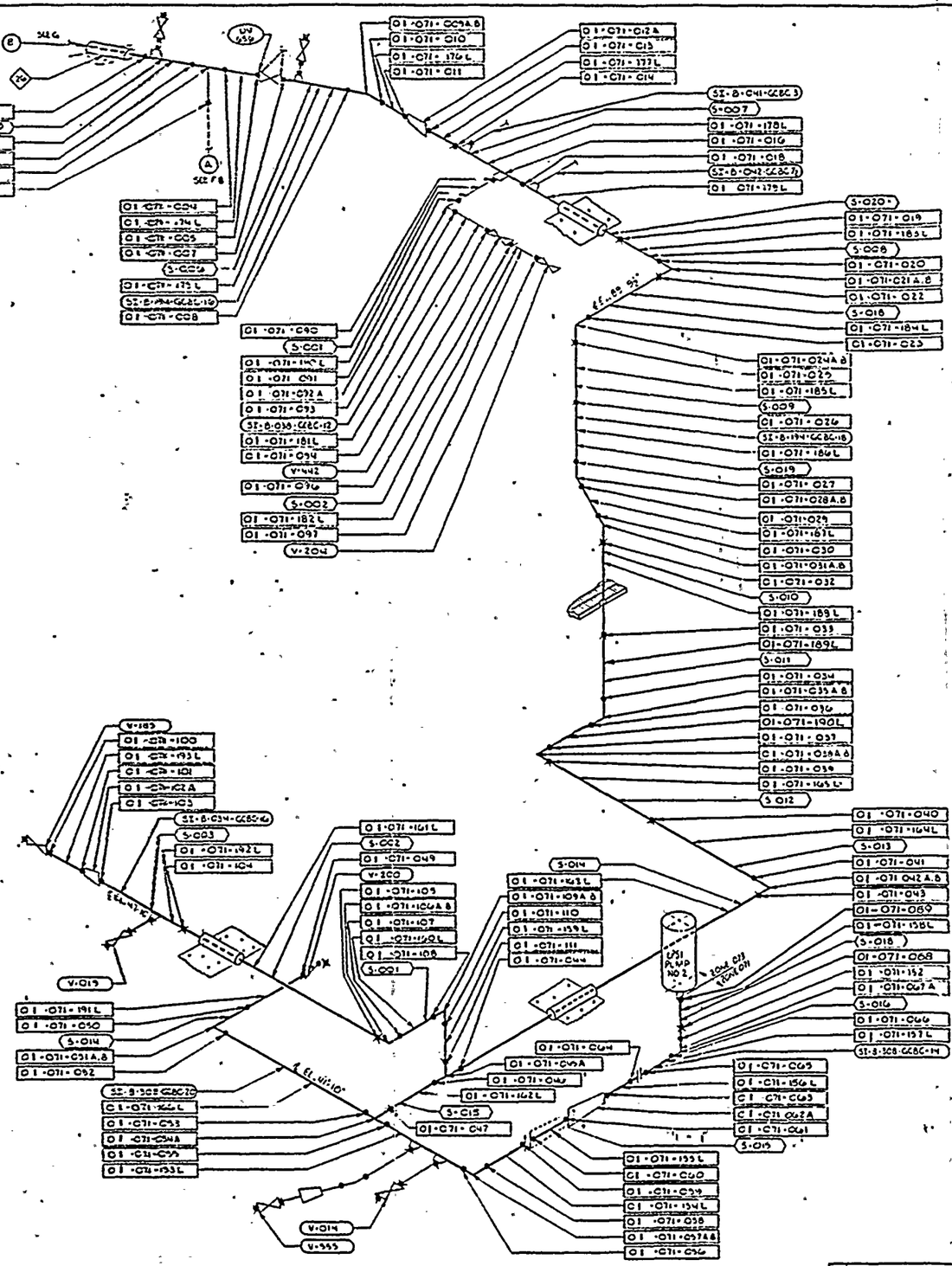
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION ZONE 71

E-9678-501-038 03

SCALE NONE

8 7 6 5 4 3 2 1



LEGEND

- SHOP WELD
- FIELD WELD
- LINE DESIGNATION
- SPOOL PIECE No
- VALVE DESIGNATION
- EXAMINATION AREA DESIGNATION
- PENETRATION No

ZONE 71 LINE & SIZE		SPOOL PIECE	DWG NO.
039	12"	S-001	E-3661 REV 0
		002	
039	16"-12"	001	E-3112 REV 0
		002	E-3113 REV 0
		003	E-3114 REV 0
173	16"-10"	S-001	E-515 REV 5
194	18"-16"	S-003	E-653 REV 0
		005	E-1425 REV 0
		006	E-3375 REV 0
		007	E-1424 REV 2
		008	E-3374 REV 0
		010	E-327 REV 1
		011	E-98 REV 2
		012	E-498 REV 2
		013	E-1424 REV 2
		014	E-1421 REV 1
		015	E-1424 REV 0
		018	E-962 REV 0
		019	E-448 REV 0
		020	
300	20"-14"	S-019	E-1694 REV 0
		015	E-1696 REV 0
		016	E-1693
368	10"	S-011	E-1936 REV 0
		012	E-1935 REV 0
		013	E-1937 REV 1
194	18"-16"	S-003	E-1363 REV 0
304	14"	S-016	E-310 REV 0

REFERENCE DRAWINGS

BECHTEL - 01-P SIF-105 REV 0 — SK-M-SIF-105 REV 3
13-P-SIF-101 REV 0 — SK-M-SIF-101 REV 1
13-P-SIF-202 REV 6 — SK-M-SIF-202 REV 7
13-P-SIF-206 REV 0 — SK-M-SIF-206 REV 6
PULLMAN-KELLOGG

E-9678-501-038
SHEET 1 OF 2 | 03

APPROVED
REFERENCE
DESIGN

UNIT 1 - ZONE 71

REV	DESCRIPTION	DATE	BY	CHK	APP
03	REVISED & RESUBMITTED PER UNIT #2 ASA REV REF E-9678-202	6-8-84			

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

SHUTDOWN COOLING LOOP 2 TO LPSI PUMP SUCTION
ZONE 71

E-9678-501-038 | 03

SCALE: NONE

8 7 6 5 4 3 2 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

REFERENCE DRAWING NO.: E-9678-501-044Rev. 03,D-9678-501-090Rev. 04 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-001	NOT USED					
01-072-002	NOT USED					
01-072-003-01 through 01-072-003-03	LPSI Pump #1 - Support Lugs	N/A	C-E-1	Surf.	525115-ESS-093	N/A
01-072-004-01 through 01-072-004-03	LPSI Pump #1 - Support Components	N/A	C-E-2	Vis.	525115-ESS-091	N/A
01-072-005	LPSI Pump Discharge Nozzle to 8" Pipe (Note 2)	SI-087-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-99 N/A
01-072-006	8" Sch 40s SS Pipe to Reducer (Note 2)	SI-087-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-99 N/A
01-072-007A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-008	10" x 8" Sch 40s SS Concentric Reducer to Pipe (Note 2)	SI-087-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-009	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-087-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-010A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-011	10" Sch 40s Elbow to Pipe (Note 2)	SI-087-S001-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-012	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-087-S001-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-013A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-014	10" Sch 40s Elbow to Pipe (Note 2)	SI-087-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04 TITLE: COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-015	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-087-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-016A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-017	10" Sch 40s Elbow to Pipe (Note 2)	SI-087-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-018	10" Sch 40s Pipe to Valve (Note 2)	SI-087-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-019	NOT USED					
01-072-020	Valve to 10" Sch 40s Pipe (Note 2)	SI-087-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-021	10" Sch 40s SS Pipe to Valve (Note 2)	SI-087-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX -- TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-022	NOT USED					
01-072-023	Valve to 10" Pipe (Note 2)	SI-087-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-024	10" Sch 40s SS Pipe to Tee (Note 2)	SI-087-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-025A	Tee Longitudinal Weld (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-026	10" x 10" x 10" Sch 40s Tee to Pipe (Note 2)	SI-087-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-027	10" Sch 40s Pipe to Valve (Note 2)	SI-087-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-028	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-029	10" Tee to Pipe (Note 2)	SI-078-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-030	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-078-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-031A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-032	10" Sch 40s Elbow to Pipe (Note 2)	SI-078-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-033	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-078-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-034A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-035	10" Sch 40s Elbow to Pipe (Note 2)	SI-078-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 72 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-036	10" Sch 40s Pipe to Elbow (Note 2)	SI-078-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-037A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-038	10" Sch 40S Elbow to Pipe (Note 2)	SI-078-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-039	10" Sch 40s SS Pipe to Valve (Note 2)	SI-078-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-040	NOT USED					
01-072-041	Valve to 10" Pipe (Note 2)	SI-078-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-042	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-078-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-043A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-044	10" Sch 40s Elbow to Pipe (Note 2)	SI-078-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-045	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-078-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-046A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-047	10" Sch 40s Elbow to Pipe (Note 2)	SI-078-S005-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-048	10" Sch 40s SS Pipe to 20" Pipe (Note 2)	SI-078-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-049	20" Welding Cap to Pipe (Note 2)	SI-078-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-049A	10" Sch 40s Sweepolet to 20" SS XS Pipe (Note 2)	SI-078-S006-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-072-049B	10" Sch 40s Sweepolet to 20" SS XS Pipe (Note 2)	SI-078-S006-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-072-050	20" SS XS Pipe to Elbow (Note 2)	SI-078-S006-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-072-051A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-072-051B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-072-052	20" SS XS Elbow to S/D HX Inlet (Note 2)	SI-078-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-072-053	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33658, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 72 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04 TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-054	Flange to 10" Pipe (Note 2)	SI-079-S009-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-055	10" Sch 40s SS Pipe to Elbow (Note 2)	SI-079-S009-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-056A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-057	10" Sch 40s Elbow to Pipe (Note 2)	SI-079-S009-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-058	10" Sch 40s Pipe to Elbow (Note 2)	SI-079-S009-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-059A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-060	10" Sch 40s Elbow to Pipe (Note 2)	SI-079-S009-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-061	10" Sch 40s SS Pipe to 20" Pipe (Note 2)	SI-079-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-072-062L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-063L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-064L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-065L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-066L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-067L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-068L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 72 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-069L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-070L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-071L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-072L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-073L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-074L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-075L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-076L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-072-077L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 72 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN A

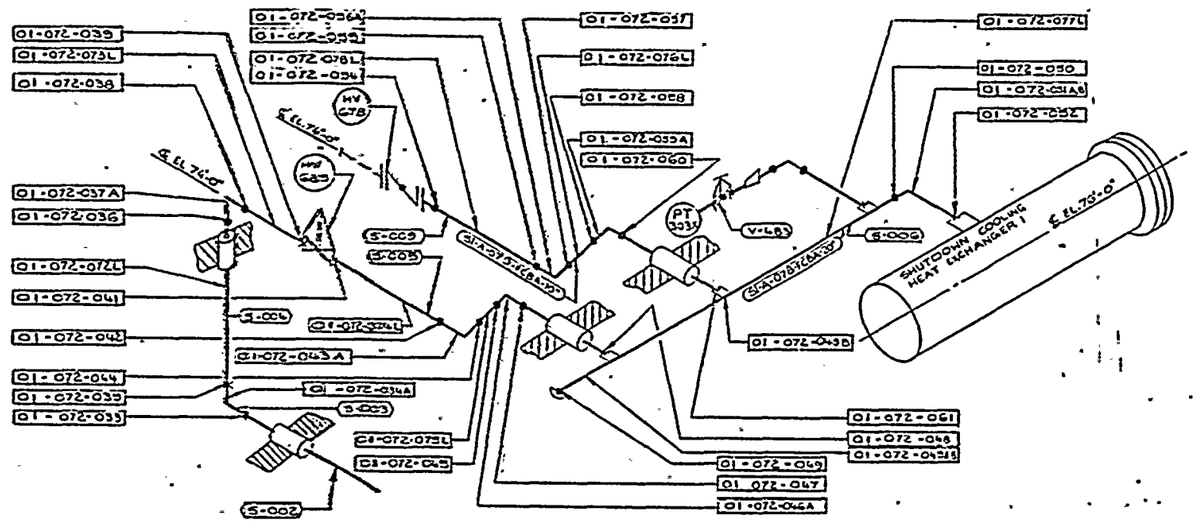
REFERENCE DRAWING NO.: E-9678-501-044 Rev. 03, D-9678-501-090 Rev. 04 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-072-078L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

● ——— SHOP WELD

X ——— FIELD WELD

(01-A-087-FC8A-10") ——— LINE DESIGNATION

(S-001) ——— SPOOL PC No

(V-435) ——— VALVE DESIGNATION

(HV 685)

(01-072-016) ——— EXAMINATION AREA DESIGNATION

REFERENCE DRAWINGS.

BECHTEL DRWG No 13-P-SIF-207

PULLMAN - KELLOGG :

ZONE 72 LINE & SIZE	SPOOL PIECE		
078 20", 10"	S-006	F-430	REV 1
	S-001	F-159	REV 0
	S-002	F-5017	REV 0
	S-003	F-426	REV 0
	S-004	F-158	REV 1
	S-005	F-457	REV 1
079, 10"	S-006	F-423	REV 3
087 10"	S-001	F-3012	REV 0
	S-002	F-183	REV 0
	S-003	F-134	REV 0
	S-004	F-195	REV 0

E-9678-501-044

SHT 1 OF 2 00

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 72

REV	DESCRIPTION	DRAWN	CHECKED	APPROVED	DATE
03	1- REVISED & REDRAWN 2- ADDED SHT 2 PER REV REQ # 9678-262				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

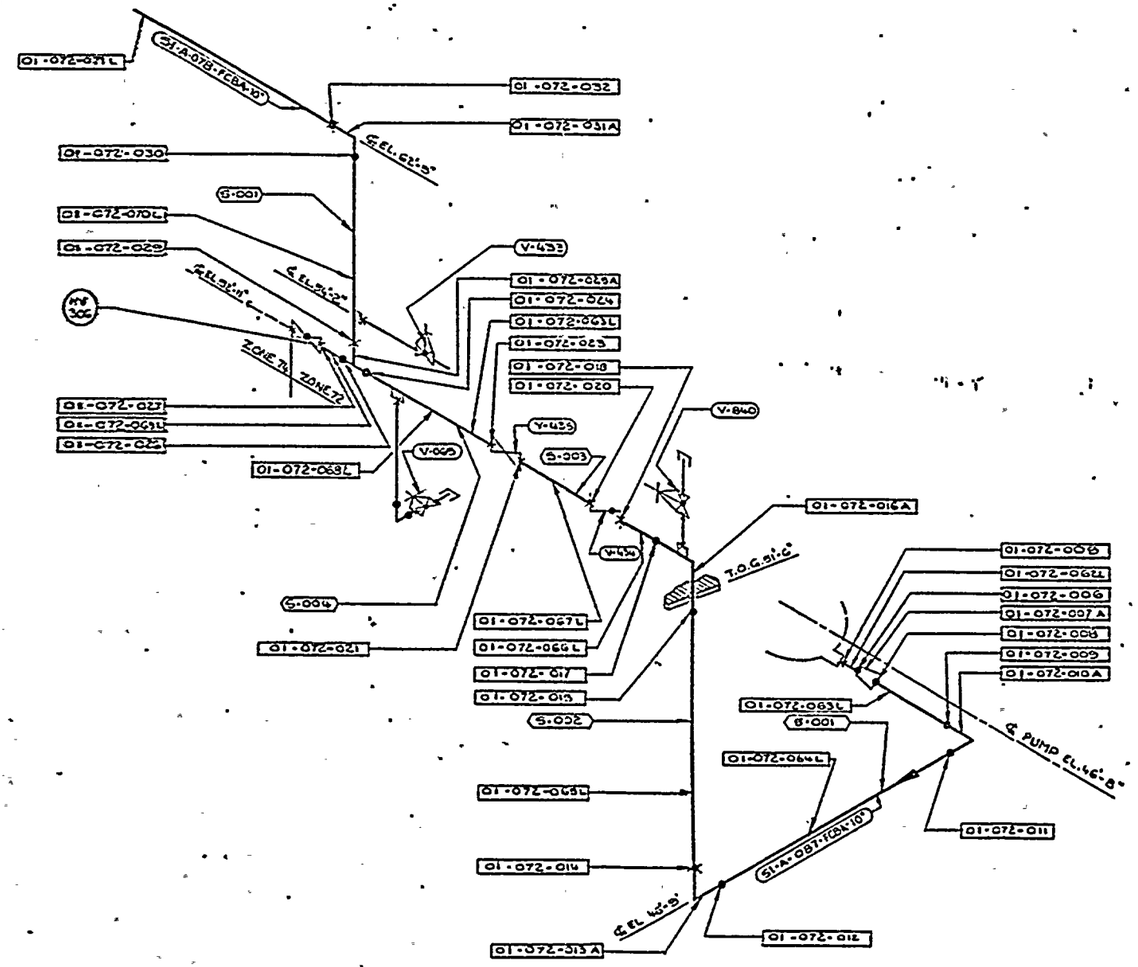
ZONE 72 LPSI PUMP DISH TO SDCHX TRAIN A

E-9678-501-044 03

SCALE NONE

8 7 6 5 4 3 2 1

I C B A



E-9678-501-044
SHT 2 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 72

REV	DESCRIPTION	DRAWN	CHECKED	APPROVED	DATE
03	1-THIS SHEET ADDED PER REV REQ# 9678-262				

POWER SYSTEMS

ZONE 72 LPSI PUMP DISH TO SDCHX TRAIN A

E-9678-501-044 03

NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-001	NOT USED					
01-073-002	NOT USED					
01-073-003-1 through 01-073-003-3	LPSI Pump #2 - Support Lugs	N/A	C-E-1	Surf.	525115-ESS-093	N/A
01-073-004-1 through 01-073-004-3	LPSI Pump #2 - Support Components	N/A	C-E-2	Vis.	525115-ESS-091	N/A
01-073-005	LPSI Pumpe #2 Discharge Nozzle to 8" Pipe (Note 2)	SI-129-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-99 N/A
01-073-006	8" Sch 40S SS Pipe to 8" x 10" ECC Reducer (Note 2)	SI-192-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-99 N/A
01-073-007	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 73 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-008	8" x 10" ECC Reducer to 10" Pipe (Note 2)	SI-129-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-009	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-129-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-010A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-011	10" Sch 40S Elbow to Pipe (Note 2)	SI-129-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-012	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-129-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-013A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-014	10" Sch 40S Elbow to Pipe (Note 2)	SI-129-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 73 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-015	10" Sch 40S SS Pipe to Valve (Note 2)	SI-129-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-016	NOT USED					
01-073-017	Valve to Pipe (Note 2)	SI-129-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-018	NOT USED					
01-073-019	10" Sch 40S SS Pipe to Valve (Note 2)	SI-129-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-020	NOT USED					
01-073-021	Valve to Pipe (Note 2)	SI-129-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04, E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-021A	10" Sch 40S Pipe to 10" Sch 40S Pipe (Note 2)	SI-129-FW301	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-022	10" Sch 40S Pipe to Tee (Note 2)	SI-129-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-023A	Tee Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-024	10" Sch 40S Tee to Pipe (Note 2)	SI-129-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-025	10" Sch 40S SS Pipe to Valve (Note 2)	SI-129-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-026	10" Sch 40S Tee Branch to Pipe (Note 2)	SI-123-W001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-027	10" Sch 40S Tee Branch to Pipe (Note 2)	SI-123-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-028	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-123-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-029A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-030	10" Sch 40S Elbow to Pipe (Note 2)	SI-123-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-031	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-123-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-032A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-033	10" Sch 40S Elbow to Pipe (Note 2)	SI-123-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-034	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-123-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04, E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-035A	Elbow Longitudinal Weld (Not Discernable Examine Whole Elbow) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-036	10" Sch 40S Elbow (Note 2)	SI-123-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-037	10" Sch 40S SS Pipe to Valve (Note 2)	SI-123-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-038	NOT USED					
01-073-039	Valve to Pipe (Note 2)	SI-123-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-040	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-123-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-041A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-810

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-042	10" Sch 40S Elbow to Pipe (Note 2)	SI-123-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-043	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-123-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-044A	Elbow Longitudinal Weld	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-045	10" Sch 40S Elbow to Pipe (Note 2)	SI-123-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-045A	10" Sch 40S Pipe to Pipe (Note 2)	SI-123-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-046	10" Sch 40S SS Pipe to Branch Fitting (Note 2)	SI-123-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-047	Branch Fitting to 20" Pipe (Note 2)	SI-123-S007-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-048	Welding Cap to 20" XS SS Pipe (Note 2)	SI-123-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-049	20" XS SS Pipe to Elbow (Note 2)	SI-123-S007-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-050A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-050B	Elbow Longitudinal Weld (Inner Radius)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-051	20" XS SS Elbow to Pipe (Note 2)	SI-123-S007-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-052	20" XS SS Pipe to Elbow (Note 2)	SI-123-S007-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-053A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04, E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-053B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-054	20" XS SS Elbow to S/D Cooling HX Inlet (Note 2)	SI-123-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-055	NOT USED					
01-073-056	Flange to Pipe (Note 2)	SI-119-S009-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-057	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-119-S009-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-058A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-059	10" Sch 40S Elbow to Pipe (Note 2)	SI-119-S009-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04, E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-060	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-119-S009-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-061A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-062	10" Sch 40S Elbow to Pipe (Note 2)	SI-119-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-063	10" Sch 40S SS Pipe to Branch Fitting (Note 2)	SI-119-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-073-064	Branch Fitting to 20" XS SS Pipe (Note 2)	SI-123-S007-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-073-065L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-066L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04, E-9678-501-084Rev. 03

TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-067L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-068L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-069L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-070L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-071L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-072L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-073L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-074L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-075L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 73 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-089Rev. 04,E-9678-501-084Rev. 03

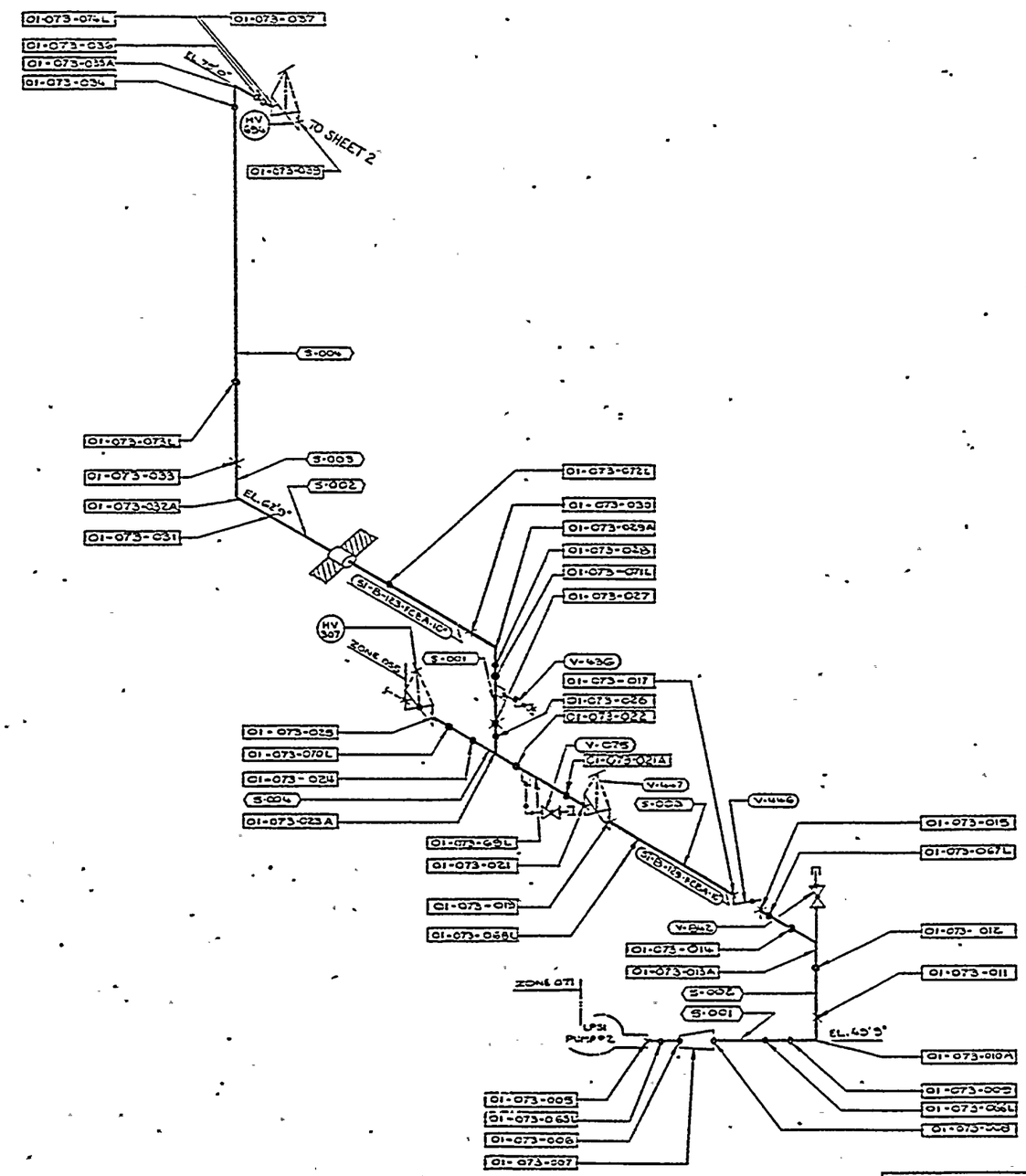
TITLE: LPSI PUMP DISCHARGE TO S/D COOLING HX - TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-073-076L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-077L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-078L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-079L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-080L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-081L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-073-082L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

● —— SHOP WELD

X —— FIELD WELD

(S1-B-123-FCBA-20") — LINE DESIGNATION

(S-006) —— SPOOL PC No

(V-446) — VALVE DESIGNATION

(HV 675)

(01-073-XXX) —— EXAMINATION AREA DESIGNATION

REFERENCE DRAWINGS

BECHTEL : 13-P-SIF-208 REV.6

PULLMAN-KELLOGG :

ZONE 73 LINE & SIZE		SPOOL PIECE
115	10"	S-000 1A-431 REV2
		S-010 1A-203 REV0
123	10"	S-001 1A-233 REV3
		S-002 1A-2019 REV0
		S-003 1A-228 REV0
		S-004 1A-225 REV1
		S-005 1A-627 REV1
		S-006 1A-937A REV2
		S-007 1A-944 REV3
125	10"	S-001 1A-361 REV0
		S-002 1A-381 REV0
		S-003 1A-382 REV0
		S-004 1A-384 REV1

E-9678-501-084

SHT 1 OF 2

APPROVED
REFERENCE
DESIGN

UNIT1 ZONE 73

REV	DESCRIPTION	DATE	BY	CHK	APP
V	ADDED PER REV REQ 9678-142				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

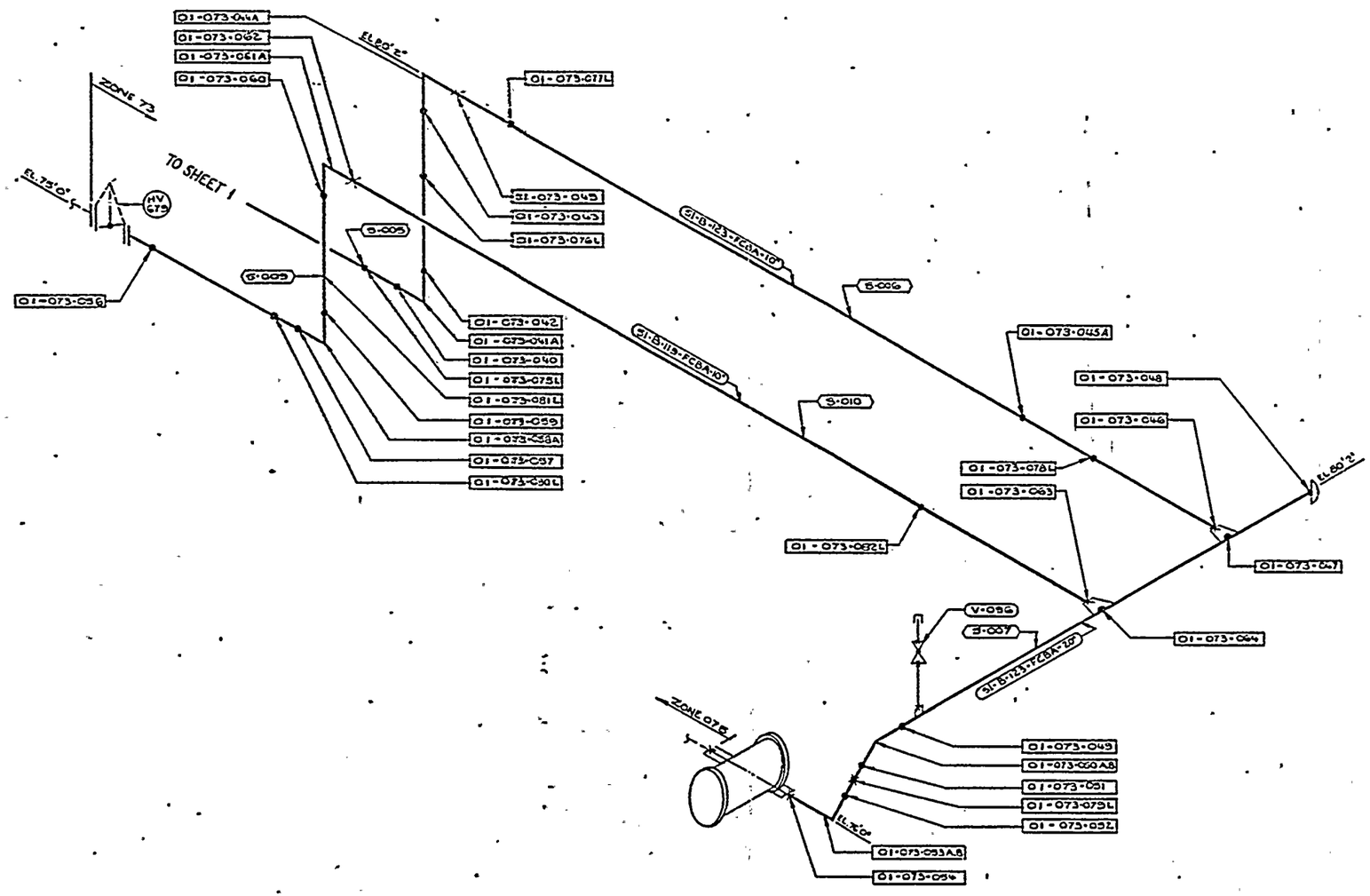
LPSI PUMP DISCHARGE TO SDCHX TRAIN B ZONE 73

E-9678-501-083

SCALE NONE

8 7 6 5 4 3 2 1

H G F E D C B A



E-9678-501-084
SHT 2 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT

ZONE 73

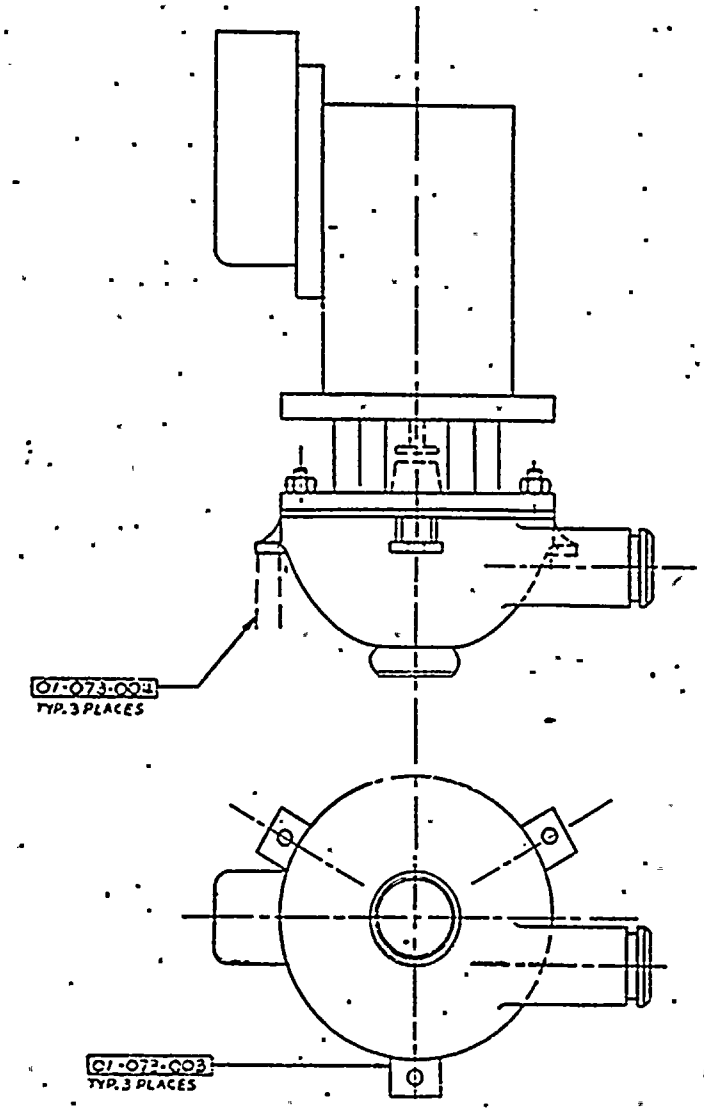
03	THIS SHT ADDED PER REV ARD 9678-262		

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

LPSI PUMP DISCHARGE TO SDCHX TRAIN B ZONE 73

E-9678-501-084 03

SCALE NONE



REFERENCE DRAWINGS
INGERSOL-RAND
C-8X20WDF86 X22A

D-9678-501-089

APPROVED
REFERENCE
DESIGN

UNIT. 1 ZONE 73

NO.	DESCRIPTION				NO.	DESCRIPTION				
03	1-GENERALLY REVISED PER REV REQ # 9678-202				05	CERTIFIED FOR APPROVED REF DESIGN PER REV REQ 9678-356				
					04	1-OK WAS 01 2-ADDED NOTE PER REV. REQ. No. 417				
					02	DRAWING WAS C-8X20WDF500X256 PER REV. REQ. 9678-503				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

ZONE 73
LPSI PUMP #2

D-9678-501-039 04

8 7 6 5 4 3 2 1

H G F E D C B A

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-001	S/D HX Outlet Nozzle to Elbow (Note 2)	SI-070-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-002A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-002B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-003	20" XS SS Elbow to Pipe (Note 2)	SI-070-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-004	20" XS SS Pipe to Elbow (Note 2)	SI-070-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-005A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-005B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-006	20" XS SS Elbow to Pipe (Note 2)	SI-070-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-007	20" XS SS Pipe to Elbow (Note 2)	SI-070-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-008A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-008B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-009	20" XS SS Elbow to Pipe (Note 2)	SI-070-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-010	20" XS SS Pipe to Elbow (Note 2)	SI-070-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-011A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-011B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-012	20" XS SS Elbow to Pipe (Note 2)	SI-070-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-013	20" XS SS Pipe to Valve (Note 2)	SI-070-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-014	NOT USED					
01-074-015	Valve to Pipe (Note 2)	SI-070-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-016	20" XS SS Pipe to Elbow (Note 2)	SI-070-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-017A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-017B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-018	20" XS SS Elbow to Pipe (Note 2)	SI-070-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-019	20" XS SS Pipe to Reducer (Note 2)	SI-070-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-020A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-021	20" x 16" XS SS Reducer to 16" Pipe (Note 2)	SI-070-S005-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-10 N/A
01-074-022	16" Sch 40 Pipe to Welding Flange (Note 2)	SI-070-S005-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-10 N/A
01-074-023	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-024	Flange to Pipe (Note 2)	SI-070-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-101 N/A
01-074-025	16" Sch 40 Pipe to Reducer (Note 2)	SI-070-S006-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-101 N/A
01-074-026A	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-027	20" x 16" ECC Reducer to 20" XS SS Pipe (Note 2)	SI-070-S006-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-028	20" XS SS Pipe to Elbow (Note 2)	SI-070-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-029A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-029B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: ~~E-9678-501-082Rev. 03~~,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-030	20" XS Elbow to Pipe (Note 2)	SI-070-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-031	20" XS SS Pipe to Pipe (Note (1) & 2)	SI-070-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-032	20" XS SS Pipe to Elbow (Note 2)	SI-070-S008-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-033A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-033B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-034	20" XS Elbow to Pipe (Note 2)	SI-070-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-034A	20" XS Pipe to Pipe (Note 2)	SI-079-S009-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-035	20" XS SS Pipe to Elbow (Note 2)	SI-070-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-036A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-036B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-037	20" XS Elbow to Pipe (Note 2)	SI-070-S010-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-038	20" XS SS Pipe to Elbow (Note 2)	SI-070-S010-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-039A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-039B	Elbow Longitudinal Weld (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-040	20" XS Elbow to Pipe (Note 2)	SI-070-S010-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-041	20" XS Pipe to Pipe (Note 2)	SI-070-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-042	20" XS SS Pipe to Flange (Note 2)	SI-070-S011-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-043	Flange to Pipe (Note 2)	SI-070-S012-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-044	20" XS SS Pipe to Reducer (Note 2)	SI-070-S012-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-045	Valve (HV-306) to Pipe (Note 2)	SI-087-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-045A	10" Sch 40S SS Pipe to Pipe (Note 2)	SI-087-W303	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-046	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-047A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-048	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-049	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-050A	Elbow Longitudinal Weld (Not Discernable Examine Entire Circumference) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-051	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-S005-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-052	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S005-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-053A	Elbow Longitudinal Weld (Not Discernable Examine Entire Circumference) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-054	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-S005-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-055	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S005-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-056A	Elbow Longitudinal Weld (Not Discernable Examine Entire Circumference) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-057	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-058	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-059A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-060	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-061	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-062A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-063	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-064	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S008-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-065A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-066	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-S008-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-067	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S008-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-068A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-069	10" Sch 40S Elbow (Note 2)	SI-087-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-070	10" Sch 40S SS Pipe to Pipe (Note (1) & 2)	SI-087-W013	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-071	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-087-S010-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-072A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-073	10" Sch 40S Elbow to Pipe (Note 2)	SI-087-S010-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-074	10" Sch 40S Pipe to Branch Fitting (Note 2)	SI-087-W014	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-075	Branch Fitting to 20" Pipe (Note 2)	SI-070-S006-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-076	Branch Fitting to 20" Pipe (Note 2)	SI-070-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-077	Branch Fitting to 10" Pipe (Note 2)	SI-089-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-078	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-089-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-079A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-079-080	10" Sch 40S Elbow to Pipe (Note 2)	SI-089-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03, D-9678-501-108Rev. 03

TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-081	10" Sch 40S Pipe to Elbow (Note 2)	SI-089-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-082A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-083	10" Sch 40S Elbow to Pipe (Note 2)	SI-089-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-084	10" Sch 40S SS Pipe to Elbow (Note 2)	SI-089-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-085A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-086	10" Sch 40S Elbow to Pipe (Note 2)	SI-089-S002-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-074-087	10" Sch 40S SS Pipe to Valve (Note 2)	SI-089-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-088	NOT USED					
01-074-089	NOT USED					
01-074-090	NOT USED					
01-074-091	NOT USED					
01-074-092	NOT USED					
01-074-093	NOT USED					
01-074-094	NOT USED					
01-074-095	NOT USED					
01-074-096	Branch Fitting to 20" XS Pipe (Note 2)	SI-070-S005-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-097	Branch Fitting to 6" Sch 40S Pipe (Note 2)	SI-131-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-074-098	6" Sch 40S SS Pipe to Elbow (Note 2)	SI-131-S028-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-074-099	6" Sch 40S Elbow to Pipe (Note 2)	SI-131-S028-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-074-100	6" Sch 40S SS Pipe to Valve (Note 2)	SI-131-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-074-101	NOT USED					
01-074-102	Branch Fitting to 20" XS Pipe (Note 2)	SI-070-S012-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-103	Branch Fitting to 12" Sch 40S SS Pipe (Note 2)	SI-071-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

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C-E 0090287 (Rev. 7/80)

ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-104	12" Sch 40S SS Pipe to Flange (Note 2)	SI-071-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-074-104A	Branch Fitting to 20" Pipe (Note 2)	SI-070-S005-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-074-105	Branch Fitting to 14" Pipe (Note 2)	SI-090-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-106	14" Sch 30 Pipe to Elbow (Note 2)	SI-090-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-107A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-108	14" Sch 30 Elbow to Pipe (Note 2)	SI-090-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-109	14" Sch 30 Pipe to Elbow (Note 2)	SI-090-S001-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-110A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-111	14" Sch 30 Elbow to Pipe (Note 2)	SI-090-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-112	14" Sch 30 Pipe to Elbow (Note 2)	SI-090-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-113A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-114	14" Sch 30 Elbow to Pipe (Note 2)	SI-090-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-115	14" Sch 30 Pipe to Elbow (Note 2)	SI-090-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-116A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-117	14" Sch 30 Elbow to Pipe (Note 2)	SI-090-S002-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-118	14" Sch 30 Pipe to Valve 458 (Note 2)	SI-090-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-074-119	NOT USED					
01-074-120	NOT USED					
01-074-121	Nozzle to Shell Weld	2742	C-B	UT	NIP-944	UT-87
01-074-122	Nozzle to Shell Weld	2741	C-B	UT	NIP-944	UT-87
01-074-123	Flange to Primary Waterbox Shell Weld	2701	C-A	UT	NIP-944	UT-87
01-074-124	Tube Sheet to Primary Waterbox Shell Weld	2702	C-A	UT	NIP-944	UT-87

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

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C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-125	SDCHX Integrally Welded Support	2803	C-C	Surf.	525115-ESS-093	N/A
01-074-126	SDHX Support (Class 3)		IWD 2600 (C)	Vis.	525115-ESS-091	N/A
01-074-127	SDHX Support (Class 3)		IWD 2600 (C)	Vis.	525115-ESS-091	N/A
01-074-128L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-129L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-130L	Longitudinal Seam (Weld Not Discernable Examine Entire Circumference)	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-131L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-132L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-133L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-134L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-135L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-136L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-137L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-138L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-139L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-140L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-141L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-142L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-143L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-144L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-145L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-146L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-147L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-148L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 74 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

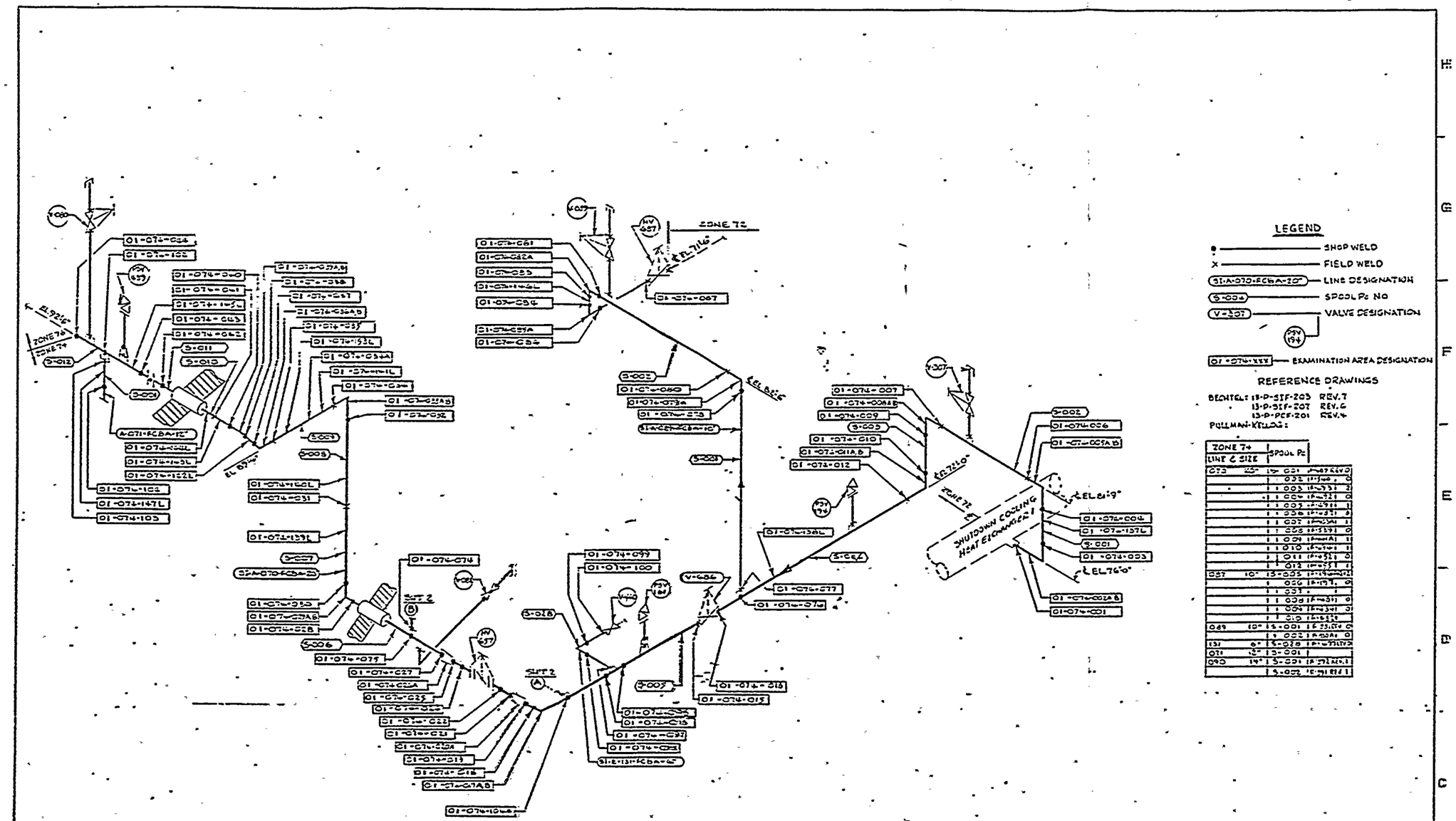
REFERENCE DRAWING NO.: E-9678-501-082Rev. 03,D-9678-501-108Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 1

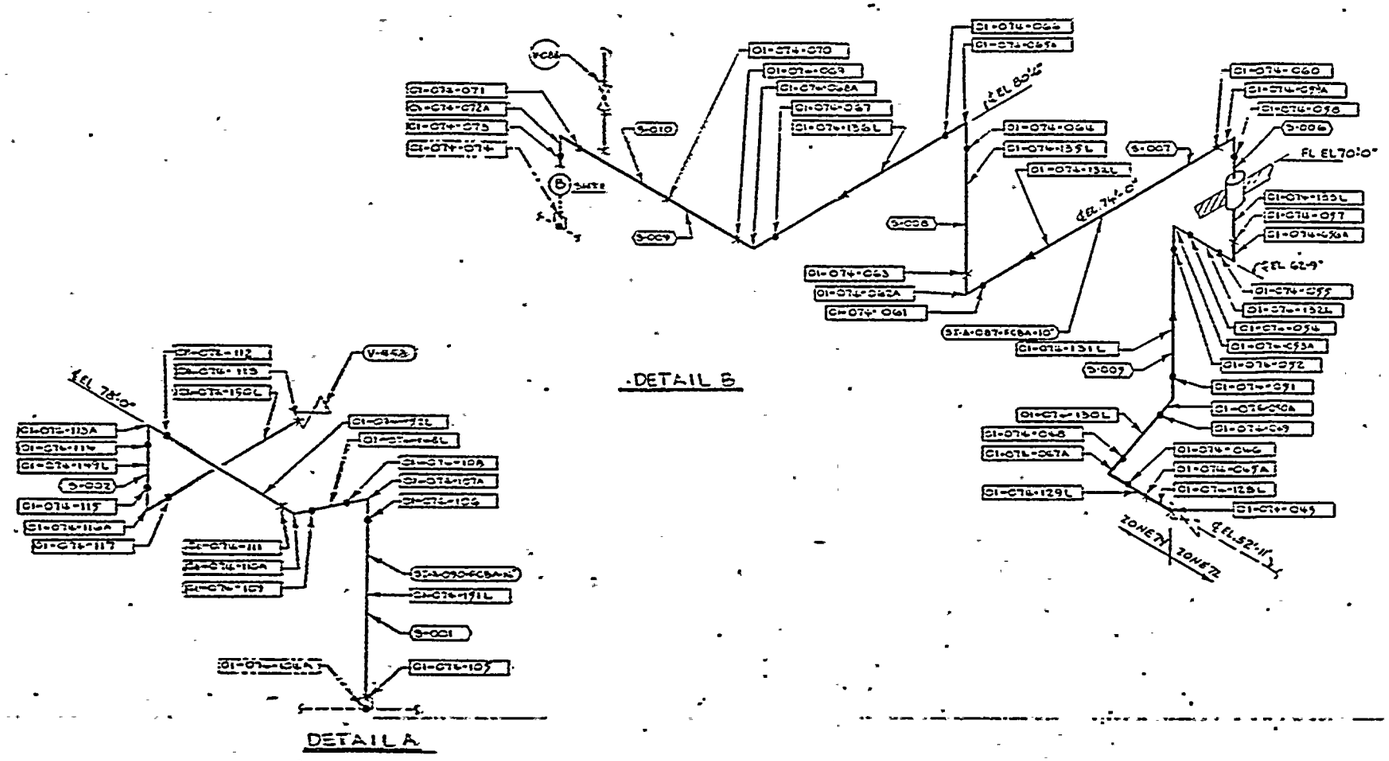
AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-074-149L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-150L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-151L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-152L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-074-153L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


ZONE 72
SHUTDOWN COOLING HEAT EXCHANGER
SHT 2
LEGEND
SHOP WELD
FIELD WELD
LINE DESIGNATION
SPOOL PC NO
VALVE DESIGNATION
EXAMINATION AREA DESIGNATION
REFERENCE DRAWINGS
BECHTEL: 13-P-SIF-203 REV. 7
13-P-SIF-207 REV. 6
13-P-PCF-201 REV. 4
PULLMAN-KELLOGG:
ZONE 74
LINE & SIZE
SPOOL PC
E-9678-501-082
SHT 1 OF 2
APPROVED
REFERENCE
DESIGN
UNIT 1 ZONE 74
POWER SYSTEMS
ZONE 74 SDCHX OUTLET TO LSPI HDR LOOP 1
E-9678-501-082



E-9678-501-082
SHT 2 of 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 74

REV	DESCRIPTION	DATE	APPR
03	THIS SHEET ADDED PER REV REQ. 9678-122		

POWER SYSTEMS

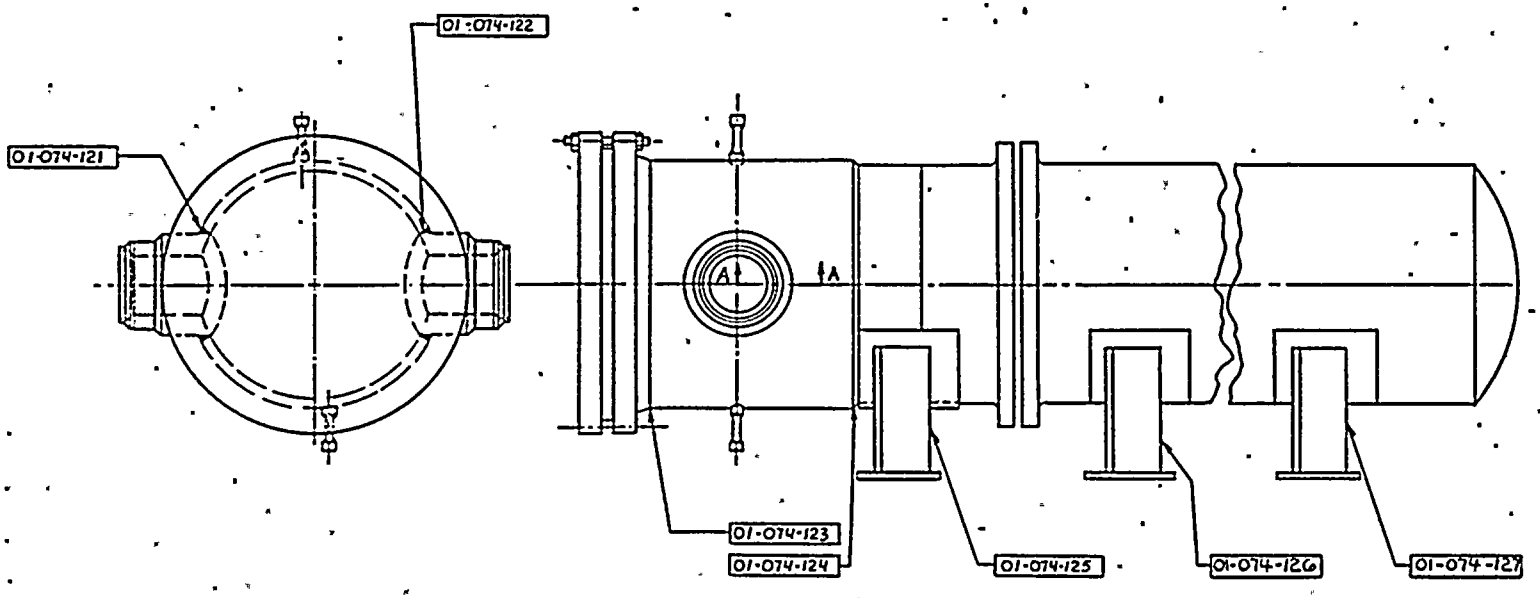
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

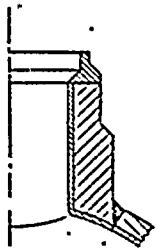
ZONE 74 SDCHX OUTLET TO LPSI HDR-LOOP 1

E-9678-501-082 03

SCALE NONE

8 7 6 5 4 3 2 1





SECTION A-A

LEGEND

01-074-121 — EXAMINATION AREA

REFERENCE DRAWINGS

ENGINEERS AND FABRICATORS, CO.
CD-18344
D-18342 REV. C

D-9678-501-108
03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 74

REV	DESCRIPTION
1	FORMALLY REVISED PER REV REQ. # 9678-262

REV	DESCRIPTION
03	UPGRADE TO APPROVED REF DESIGN PER REV. REQ. No 9678-258
02	DELETED EXAM. AREA DES. 01-074-119 & 120 PER REV. REQ 9678-503

POWER SYSTEMS
CONSTRUCTION ENGINEERING INC
NUCLEAR POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

ZONE 74 SHUTDOWN COOLING HEAT EXCHANGER #1 PRIMARY WATER BOX

D-9678-501-108 | 03

SCALE NONE

8 7 6 5 4 3 2 1

H G F E D C B A

'ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-001	S/D Cooling HX Outlet Nozzle to 20" XS (.5" Wall) Pipe (Note 2)	SI-072-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-002	20" Sch 30 XS SS Pipe to 20" XS LR 90 Degree Ell (Note 2)	SI-072-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-003A	20" XS LR 90 Degree Ell (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-003B	20" XS LR 90 Degree Ell (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-004	20" XS LR 90 Degree Ell to 20" XS Pipe (Note 2)	SI-072-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-005	20" XS SS Pipe to 20" XS LR 45 Degree Ell (Note 2)	SI-072-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-006A	20" XS LR 45 Degree Ell (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-006B	20" XS LR 45 Degree Ell (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-007	20" XS LR 45 Degree Ell to 20" XS Pipe (Note 2)	SI-072-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-008	20" XS Pipe to 10" Sch 40 S-O-L (Note 2)	SI-072-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-009	20" XS SS Pipe to Valve HV-696 (Note 2)	SI-072-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-010	NOT USED					
01-075-011	Valve HV-696 to 20" x .5 WL Welded Pipe (Note 2)	SI-072-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-012	20" XS SS Pipe to 6" Sch 40 S-O-L (Note 2)	SI-072-S003-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-013	20" XS SS Pipe to 14" Std S-O-L (Note 2)	SI-072-S003-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-014	20" XS SS Pipe to 20" XS SR 90 Degree Ell (Note 2)	SI-072-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-015A	20" XS SR 90 Degree Ell (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-015B	20" XS SR 90 Degree Ell (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-016	20" XS SR 90 Degree Ell to 20" OD x .50 WL Welded (Note 2)	SI-072-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-017	20" XS SS Pipe to 20" XS x 16" Std Wt Eccentric Reducer (Note 2)	SI-072-S003-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-018	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

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N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-019	20" x 16" Eccentric Reducer to 16" OD x .375" WL Welded (Note 2)	SI-072-S003-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-101 N/A
01-075-020	16" OD x .375" WL Pipe to 16" 400# RF WN Flange (Note 2)	SI-072-S003-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-101 N/A
01-075-021	NOT USED					
01-075-022	16" 400# RF WN Flange to 16" x .375" Wall Pipe (Note 2)	SI-072-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-101 N/A
01-075-023	16" Std Wt (.375 WL) Pipe to 20" XS x 16" Std Wt Eccentric Reducer (Note 2)	SI-072-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-101 N/A
01-075-024	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-025	20" XS x 16" Std Eccentric Reducer to 20" XS Pipe (Note 2)	SI-072-S004-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-026	20" XS SS Pipe to 10" Sch 40 on 20" XS Sweepolet (Note 2)	SI-072-S004-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-027	20" XS SS Pipe to 20" XS LR 90 Degree Ell (Note 2)	SI-072-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-028A	20" XS LR 90 Degree Ell (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-028B	20" XS LR 90 Degree Ell (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-029	20" XS LR 90Degree Ell 20" XS Pipe (Note 2)	SI-072-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-030	20" XS SS Pipe to 20"XS Pipe (Note (1) and 2)	SI-072-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-031	20" XS SS Pipe to 20" XS LR 90 Degree Ell (Note 2)	SI-072-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-032A	20" XS LR 90 Degree Ell (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-032B	20" XS LR 90 Degree Ell (Inner Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-033	20" XS LR 90 Degree Ell to 20" XS Pipe (Note 2)	SI-072-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-034	20" XS SS Pipe to 20" XS Pipe (Note (1) and 2)	SI-072-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-034A	Support Assembly to 20" XS Pipe	SI-072-S008-C	C-E-1	Surf.	525115-ESS-093	N/A
01-075-035	20" XS SS Pipe to 20" 400# RF WV Orif Flange (Note 2)	SI-072-S008-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-036	20" 400# RF WN Orifice Flange to 20" XS Pipe (Note 2)	SI-072-S009-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-036A	Support Assembly to 20" XS Pipe (Note 2)	SI-072-S009-H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-037	20" XS SS Pipe to 12" Sch 40 Sweepolet	SI-072-S009-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-038	20" XS SS Pipe to 20" XS x 12" Sch 40 Eccentric Reducer (Note 2)	SI-072-S009-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-075-039	Valve HV-307 to 10" Sch 40 Pipe (Note 2)	SI-129-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-039A	Support Assembly to 10" Sch 40 Pipe	SI-129-S005-W-1	C-E-1	Surf.	525115-ESS-093	N/A
01-075-039B	Support Assembly to 10" Sch 40 Pipe	SI-129-S005-W-2	C-E-1	Surf.	525115-ESS-093	N/A
01-075-040	10" Sch 40 Pipe to 10" Sch 40 LR 90 Degree Ell (Note 2)	SI-129-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 2-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-041A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-042	10" Sch 40S LR 90 Degree Ell to 10" Sch 40 Pipe (Note 2)	SI-129-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-043	10" Sch 40S Pipe to 10" Sch 40 LR 45 Degree Ell (Note 2)	SI-129-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-044A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-045	10" Sch 40S LR 45 Degree Ell to 10" Sch 40 Pipe (Note 2)	SI-129-S005-P	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-046	10" Sch 40S Pipe to 10" Sch 40 LR 90 Degree Ell (Note 2)	SI-129-S005-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-047A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-048	10" Sch 40S LR 90 Degree Ell to 10" Sch 40 Pipe (Note 2)	SI-129-S005-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-049	10" Sch 40S Pipe to 10" Sch 40 LR 90 Degree Ell (Note 2)	SI-129-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-050A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-051	10" Sch 40S LR 90 Degree Ell to 10" Sch 40 Pipe (.375 Wall) (Note 2)	SI-129-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-052	Support Assembly to 10" Sch 40 Pipe	SI-129-S006-C	C-E-1	Surf.	525115-ESS-093	N/A
01-075-053	10" Sch 40 Pipe to 10" Subassembly (Note 2)	SI-129-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-053A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-054	10" Sch 40S Subassembly to 10" Sch 40 Pipe (Note 2)	SI-129-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-055	10" Sch 40S Pipe to 10" Sch 40S LR 90 Degree Elbow (Note 2)	SI-129-S007-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-056	10" Sch 40S Pipe to 10" Subassembly	SI-129-W011	C-E-1	Surf.	525115-ESS-093	N/A
01-075-056A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-057	Support Assembly to 10" Sch 40 Pipe	SI-129-S007-D	C-E-1	Surf.	525115-ESS-093	N/A
01-075-057A	Support Assembly to 10" Sch 40 Pipe	SI-129-FW003	C-E-1	Surf.	525115-ESS-093	N/A
01-075-058	10" Sch 40S Pipe to 10" Subassembly (Note 2)	SI-129-W014	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for [illegible] metric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-059A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-060	10" Sch 40S LR 90 Degree Elbow to 10" Sch 40 Pipe (Note 2)	SI-129-S010-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-061	10" Sch 40S Pipe to 10" Sch 40 Sweepolet on 20" XS Pipe (Note 2)	SI-129-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-062	10" Sch 40 on 20" Sweepolet to 10" Sch 40 Pipe (Note 2)	SI-134-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-063	10" Sch 40S Pipe to 10" Sch 40 LR 90 Degree Ell (Note 2)	SI-134-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-064A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-065	10" Sch 40S LR 90 Degree Ell to 10" Sch 40 Pipe (Note 2)	SI-134-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-066	10" Sch 40S Pipe to 10" Sch 40 LR 90 Degree Ell (Note 2)	SI-134-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-067A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-068	10" Sch 40S LR 90 Degree Ell to 10" Sch 40 Pipe (Note 2)	SI-134-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-068A	Support Assembly to 10" Sch 40 Pipe	SI-134-S002-E	C-E-1	Surf.	525115-ESS-093	N/A
01-075-069	10" Sch 40S Pipe to 10" Sch 40 90 Degree LR Ell (Note 2)	SI-134-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-070A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-071	10" Sch 40S LR 90 Degree Ell to 10" Sch 40 Pipe (Note 2)	SI-134-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-072	10" Sch 40S Pipe to Valve HV-695 (Note 2)	SI-134-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-073A	Elbow Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-075-074	NOT USED					
01-075-075	NOT USED					
01-075-076	Nozzle to Shell Weld	2742	C-B	UT	NIP-944	UT-87
01-075-077	Nozzle to Shell Weld	2741	C-B	UT	NIP-944	UT-87
01-075-078	Flange to Primary Waterbox Shell Weld	2701	C-A	UT	NIP-944	UT-87
01-075-079	Tube Sheet to Primary Waterbox Shell Weld	2702	C-A	UT	NIP-944	UT-87

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-080	SDCHX Integrally Welded Support	2803	C-C	Surf.	525115-ESS-093	N/A
01-075-081	6" SOL-to-6" Sch 40 Pipe (Note 2)	SI-131-W031	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-075-082	6" Sch 40 Pipe-to-Ell (Note 2)	SI-131-S031-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-075-083	6" Sch 40 Ell-to-Pipe (Note 2)	SI-131-S031-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-075-084	6" Sch 40 Pipe-to-Valve (Note 2)	SI-131-W032	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-57 N/A
01-075-085	NOT USED					
01-075-086	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-087	14" SOL-to-14" Sch 30 Pipe (Note 2)	SI-135-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-088	14" Sch 30 Pipe-to-LR Ell (Note 2)	SI-135-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-089A	14" Sch 30 LR Ell (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-090	14" Sch 30 LR Ell-to-Pipe (Note 2)	SI-135-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-091	14" Sch 30 Pipe-to-LR 45 Degree Ell (Note 2)	SI-135-S001-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-092A	14" Sch 30 LR 45 Degree Ell (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-093	14" Sch 30 LR 45 Degree Ell-to-Pipe (Note 2)	SI-135-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN E-9678-501-085Rev. 03,D-9678-501-107Rev. 03

REFERENCE DRAWING NO.: TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-094	14" Sch 30 Pipe to LR Ell (Note 2)	SI-135-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-095A	14" Sch 30 LR Ell Longitudinal	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-096	14" Sch 30 LR Ell-to-Pipe (Note 2)	SI-135-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-097	14" Sch 30 Pipe-to-LR Ell (Note 2)	SI-135-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-098A	14" Sch 30 LR Ell Longitudinal (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-099	14" Sch 30 LR Ell-to-Pipe (Note 2)	SI-135-S002-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A
01-075-100	14" Sch 30 Pipe-to-Valve V-455 (Note 2)	SI-135-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-60 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-101	SDHX Support (Class 3)		IWD 2600 (C)	Vis.	525115-ESS-091	N/A
01-075-102	SDHX Support (Class 3)		IWD 2600 (C)	Vis.	525115-ESS-091	N/A
01-075-101L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-102L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-103L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-104L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-105L	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 75 CLASS 2

DOCUMENT NO.: TR-ESS-069 PROGRAM PLAN S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03 TITLE:

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-106L	NOT USED					
01-075-107L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-108L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-109L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-110L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-111L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-112L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-113L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-114L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 75 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-085Rev. 03,D-9678-501-107Rev. 03

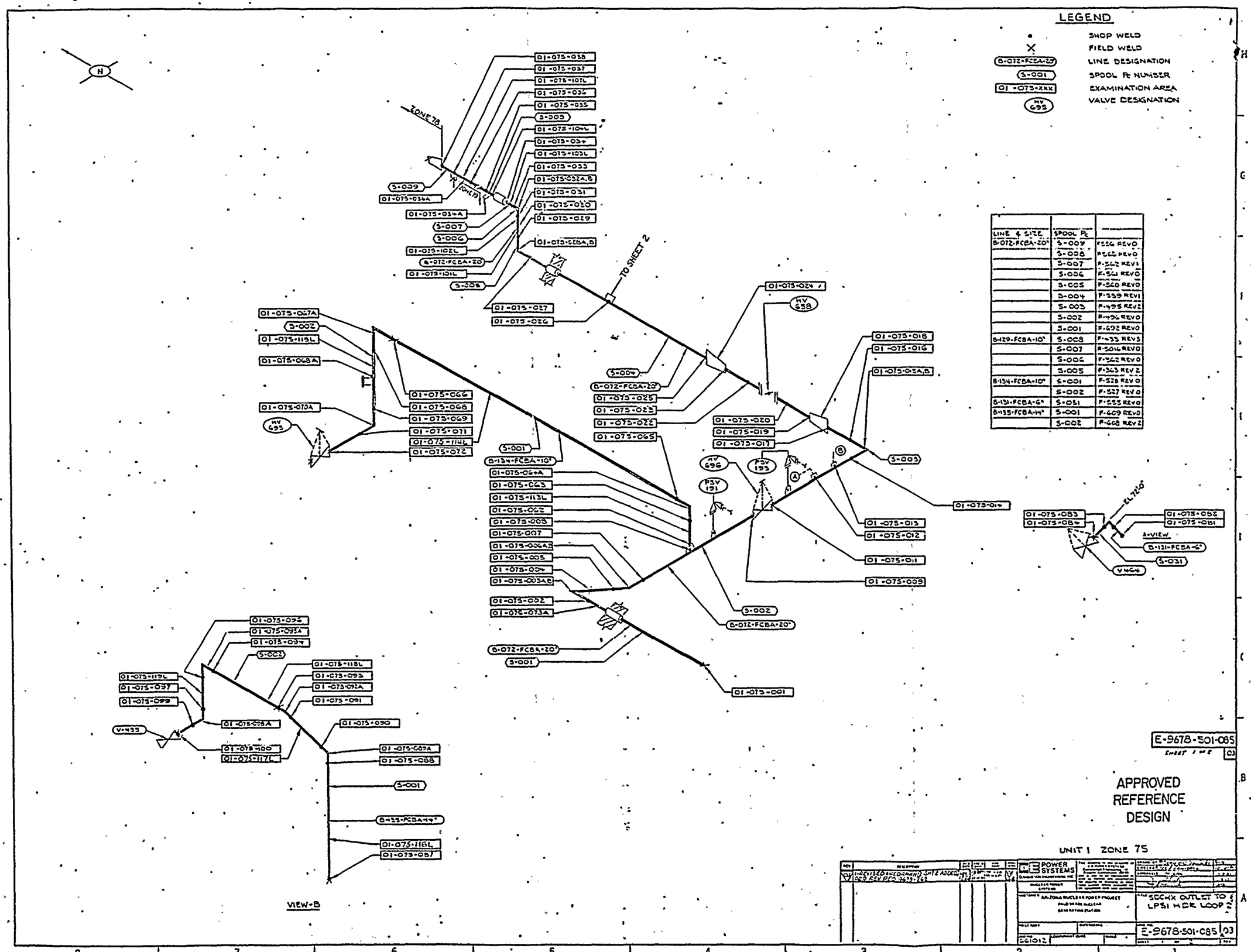
TITLE: S/D COOLING HX OUTLET TO LPSI HEADER - LOOP 2

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-075-115L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-116L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-117L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-118L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-119L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-120L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-075-121L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

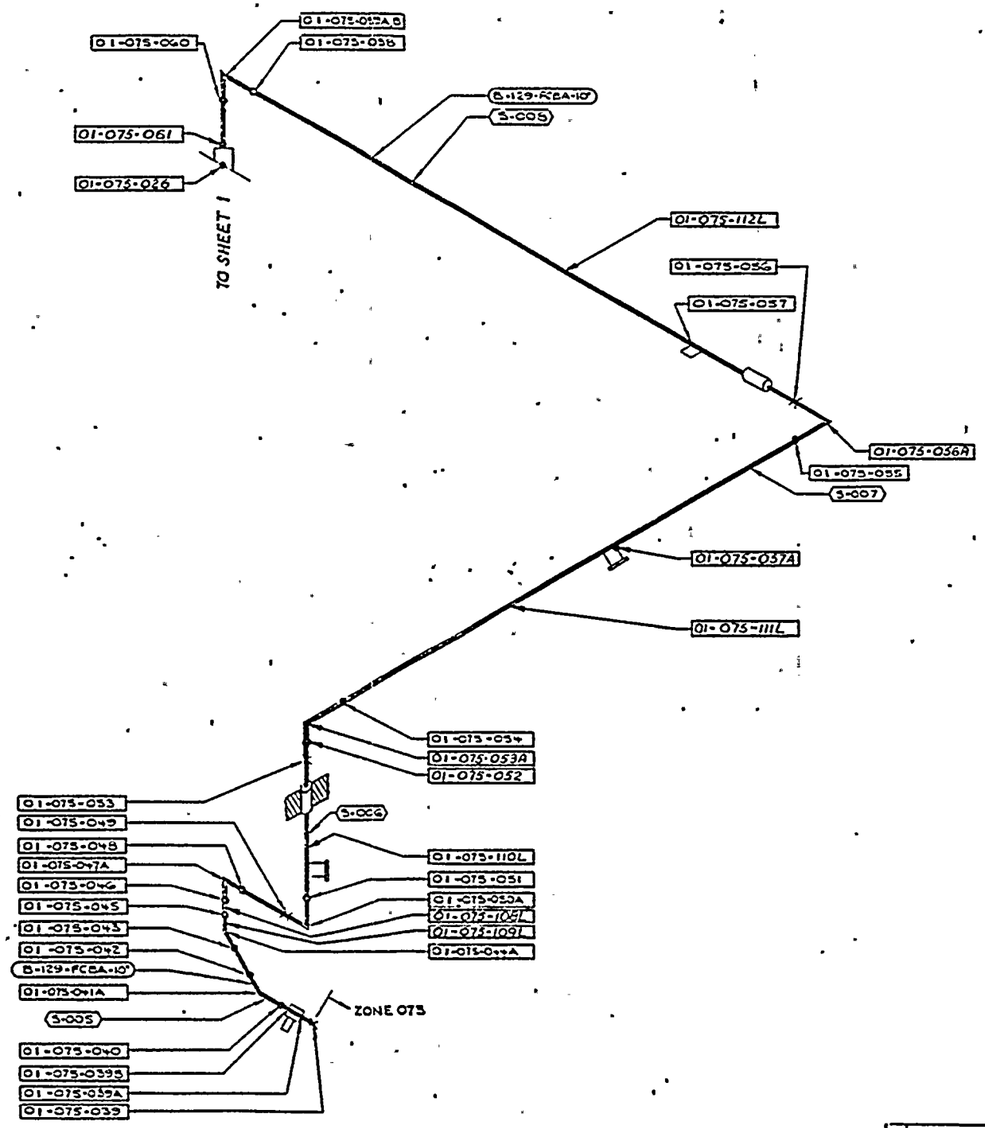
N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LINE & SIZE	SPOOL PC	
B-012-FCBA-20"	S-009	F-556 REV 0
	S-008	F-558 REV 0
	S-007	F-562 REV 1
	S-006	F-561 REV 0
	S-005	F-560 REV 0
	S-004	F-559 REV 1
	S-003	F-495 REV 2
	S-002	F-496 REV 0
	S-001	F-692 REV 0
B-129-FCBA-10"	S-008	F-433 REV 3
	S-007	F-5016 REV 0
	S-006	F-362 REV 0
	S-005	F-363 REV 2
B-134-FCBA-10"	S-001	F-528 REV 0
	S-002	F-527 REV 0
B-131-FCBA-6"	S-031	F-555 REV 0
B-133-FCBA-14"	S-001	F-609 REV 0
	S-002	F-608 REV 2



E-9678-501-C85
SHEET 2 OF 2
C3

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 75

REV	DESCRIPTION	DRAWN	CHECKED	APPROVED	DATE
1	1. THIS SHEET NO CHANGE REQ 0378-102				

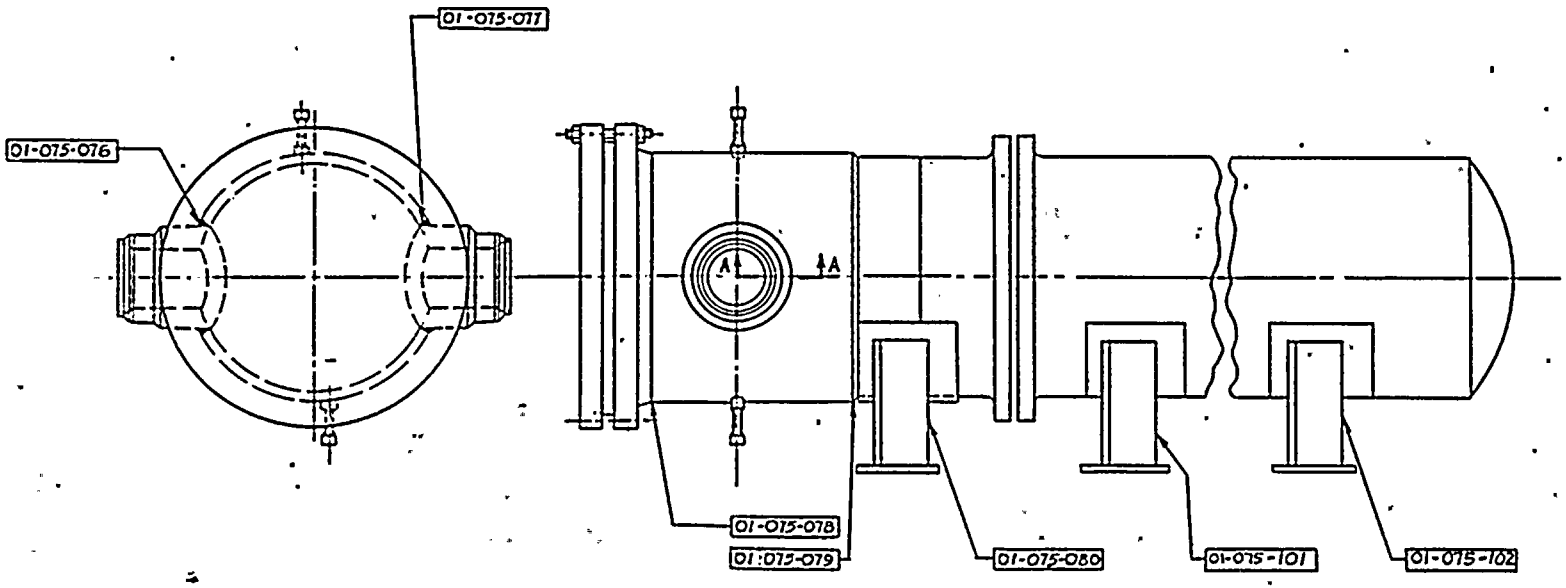
POWER SYSTEMS
CONSOLIDATED INDUSTRIES INC
NUCLEAR POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

SDCHX OUTLET TO LPSI HDR LOOP 2

E-9678-501-C85 | 03

CC1012



LEGEND

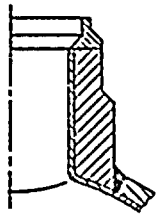
01-075-076 — EXAMINATION AREA

REFERENCE DRAWINGS

ENGINEERS AND FABRICATORS, CO
CD-18344
D-18342 REV. C

D-9678-501-107
03

APPROVED
REFERENCE
DESIGN



SECTION A-A

UNIT 1 ZONE 75

REV	DESCRIPTION	DRAWN	CHECKED	DATE	APPROVED
02	UPGRADE TO APPROVED REF DESIGN PER REV REQ No. 9678-258				
01	DELETED EXAMINATION 01-075-074 & 075 PER REV REQ # 9678-503				
00	1-GENERALLY REVISED PER REV. REQ. # 9678-262				

POWER SYSTEMS
QUANTUM TECHNOLOGIES, INC.
NUCLEAR POWER SYSTEMS

CUSTOMER: ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

SUPERVISOR

SCALE: NONE

TITLE: ZONE 75 SHUTDOWN COOLING HEAT EXCHANGER #2 PRIMARY WATER BOX

D-9678-501-107 | 03

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-001L	Reducer Longitudinal Weld (Top) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-076-002	20" XS x 12" Sch 40S Reducer to 12" Welded Pipe (Note 2)	SI-070-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-003	12" Sch 40S SS Pipe to 12" Sch 40S 90 Degree LR Ell (Note 2)	SI-070-S013-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-004L	Elbow Longitudinal Weld (Outer Radius) (Note 2)	[illegible]	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-005	12" Sch 40S Elbow to Pipe (Note 2)	SI-070-S013-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-006	12" Sch 40S Pipe to 12" R.F.W.N. Flange (Note 2)	SI-070-S013-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-007	Flange to 12" Pipe (Note 2)	SI-070-S015-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-008	12" Sch 40S Pipe to Elbow (Note 2)	SI-070-W013	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-009L	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-010	12" Sch 40S Elbow to Pipe (Note 2)	SI-070-S014-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-011	12" Sch 40S Pipe to 45 Degree Ell (Note 2)	SI-070-S014-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-012L	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-013	12" Sch 40S Elbow to Pipe (Note 2)	SI-070-S014-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-014	12" Sch 140S Pipe to Valve UV-635	SI-202-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-015	NOT USED					
01-076-016	Valve UV-635 to 12" Sch 140 Pipe	SI-202-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-017	12" Sch 140 SS Pipe to Elbow	SI-202-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-018	12" Sch 140 SS Elbow to Pipe	SI-202-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-019	12" Sch 140 SS Pipe to 12" Sch 140 90 Degree LR Ell	SI-202-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-020	12" Sch 140 Elbow to Pipe	SI-202-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-021	12" Sch 140 Pipe to Penetration #19	SI-202-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-022	Containment Penetration #19 to 12" Sch 140 Pipe	SI-202-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-023	12" Sch 140 Pipe to 12" Sch 140 SR 62 Degree Elbow	SI-202-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-024	12" Sch 140 Elbow to 12" Sch 140 Pipe	SI-202-S004-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-025	12" Sch 140 Pipe to Valve V-134	SI-202-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-026	NOT USED					
01-076-027	Valve to 12" Sch 160 Pipe	SI-202-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-027A	12" Sch 160 Pipe to Pipe	SI-202-S005-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-028	12" Sch 160 Pipe to 12" Sch 160 LR 45 Degree Ell	SI-202-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-029	12" Sch 160 LR 45 Degree Ell to 12" Sch 160 Pipe	SI-202-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-030	12" Sch 160 Pipe to 12" Sch 160 45 Degree LR Ell	SI-202-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-031	12" Sch 160 LR 45 Degree Ell to 12" Sch 160 Pipe	SI-202-S005-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-032	12" Sch 160 Pipe to 12" Sch 160 Pipe	SI-202-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-033	12" Sch 160 Pipe to 12" Sch 160 90 Degree Elbow	SI-202-S006-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-034	12" Sch 160 Elbow to 12" Sch 160 Pipe	SI-202-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
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REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-035	12" Sch 160 Pipe to 12" Sch 160 LR 90 Degree Ell	SI-202-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-036	12" Sch 160 Elbow to 12" Sch 160 Pipe	SI-202-S007-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-037	12" Sch 160 Pipe to 12" Sch 160 LR 90 Degree Ell	SI-202-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-038	12" Sch 160 Elbow to 12" Sch 160 Pipe	SI-202-S008-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-039	12" Sch 160 Pipe to 12" Sch 160 90 Degree LR Ell	SI-202-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-040	12" Sch 160 Elbow to 12" Sch 160 Pipe	SI-202-S009-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-041	12" Sch 160 Pipe to 12" Sch 160 LR 90 Degree Ell	SI-202-S009-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 76 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-042	12" Sch 160 90 Degree LR Ell to 12" Sch 160 Pipe	SI-202-S009-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-043	12" Sch 160 Pipe to 12" Sch 160 Elbow	SI-202-S009-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-044	12" Sch 160 Elbow to 12" Sch 160 Pipe	SI-202-S009-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-045	12" Sch 160 Pipe to 12" Sch 160 LR 90 Degree Ell	SI-202-S009-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-046	12" Sch 160 LR 90 Degree Ell to 12" Sch 160 Pipe	SI-202-S009-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-076-047	12" Sch 140 Pipe to Valve V-542	SI-202-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-048	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 76 CLASS 2
PROGRAM PLAN

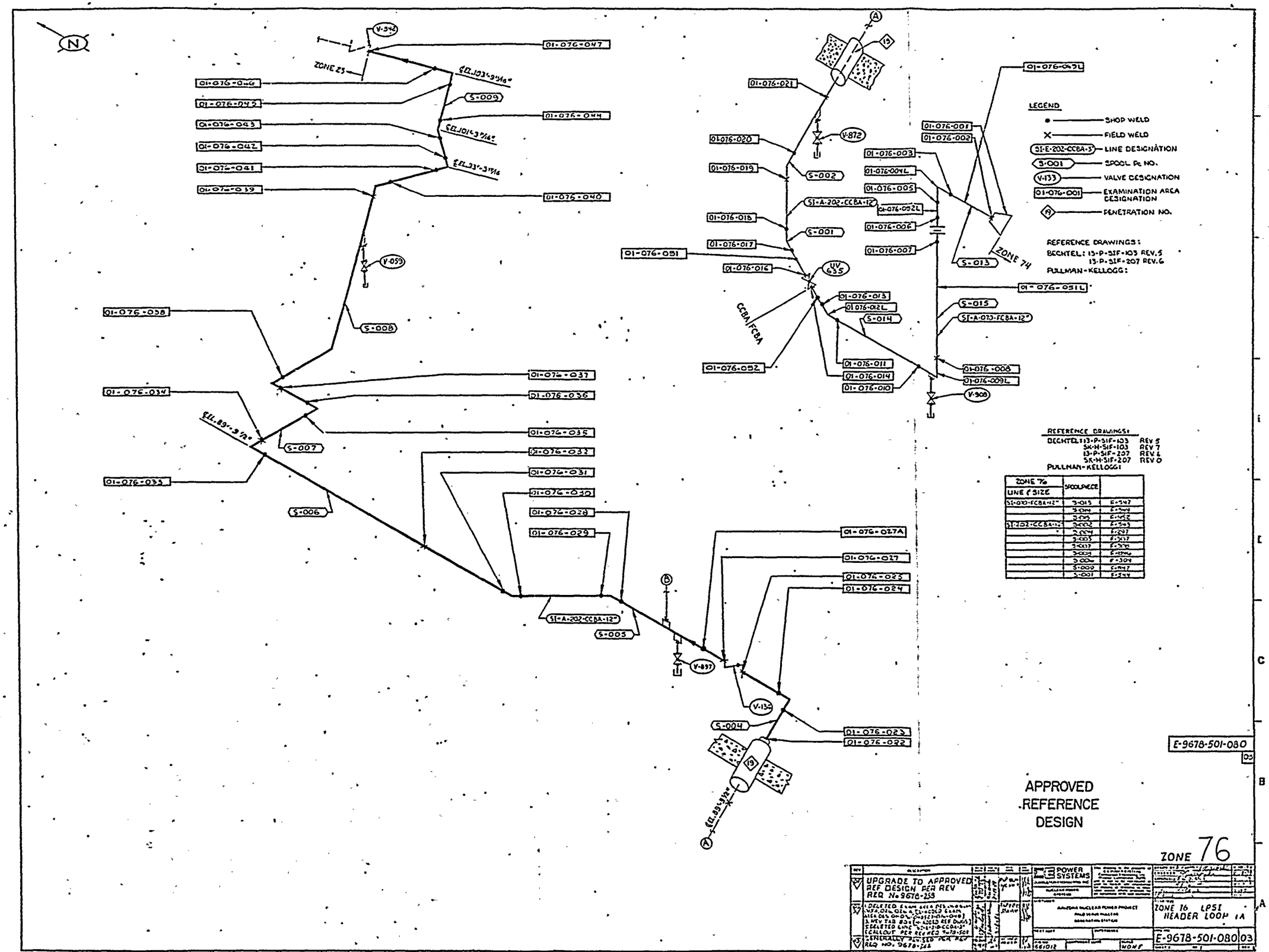
DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-080 Rev. 03
TITLE: LPSI HEADER LOOP 1A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-076-049L	Longitudinal Seam	SI-070-S013	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-076-050	NOT USED					
01-076-051	12" Sch 140 Pipe to 12" Sch 140 Pipe	SI-070-S014-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-051L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-076-052	12" Sch 140 Pipe to 12" Sch 140 Pipe	SI-202-S001-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-076-052L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)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S-013
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S-015
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01-076-009L
V-908
LEGEND
SHOP WELD
FIELD WELD
S1-E-202-CCBA-3" LINE DESIGNATION
S-001 SPOOL PC NO.
V-133 VALVE DESIGNATION
01-076-001 EXAMINATION AREA DESIGNATION
PENETRATION NO.
REFERENCE DRAWINGS:
BECHTEL: 13-P-SIF-103 REV. 5
13-P-SIF-207 REV. 6
PULLMAN-KELLOGG:
REFERENCE DRAWINGS:
BECHTEL: 13-P-SIF-103 REV 5
SK-H-SIF-103 REV 7
13-P-SIF-207 REV 6
SK-H-SIF-207 REV 0
PULLMAN-KELLOGG:
ZONE 76
LINE & SIZE
SPOOL/PIECE
S1-010-FCBA-12"
S-015
S-014
S1-202-CCBA-12"
S-002
S-001
S-003
S-004
S-005
S-006
S-007
S-008
S-009
E-9678-501-080
03
APPROVED
REFERENCE
DESIGN
ZONE 76
UPGRADE TO APPROVED REF DESIGN PER REV REQ No. 9678-258
POWER SYSTEMS
ZONE 76 LPSI HEADER LOOP 1A
E-9678-501-080 03
NONE

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-001	NOT USED					
01-077-002	NOT USED					
01-077-003	NOT USED					
01-077-004	NOT USED					
01-077-005	NOT USED					
01-077-006	NOT USED					
01-077-007	400# RFWN Flange to 12" Sch 40S Pipe (Note 2)	SI-071-S003-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-008	12" Sch 40S Pipe to 12" Sch 40S LR 90 Degree Ell (Note 2)	SI-071-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-009L	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-010	12" Sch 40S Elbow to Pipe (Note 2)	SI-071-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-010A	12" Sch 40S Pipe to Tee (Note 2)	SI-071-S002-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-010B	12" x 12" x 10" Tee to 12" Sch 40S Pipe (Note 2)	SI-071-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-010C	12" x 12" x 10" Tee to 10" Sch 40S Pipe (Note 2)	SI-071-S002-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-077-010D	10" Sch 40S Pipe to Valve HV-691 (Note 2)	SI-071-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-077-010E	Tee Longitudinal Weld (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03

TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-011	12" Sch 40S Pipe to 12" Sch 40S LR 45 Degree Ell (Note 2)	SI-071-S002-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-012L	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-013	12" Sch 40S Elbow to 12" Sch 140 Pipe (Note 2)	SI-071-S003-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-077-014	12" Sch 140 Pipe to Valve UV-645	SI-220-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-015	NOT USED					
01-077-016	Valve UV-645 to 12" Sch 140 SS Pipe	SI-202-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-017	12" Sch 140 SS Pipe to 12" Sch 140 45 Degree LR Ell	SI-220-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-018	12" Sch 140 SS Elbow to Pipe	SI-220-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-019	12" Sch 140 SS Pipe to 12" Sch 140 LR 90 Degree Ell	SI-220-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-020	12" Sch 140 SS Elbow to 12" Sch 140 Pipe	SI-220-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-021	12" Sch 140 SS Pipe to Containment Penetration 20	SI-220-W004	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-022	Containment Penetration 20 to 12" Sch 140 Pipe	SI-220-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-023	12" Sch 140 SS Pipe to 12" Sch 140 LR 50 Degree Ell	SI-220-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-024	12" Sch 140 SS LR 50 Degree Ell to 12" Sch 140 Pipe	SI-220-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

NER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-025	12" Sch 140 SS Pipe to Valve V-144	SI-220-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-026	NOT USED					
01-077-027	Valve to 12" Sch 160 Pipe	SI-220-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-027A	12" Sch 160 SS Pipe to Pipe	SI-220-S005-M	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-077-028	12" Sch 160 SS Pipe to 12" Sch 160 LR 45 Degree Ell	SI-220-S005-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-028A	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S005-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-028B	12" Sch 160 SS Pipe to 12" Sch 160 LR 45 Degree Ell	SI-220-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

NER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-028C	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S005-L	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-028D	12" Sch 160 SS Pipe to 12" Sch 160 LR 45 Degree Ell	SI-220-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-029	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S005-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A.
01-077-030	12" Sch 160 SS Pipe to 12" Sch 160 LR 45 Degree Ell	SI-220-S005-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-031	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S005-H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-032	12" Sch 160 SS Pipe to 12" Sch 160 Pipe (Note (1))	SI-220-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-033	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-034	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-035	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S007-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-036	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-037	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S008-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-038	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S008-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-038A	12" Sch 160 SS Pipe to 12" Sch 160 Pipe	SI-220-S008-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-039	12" Sch 160 SS Pipe to 12" Sch 160 LR 60 Degree Ell	SI-220-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: IR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03

TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-040	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S009-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-040A	12" Sch 160 SS Pipe to Pipe	SI-220-S009-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-041	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S009-E,H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-042	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-042A	12" Sch 160 SS Pipe to Pipe	SI-220-S010-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-043	12" Sch 160 SS Pipe to 12" Sch. 160 LR 90 Degree Ell	SI-220-S010-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-044	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S010-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-079 Rev. 03
TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-045	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S010-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-W013	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046A	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S011-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046B	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-FW300	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046C	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-220-S011-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046D	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S011-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046E	12" Sch 160 SS Pipe to 12" Sch 160 LR 60 Degree Ell	SI-220-S011-H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 77 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
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TITLE: LPSI HEADER LOOP 1B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-077-046F	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-220-S011-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-077-046G	NOT USED					
01-077-047	12" Sch 160 Pipe to Valve V-543	SI-220-W014	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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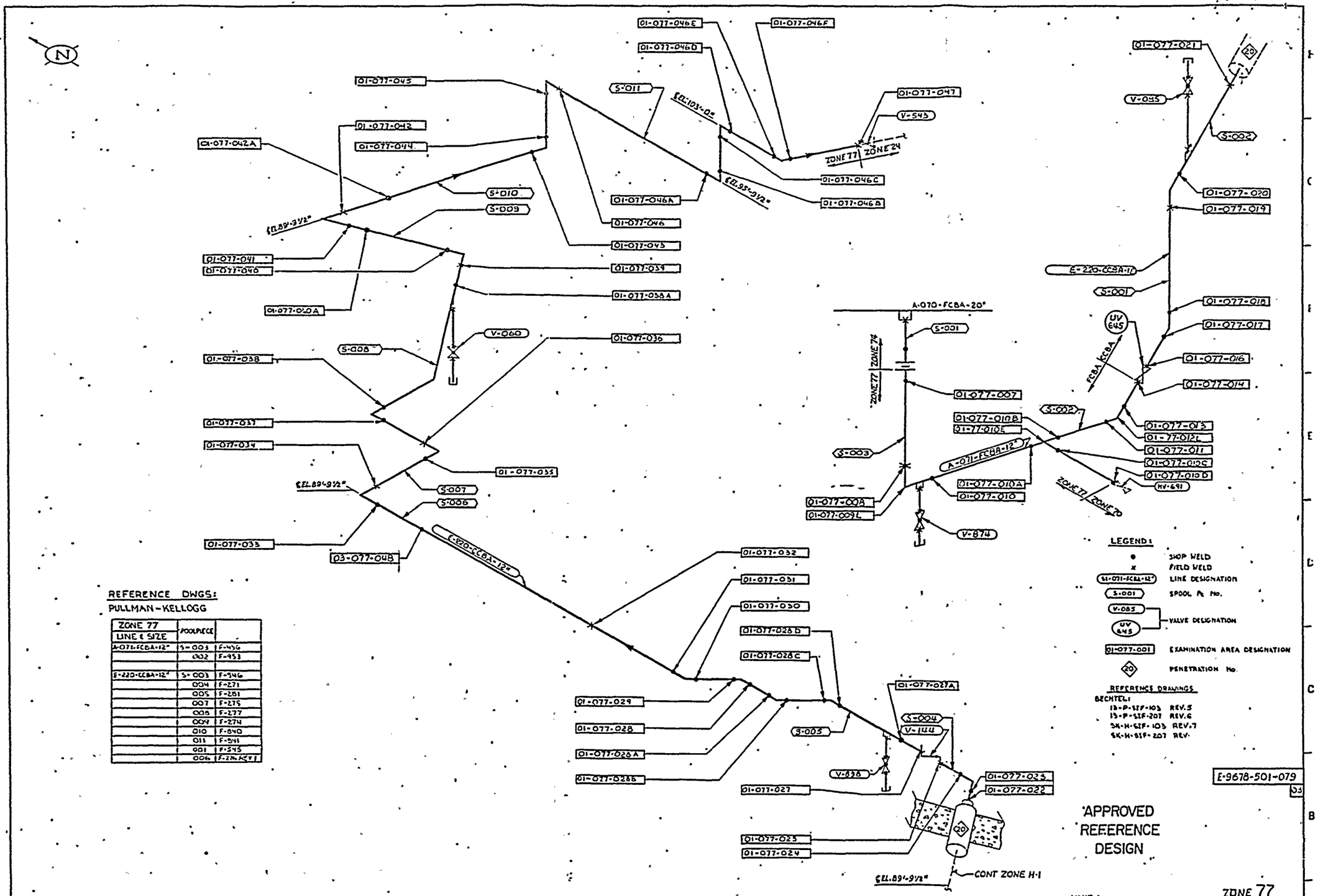

REFERENCE DWGS:

PULLMAN-KELLOGG

ZONE 77 LINE & SIZE	POOLPIECE	
A-071-FCBA-12"	S-003	F-456
	002	F-453
E-220-CCBA-12"	S-003	F-546
	004	F-271
	005	F-281
	007	F-275
	008	F-277
	009	F-274
	010	F-840
	011	F-541
	001	F-545
	006	F-276 REV 1

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-001L	Reducer Longitudinal Weld (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-61 N/A
01-078-002	20" x 12" Sch 40S Reducer to 12" Sch 40S Pipe (Note 2)	SI-072-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-003	12" Sch 40S Pipe to 12" Sch 40S LR 90 Degree Ell (Note 2)	SI-072-S010-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-004L	Elbow Longitudinal Weld (Outer Radiuss) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-005	12" Sch 40S Elbow to 12" Sch 40S Pipe (Note 2)	SI-072-S010-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-006	12" Sch 40S Pipe to 12" 400# RFWN Flange (Note 2)	SI-072-S010-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-007	Flange to 12" Sch 40S Pipe (Note 2)	SI-072-S016-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-008	12" Sch 40S Pipe to Pipe (Note (1) and 2)	SI-072-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009	12" Sch 40S Pipe to 12" Sch 40S LR 90 Degree Ell (Note 2)	SI-072-S011-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009B	NOT USED					
01-078-009C	12" Sch 40S Elbow to 12" Sch 40S Pipe (Note 2)	SI-072-S011-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009D	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009E	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03

TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-009F	12" Sch 40S Elbow to 12" Sch 40S Pipe (Note 2)	SI-072-W011	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009G	12" Sch 40S Pipe to 12" Sch 40S LR 90 Degree Ell (Note 2)	SI-072-S012-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009H	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-009I	NOT USED					
01-078-009J	12" Sch 40S Elbow to 12" Sch 40S Pipe (Note 2)	SI-072-W012	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-010A	12" Sch 40S Pipe to 12" x 12" x 10" Red. Tee (Note 2)	SI-072-S013-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-010B	12" x 12" x 10" Tee to 12" Sch 40S Pipe (Note 2)	SI-072-S013-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-010C	12" x 12" x 10" Red. Tee to 10" Sch 40S Pipe (Note 2)	SI-172-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-078-010D	10" Sch 40S Pipe to Valve HV-690 (Note 2)	SI-172-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-078-010E	Tee Longitudinal Weld (Long Seam) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-010F	NOT USED					
01-078-010G	NOT USED					
01-078-010H	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-078-010I	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-010J	10" Sch 40S Pipe to 10" Sch 40S LR 90 Degree Ell (Note 2)	SI-172-S015-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-078-010K	10" Sch 40S Pipe to 10" Sch 40S LR 90 Degree Ell (Note 2)	SI-172-S015-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-58 N/A
01-078-010L	NOT USED					
01-078-010M	Tee Longitudinal Weld (Long Seam)	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-011	12" Sch 40S Pipe to 12" Sch 40S LR 45 Degree Ell (Note 2)	SI-072-W013	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-012A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-078-013	12" Sch 40S Elbow to 12" Sch 140 Pipe (Note 2)	SI-072-S014-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 78 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03

TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-014	12" Sch 140 SS Pipe to Valve UV-615	SI-072-W014	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-015	NOT USED					
01-078-016	Valve UV-615 to 12" Sch 140 SS Pipe	SI-155-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-017	12" Sch 140 SS Pipe to 12" Sch 140 LR 45 Degree Ell	SI-155-S001-FW302	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-018	12" Sch 140 SS Elbow to 12" Sch 140 Pipe	SI-155-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-019	12" Sch 140 SS Pipe to 12" Sch 140 LR 90 Degree Ell	SI-155-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-020	12" Sch 140 SS Elbow to 12" Sch 140 Pipe	SI-155-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-021	12" Sch 140 SS Pipe to Cont. Penetration 17	SI-155-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-022	Containment Penetration 17 to 12" Sch 140 Pipe	SI-155-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-023	12" Sch 140 SS Pipe to Elbow	SI-155-S003-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-024	12" Sch 140 SS Elbow to Pipe	SI-155-S003-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-025	12" Sch 140 SS Pipe to Valve V-114	SI-155-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-078-026	NOT USED					
01-078-027	Valve V-114 to 12" Sch 160 Pipe	SI-155-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 78 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03

TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-028	12" Sch 160 SS Pipe to 12" Sch 160 LR 70 Degree Ell	SI-155-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-029	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-030	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S004-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-031	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S004-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-032	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S004-E	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-033	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S004-F	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-034	12" Sch 160 SS Pipe to 12" Sch 160 LR 30 Degree Ell	SI-155-S004-G	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-035	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S004-H	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-036	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S004-J	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-037	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-038	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-039	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-040	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-041	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-094 Rev. 03
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-042	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-043	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S006-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-044	12" Sch 160 SS Pipe to 12" Sch 160 LR 90 Degree Ell	SI-155-S006-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-045	12" Sch 160 SS Elbow to 12" Sch 160 Pipe	SI-155-S006-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-046	NOT USED					
01-078-047	12" Sch 160 SS Pipe to Valve V-540	SI-155-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-078-048	3" Sch 160 Weldolet to 12" Sch 160 Pipe	SI-155-S004-K	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 78 CLASS 2
PROGRAM PLAN

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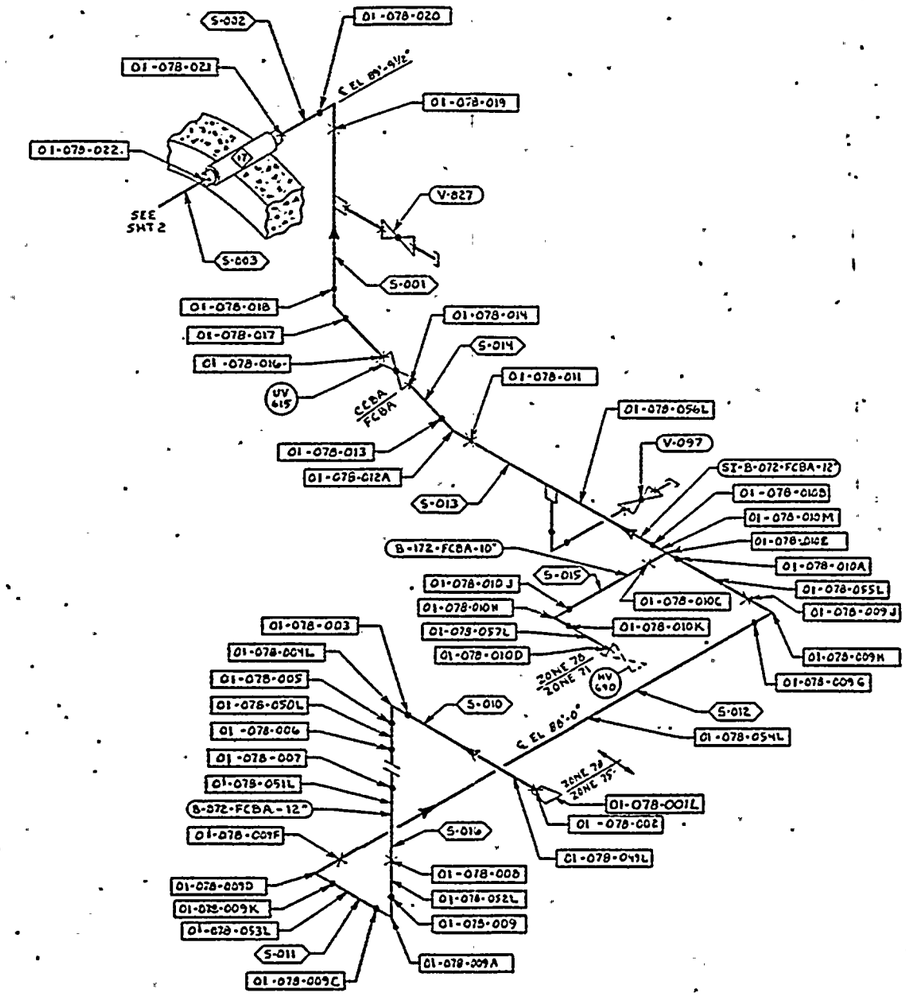
TITLE: LPSI HEADER LOOP 2A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-078-049L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-050L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-051L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-052L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-053L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-054L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-055L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-056L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A
01-078-057L	Longitudinal Weld	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

- • SHOP WELD
- X FIELD WELD
- (SI-B-072-FCBA12) LINE DESIGNATION
- (S-001) SPOOL P. No.
- (V-827) (UV 615) VALVE DESIGNATION
- (01-078-XXX) EXAMINATION AREA DESIGNATION
- (17) PENETRATION No.

REFERENCE DRAWINGS

BECHTEL:

13-P-SIF-136 REV 5
13-P-SIF-208 REV 6

PULLMAN-KELLOGG:

ZONE 78 LINE & SIZE	SPOOL PIECE	DWG No.
B-072-FCBA-12"	S-010	F-530 REV 2
	011	F-531 REV 0
	012	F-532 REV 2
	013	F-534 REV 0
	014	F-535 REV 0
	016	F-954
B-155-CCBA-12"	S-001	F-533 REV 2
	002	F-536 REV 1
	003	F-537 REV 0
	004	F-535 REV 1
	005	F-536 REV 0
	006	F-963 REV 0
B-172-FCBA-10"	S-015	F-926 REV 0

E-9678-501-094
SHEET 1 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 78

REV	DESCRIPTION					
03	REVISED & REDRAWN (S2-SI-B & ADDED) PER REV SEQ # 9678-522					

POWER SYSTEMS

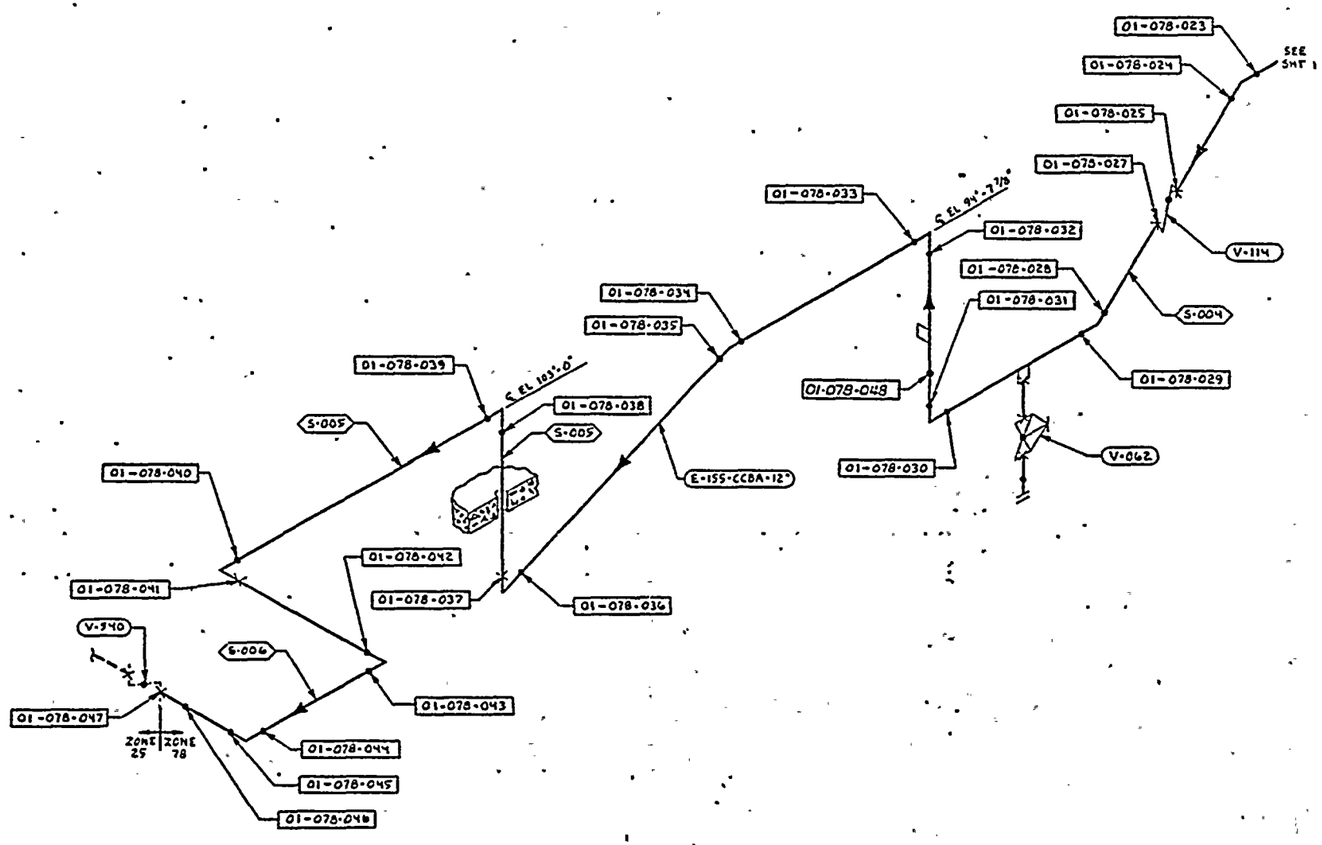
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

TITLE: LPSI HEADER LOOP 2A ZONE 78

E-9678-501-094 03

SCALE: NONE

8 7 6 5 4 3 2 1



E-9678-501-094
SHEET 2 OF 2 03

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 78

03	THIS SHEET ADDED PER REV REQ E-9678-002		

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

LPSI HEADER LOOP 2A ZONE 78

E-9678-501-094 | 03

601012 | NONE

8 7 6 5 4 3 2 1

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 79 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-071 Rev. 03
TITLE: LPSI HEADER LOOP 2B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-001	12" Sch 40S Pipe to 12" Sch 40S Sweepolet (Note 2)	SI-073-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-002	NOT USED					
01-079-003	NOT USED					
01-079-004	NOT USED					
01-079-005	NOT USED					
01-079-006	12" Sch 40S Pipe to 12" 400# RFWN Flange (Note 2)	SI-073-S003-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-007	12" 400# RFWN Flange to 12" Sch 40S Pipe (Note 2)	SI-073-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-008	12" Sch 40S Pipe to 12" Sch 40S LR 90 Degree Ell (Note 2)	SI-073-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 79 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-071 Rev. 03
TITLE: LPSI HEADER LOOP 2B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-009A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-010	12" Sch 40S LR 90 Degree Ell to 12" Sch 40S Pipe (Note 2)	SI-073-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-011	12" Sch 40S Pipe to 12" Sch 40S LR 45 Degree Ell (Note 2)	SI-073-S002-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-012A	Elbow Longitudinal Weld (Outer Radius) (Note 2)	N/A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-013	12" Sch 40S LR 45 Degree Ell to 12" Sch 140 Pipe (Note 2)	SI-073-S002-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-59 N/A
01-079-014	12" Sch 140 Pipe to Valve UV-625	SI-073-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-015	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note 2: Not to be used for ISI. Volumetric exams of 1/2 in. or less deleted in units 2 and 3 per Bechtel instruction. (ref. B/CE-E-33858, 4-24-81)

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 79 CLASS 2
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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-016	Valve UV-625 to 12" Sch 140 Pipe	SI-174-W001	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-017	12" Sch 140 Pipe to 12" Sch 140 LR 45 Degree Ell	SI-174-S001-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-018	12" Sch 140 LR 45 Degree Ell to 12" Sch 140 Pipe	SI-174-S001-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-019	12" Sch 140 Pipe to 12" Sch 140 LR 90 Degree Ell	SI-174-W002	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-020	12" Sch 140 LR 90 Degree Ell to 12" Sch 140 Pipe	SI-174-S002-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-021	12" Sch 140 Pipe to Penetration No. 18	SI-174-W003	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-022	Penetration No. 18 to 12" Sch 140 Pipe	SI-174-W005	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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COMBUSTION ENGINEERING, INC

ZONE 79 CLASS 2

PROGRAM PLAN

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TITLE: LPSI HEADER LOOP 2B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-023	NOT USED					
01-079-024	NOT USED					
01-079-025	12" Sch 140 Pipe to Valve V-124	SI-174-W006	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-69 N/A
01-079-026	NOT USED					
01-079-027	Valve V-124 to 12" Sch 160 Pipe	SI-174-W007	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-028	NOT USED					
01-079-029	NOT USED					
01-079-030	NOT USED					

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 79 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-071 Rev. 03
TITLE: LPSI HEADER LOOP 2B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-031	NOT USED					
01-079-032	NOT USED					
01-079-033	NOT USED					
01-079-034	12" Sch 160 Pipe to 12" Sch 160 LR 90 Degree Ell	SI-174-S004-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-035	12" Sch 160 LR 90 Degree Ell to 12" Sch 160 Pipe	SI-174-S004-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-036	12" Sch 160 Pipe to 12" Sch 160 LR 90 Degree Ell	SI-174-S004-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-037	12" Sch 160 LR 90 Degree Ell to 12" Sch 160 Pipe	SI-174-S004-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 79 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-071 Rev. 03
TITLE: LPSI HEADER LOOP 2B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-038	12" Sch 160 Pipe to 12" Sch 160 Pipe (Note (1))	SI-174-W008	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-039	12" Sch 160 Pipe to 12" Sch 160 Pipe	SI-174-S005-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-040	12" Sch 160 Pipe to 12" Sch 160 LR 45 Degree Ell	SI-174-S005-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-041	12" Sch 160 45 Degree LR Ell to 12" Sch 160 Pipe	SI-174-S005-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-042	12" Sch 160 Pipe to 12" Sch 160 LR 45 Degree Ell	SI-174-W009	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-043	12" Sch 160 LR 45 Degree Ell to 12" Sch 160 Pipe	SI-174-S006-A	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-044	12" Sch 160 Pipe to 12" Sch 160 LR 60 Degree Ell	SI-174-S006-C	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 79 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-071 Rev. 03
TITLE: LPSI HEADER LOOP 2B

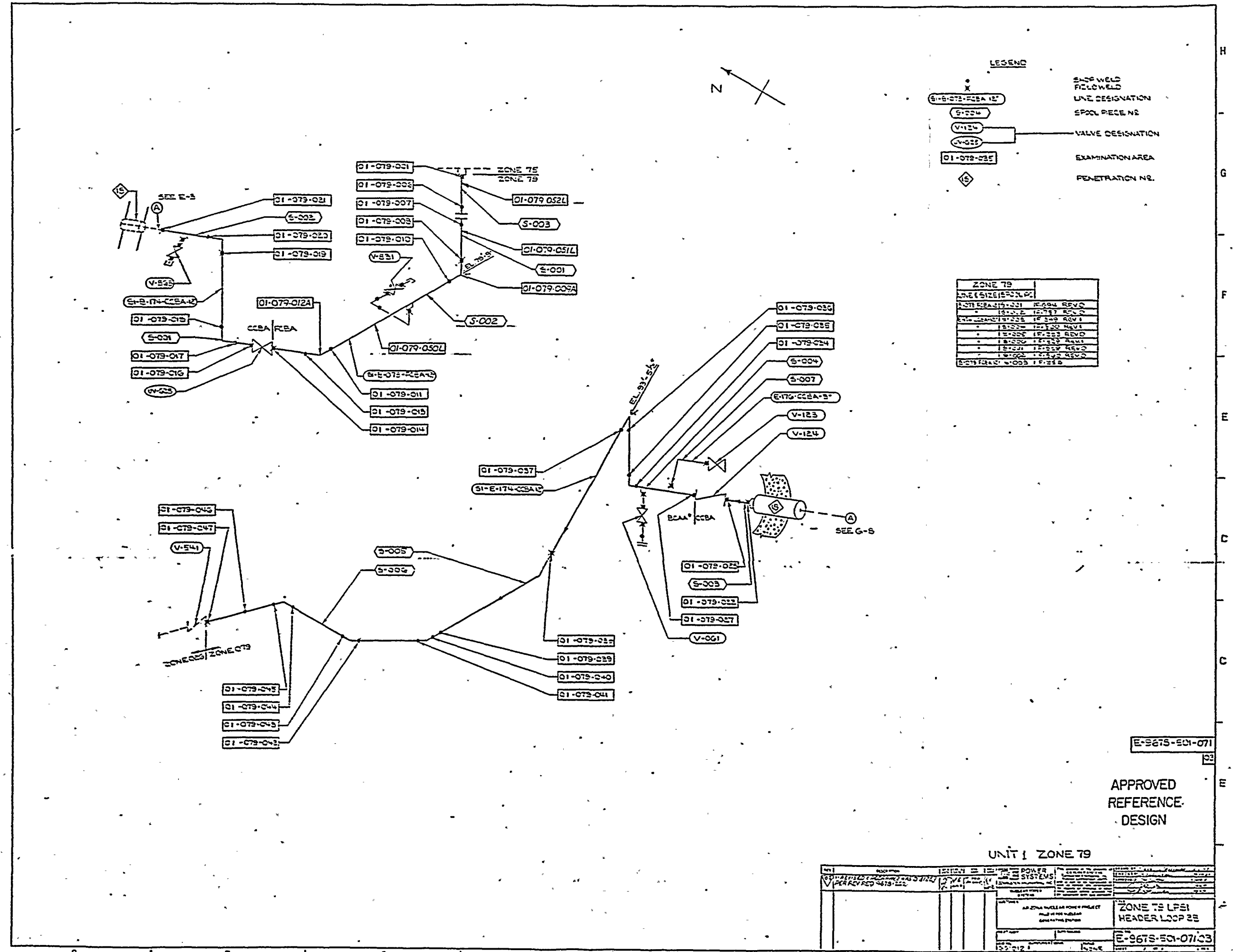
AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-079-045	12" Sch 160 LR 60 Degree Ell to 12" Sch 160 Pipe	SI-174-S006-B	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-046	12" Sch 160 Pipe to 12" Sch 160 Pipe (Note (1))	SI-174-S006-D	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-047	12" Sch 160 Pipe to Valve V-541	SI-174-W010	C-F	UT Surf.	NIP-954 525115-ESS-093	UT-54 N/A
01-079-048	NOT USED					
01-079-049	NOT USED					
01-079-050L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-079-051L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A
01-079-052L	Longitudinal Seam	N/A	C-F	PT	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)


LEGEND
SHOP WELD
FIELD WELD
LINE DESIGNATION
SPOOL PIECE NO.
VALVE DESIGNATION
EXAMINATION AREA
PENETRATION NO.
N
ZONE 75
ZONE 79
SEE E-3
SEE G-5
EL. 93'-5½"
EL. 78'-9"
CCBA
RCBA
ZONE 025
ZONE 079
ZONE 79
01-079-021
01-079-022
01-079-007
01-079-008
01-079-010
01-079-052L
01-079-051L
01-079-005A
01-079-012A
01-079-050L
01-079-011
01-079-015
01-079-014
01-079-037
01-079-036
01-079-035
01-079-034
01-079-025
01-079-027
01-079-039
01-079-040
01-079-041
01-079-045
01-079-044
01-079-043
01-079-042
01-079-046
01-079-047
01-079-020
01-079-019
01-079-017
01-079-016
S-002
S-003
S-001
S-004
S-007
S-005
S-006
V-123
V-124
V-061
V-541
V-831
E-967S-501-071
03
APPROVED
REFERENCE
DESIGN
UNIT 1 ZONE 79
POWER SYSTEMS
ZONE 79 LPSI
HEADER LOOP 2B
E-967S-501-071/03

COMBUSTION ENGINEERING, INC.

ZONE 80 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-183 Rev. 02

TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-080-001	Containment Spray Pump #1 to 14" Sch 20 SS Pipe	SI-009-FW006	C-F	Surf.	525115-ESS-093	N/A
01-080-001L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-002	14" Sch 20 SS Pipe to Elbow	SI-009-FW100	C-F	Surf.	525115-ESS-093	N/A
01-080-002A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-003	Elbow to Flange	SI-009-S005-A	C-F	Surf.	525115-ESS-093	N/A
01-080-004	Flange to Reducer	SI-009-S005-B	C-F	Surf.	525115-ESS-093	N/A
01-080-004L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-005	Reducer to Flange	SI-009-S004-A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 80 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-183 Rev. 02
TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-080-006	Flange to 18" Sch 20 SS Pipe	SI-009-S003-G	C-F	Surf.	525115-ESS-093	N/A
01-080-006L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-007	18" Sch 20 SS Pipe to Elbow	SI-009-S003-F	C-F	Surf.	525115-ESS-093	N/A
01-080-007A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-008	Elbow to 18" Sch 20 SS Pipe	SI-009-S003-E	C-F	Surf.	525115-ESS-093	N/A
01-080-008L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-009	18" Sch 20 SS Pipe to Elbow	SI-009-S-003-D	C-F	Surf.	525115-ESS-093	N/A
01-080-009A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-009B	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 80 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-183 Rev. 02

TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-080-010	Elbow to 18" Sch 20 SS Pipe	SI-009-S003-C	C-F	Surf.	525115-ESS-093	N/A
01-080-010L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-011	18" Sch 20 SS Pipe to 18" Sch 20 SS Pipe (Note (1))	SI-009-S003-B	C-F	Surf.	525115-ESS-093	N/A
01-080-011L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-012	18" Sch 20 SS Pipe to 18" Sch 20 SS Pipe (Note (1))	SI-009-S003-A	C-F	Surf.	525115-ESS-093	N/A
01-080-012L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-013	18" Sch 20 SS Pipe to Valve	SI-009-FW005	C-F	Surf.	525115-ESS-093	N/A
01-080-014	Valve to 18" Sch 20 SS Pipe	SI-009-FW004	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 80 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-183 Rev. 02

TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-080-014L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-015	18" Sch 20 SS Pipe to Valve	SI-009-FW003	C-F	Surf.	525115-ESS-093	N/A
01-080-016	14" Sch 20 SS Pipe to Sch 20 SS Pipe (Note (1))	SI-067-FW006	C-F	Surf.	525115-ESS-093	N/A
01-080-016L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-017	14" Sch 20 SS Pipe to Elbow	SI-067-S004-A	C-F	Surf.	525115-ESS-093	N/A
01-080-017A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-018	Elbow to 14" Sch 20 SS Pipe	SI-067-S005-B	C-F	Surf.	525115-ESS-093	N/A
01-080-018L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

REVISION: 2

C-E 0090287 (Rev. 7/80)

NER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 80 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-183 Rev. 02

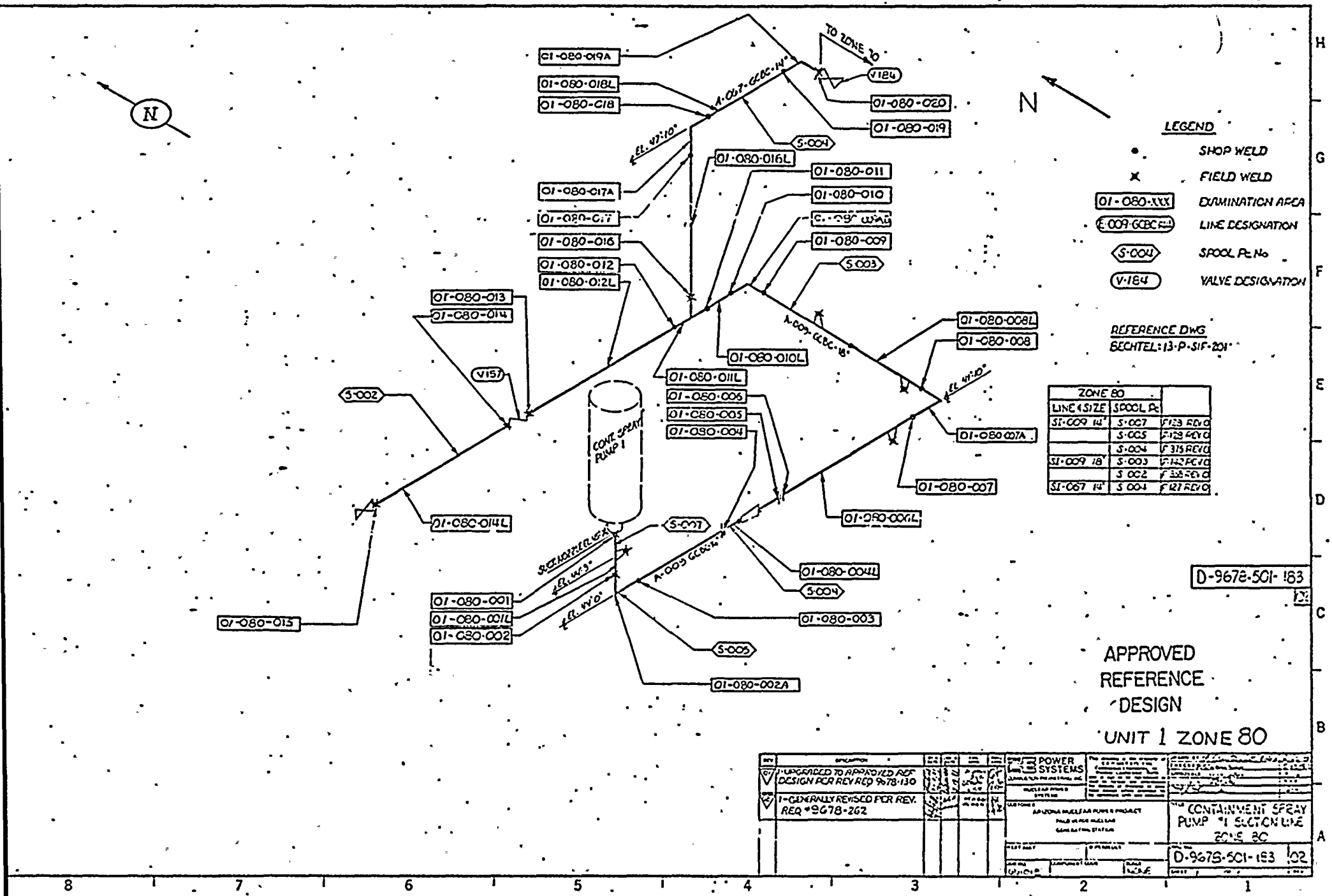
TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-080-019	14" Sch 20 SS Pipe to Elbow	SI-067-S004-C	C-F	Surf.	525115-ESS-093	N/A
01-080-019A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-080-020	Elbow to Valve 184	SI-067-FW005	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)


N
TO ZONE 70
V184
01-080-019A
01-080-018L
01-080-018
01-080-020
01-080-019
S-004
01-080-016L
01-080-011
01-080-010
01-080-017A
01-080-017
01-080-016
01-080-009
01-080-012
01-080-012L
S-003
01-080-013
01-080-014
01-080-008L
01-080-008
01-080-010L
V157
S-002
01-080-011L
01-080-006
01-080-005
01-080-004
CONT. SPRAY PUMP 1
01-080-007A
01-080-007
01-080-014L
S-007
01-080-006L
01-080-004L
S-004
01-080-001
01-080-001L
01-080-002
01-080-015
01-080-003
S-005
01-080-002A
LEGEND
SHOP WELD
FIELD WELD
01-080-XXX EXAMINATION AREA
S-009-6CBC LINE DESIGNATION
S-004 SPOOL PC No
V-184 VALVE DESIGNATION
REFERENCE DWG
BECHTEL:13-P-SIF-201
ZONE 80
LINE (SIZE
SPOOL PC
SI-009 14"
S-007
S-005
S-004
SI-009 18"
S-003
S-002
SI-067 14"
S-004
D-9678-501-183
APPROVED
REFERENCE
DESIGN
UNIT 1 ZONE 80
UPGRADED TO APPROVED REF DESIGN PER REV REQ 9678-130
1-GENERALLY REVISED PER REV. REQ #9678-262
POWER SYSTEMS
ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION
CONTAINMENT SPRAY PUMP #1 SUCTION LINE ZONE 80
D-9678-501-183 02

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 81 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-184 Rev. 02
TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-081-001	Containment Spray Pump Nozzle #2 to 14" Sch 20 SS Pipe	SI-033-FW-006	C-F	Surf.	525115-ESS-093	N/A
01-081-001L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-002	14" Sch 20 SS Pipe to Elbow	SI-033-FW100	C-F	Surf.	525115-ESS-093	N/A
01-081-002A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-003	Elbow to Flange	SI-033-S005-A	C-F	Surf.	525115-ESS-093	N/A
01-081-004	Flange to Reducer	SI-033-S005-J	C-F	Surf.	525115-ESS-093	N/A
01-081-004L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-005	Reducer to Flange	SI-033-S004-B	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 81 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-184 Rev. 02
TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-081-006	Flange to 18" Sch 20 SS Pipe	SI-033-S003-F	C-F	Surf.	525115-ESS-093	N/A
01-081-006L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-007	18" Sch 20 SS Pipe to Elbow	SI-033-S003-E	C-F	Surf.	525115-ESS-093	N/A
01-081-007A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-007B	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-008	Elbow to 18" Sch 20 SS Pipe	SI-033-S003-D	C-F	Surf.	525115-ESS-093	N/A
01-081-008L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-009	18" Sch 20 Ss Pipe to Elbow	SI-033-S004-C	C-F	Surf.	525115-ESS-093	N/A
01-081-009A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 81 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: D-9678-501-184 Rev. 02

TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-081-009B	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-010	Elbow to 18" Sch 20 SS Pipe	SI-033-S003-B	C-F	Surf.	525115-ESS-093	N/A
01-081-010L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-011	18" Sch 20 SS Pipe to Valve	SI-033-S003-A	C-F	Surf.	525115-ESS-093	N/A
01-081-011L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-012	Valve to 18" Sch 20 SS Pipe	SI-033-FW005	C-F	Surf.	525115-ESS-093	N/A
01-081-013	18" Sch 20 SS Pipe to 18" Sch 20 SS Pipe (Note (1))	SI-033-FW004	C-F	Surf.	525115-ESS-093	N/A
01-081-013L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

POWER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 81 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-184 Rev. 02

TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-081-014	18" Sch 20 SS Pipe to Valve	SI-033-FW002	C-F	Surf.	525115-ESS-093	N/A
01-081-015	14" Sch 20 SS Pipe to 14" Sch 20 SS Pipe (Note (1))	SI-034-FW006	C-F	Surf.	525115-ESS-093	N/A
01-081-015L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-016	14" Sch 20 SS Pipe to Elbow	SI-034-S004-C	C-F	Surf.	525115-ESS-093	N/A
01-081-016A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-017	Elbow to 14" Sch 20 SS Pipe	SI-034-S004-B	C-F	Surf.	525115-ESS-093	N/A
01-081-017L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-018	14" Sch 20 SS Pipe to Elbow	SI-034-S004-A	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 81 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: D-9678-501-184 Rev. 02

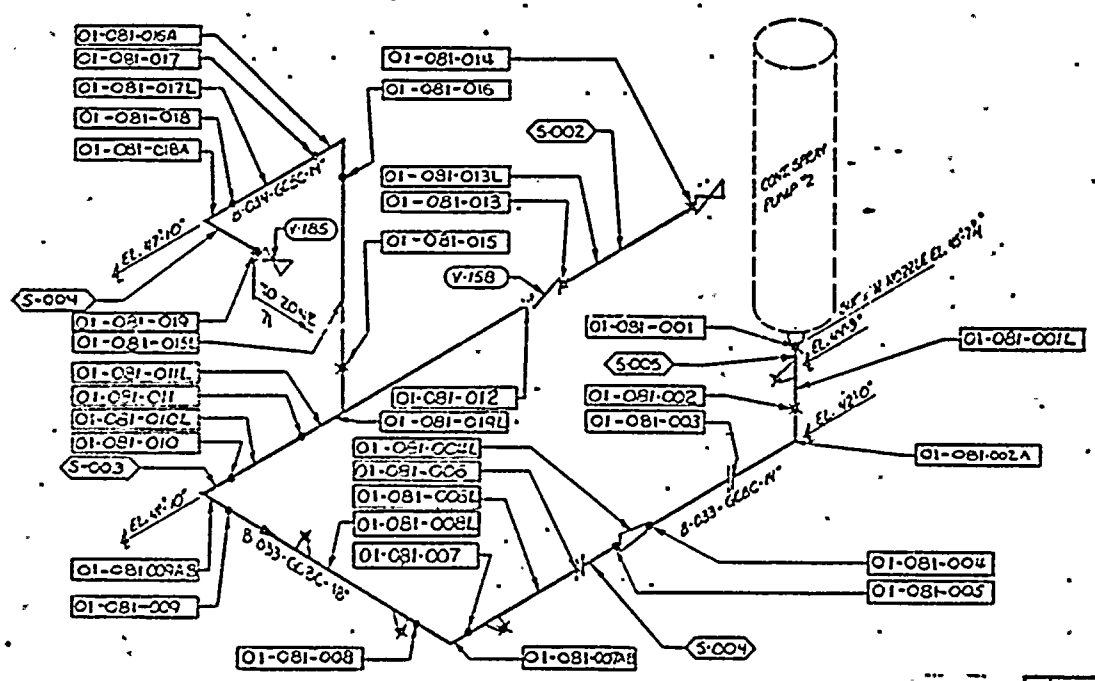
TITLE: CONTAINMENT SPRAY PIPING #2 SUCTION LINE

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-081-018A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-081-019	Elbow to Valve 185	SI-034-FW005	C-F	Surf.	525115-ESS-093	N/A
01-081-019L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

●	SHOP WELD
✕	FIELD WELD
01-081-XXX	EXAMINATION AREA
E 033-GCBC-N	LINE DESIGNATION
S-003	SPOOL PC No
V-185	VALVE DESIGNATION

REFERENCE DWG
BECHTEL: 13-P-SIF-202

ZONE 81		
LINE & SIZE	SPOOL PC	
SI-033 14"	S-005	F-211 REV 0
SI-033 18"	S-004	F-211 REV 0
	S-003	F-117 REV 0
	S-002	F-118 REV 0
SI 034	S-004	F-115 REV 0

D-%78-501-184 02

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 81

REV	DESCRIPTION	DATE	BY	CHK	APP
01	1-UPGRADED TO APPROVED REF DESIGN PER REV REQ 9678-130				
02	1-GENERALLY REVISED PER REV REQ # 9678-262				

POWER SYSTEMS

ARIZONA NUCLEAR POWER PROJECT
PALO VERDE NUCLEAR GENERATING STATION

CONTAINMENT SPRAY PUMP #2 SUCTION LINE ZONE 81

D-%78-501-184 02

/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 82 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-185 Rev. 02

TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-001	Pump Discharge Nozzle to Reducer	SI-079-S001-A	C-F	Surf.	525115-ESS-093	N/A
01-082-001A	Reducer to 10" Sch 40 SS Pipe	SI-079-FW001	C-F	Surf.	525115-ESS-093	N/A
01-082-001AL	Longitudinal Seam in Reducer	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-01L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-002	10" Sch 40 SS Pipe to Elbow	SI-079-S001-B	C-F	Surf.	525115-ESS-093	N/A
01-082-002A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-003	Elbow to 10" Sch 40 SS Pipe	SI-079-S001-C	C-F	Surf.	525115-ESS-093	N/A
01-082-004	10" Sch 40 SS Pipe to Elbow	SI-079-S001-D	C-F	Surf.	525115-ESS-093	N/A
01-082-004A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 82 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-185 Rev. 02
TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN A

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-005	Elbow to 10" Sch 40 SS Pipe	SI-079-S001-E	C-F	Surf.	525115-ESS-093	N/A
01-082-005L	Longitudinal Seam	SI-079-S001	C-F	Surf.	525115-ESS-093	N/A
01-082-006	10" Sch 40 SS Pipe to Elbow	SI-079-S001-F	C-F	Surf.	525115-ESS-093	N/A
01-082-006A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-007	Elbow to 10" Sch 40 SS Pipe	SI-079-FW002	C-F	Surf.	525115-ESS-093	N/A
01-082-007L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-008	10" Sch 40 SS Pipe to Flange	SI-079-S002-A	C-F	Surf.	525115-ESS-093	N/A
01-082-009	Flange to 10" Sch 40 SS Pipe	SI-079-S003-A	C-F	Surf.	525115-ESS-093	N/A
01-082-009L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-010	10" Sch 40 SS Pipe to Elbow	SI-079-S003-B	C-F	Surf.	525115-ESS-093	N/A
01-082-010A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-011	Elbow to 10" Sch 40 SS Pipe	SI-079-S003-C	C-F	Surf.	525115-ESS-093	N/A
01-082-011L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-012	10" Sch 40 SS Pipe to Elbow	SI-079-FW003	C-F	Surf.	525115-ESS-093	N/A
01-082-012A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-013	Elbow to 10" Sch 40 SS Pipe	SI-079-S004-A	C-F	Surf.	525115-ESS-093	N/A
01-082-013L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-014	10" Sch 40 SS Pipe to Valve	SI-079-FW004	C-F	Surf.	525115-ESS-093	N/A

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-015	Valve to 10" Sch 40 SS Pipe	SI-079-FW005	C-F	Surf.	525115-ESS-093	N/A
01-082-015L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-016	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-079-S005-A	C-F	Surf.	525115-ESS-093	N/A
01-082-016L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-017	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-079-S005-B	C-F	Surf.	525115-ESS-093	N/A
01-082-017L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-018	10" Sch 40 SS Pipe to Valve 684	SI-079-FW006	C-F	Surf.	525115-ESS-093	N/A
01-082-019	Valve 684 to 10" Sch 40 SS Pipe	SI-079-FW007	C-F	Surf.	525115-ESS-093	N/A

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Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-019L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-020	10" Sch 40 SS Pipe to Elbow	SI-079-S006-A	C-F	Surf.	525115-ESS-093	N/A
01-082-020A	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-021	Elbow to 10" Sch 40 SS Pipe	SI-079-S006-B	C-F	Surf.	525115-ESS-093	N/A
01-082-021L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-022	10" Sch 40 SS Pipe to Elbow	SI-079-S006-C	C-F	Surf.	525115-ESS-093	N/A
01-082-022A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-023	Elbow to 10" Sch 40 SS Pipe	SI-079-S006-D	C-F	Surf.	525115-ESS-093	N/A
01-082-023L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-024	10" Sch 40 SS Pipe to Elbow	SI-079-FW008	C-F	Surf.	525115-ESS-093	N/A
01-082-024A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-025	Elbow to 10" Sch 40 SS Pipe	SI-079-S007-A	C-F	Surf.	525115-ESS-093	N/A
01-082-025L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-026	10" Sch 40 SS Pipe to Elbow	SI-079-S007-B	C-F	Surf.	525115-ESS-093	N/A
01-082-026A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-027	Elbow to 10" Sch 40 SS Pipe	SI-079-FW009	C-F	Surf.	525115-ESS-093	N/A
01-082-027L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-028	10" Sch 40 SS Pipe to Elbow	SI-079-S008-A	C-F	Surf.	525115-ESS-093	N/A

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-028A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-029	Elbow to 10" Sch 40 SS Pipe	SI-079-S008-B	C-F	Surf.	525115-ESS-093	N/A
01-082-029L	Longitudinal Seam	SI-079-S008	C-F	Surf.	525115-ESS-093	N/A
01-082-030	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe	SI-079-S008-C	C-F	Surf.	525115-ESS-093	N/A
01-082-031	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe	SI-082-FW001	C-F	Surf.	525115-ESS-093	N/A
01-082-031L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-032	10" Sch 40 SS Pipe to Elbow	SI-082-S001-A	C-F	Surf.	525115-ESS-093	N/A
01-082-032A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-033	Elbow to 10" Sch 40 SS Pipe	SI-082-S001-B	C-F	Surf.	525115-ESS-093	N/A

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01-082-033L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-034	10" Sch 40 SS Pipe to Elbow	SI-082-S001-C	C-F	Surf.	525115-ESS-093	N/A
01-082-034A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-035	Elbow to 10" Sch 40 SS Pipe	SI-082-FW002	C-F	Surf.	525115-ESS-093	N/A
01-082-035L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-036	10" Sch 40 SS Pipe to Elbow	SI-082-S002-A	C-F	Surf.	525115-ESS-093	N/A
01-082-036A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-037	Elbow to 10" Sch 40 SS Pipe	SI-082-S002-B	C-F	Surf.	525115-ESS-093	N/A
01-082-037L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

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01-082-038	10" Sch 40 SS Pipe to Valve 688	SI-082-FW003	C-F	Surf.	525115-ESS-093	N/A
01-082-039	Valve 688 to 10" Sch 40 SS Pipe	SI-089-FW005	C-F	Surf.	525115-ESS-093	N/A
01-082-039L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-040	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-089-S003-B	C-F	Surf.	525115-ESS-093	N/A
01-082-041	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-089-S003-A	C-F	Surf.	525115-ESS-093	N/A
01-082-041L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-042	10" Sch 40 SS Pipe to Valve	SI-089-FW004	C-F	Surf.	525115-ESS-093	N/A
01-082-043	10" Sch 40 SS Pipe to Pipe	SI-089-S004-D	C-F	Surf.	525115-ESS-093	N/A

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Note (1)): Required if within three (3) pipe diameters of pipe support or rigid anchor.

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01-082-043L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-044	10" Sch 40 SS Pipe to Pipe	SI-089-FW006	C-F	Surf.	525115-ESS-093	N/A
01-082-044L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-045	10" Sch 40 SS Pipe to Elbow	SI-089-FW007	C-F	Surf.	525115-ESS-093	N/A
01-082-045A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-046	Elbow to 10" Sch 40 SS Pipe	SI-089-S004-A	C-F	Surf.	525115-ESS-093	N/A
01-082-046L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-047	10" Sch 40 SS Pipe to Elbow	SI-089-FW008	C-F	Surf.	525115-ESS-093	N/A
01-082-047A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A

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01-082-048	Elbow to 10" Sch 40 Pipe	SI-089-S005-A	C-F	Surf.	525115-ESS-093	N/A
01-082-048L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-049	10" Sch 40 Pipe to Pipe	SI-089-FW009	C-F	Surf.	525115-ESS-093	N/A
01-082-049L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-050	10" Sch 40 Pipe to Elbow	SI-089-S006-A	C-F	Surf.	525115-ESS-093	N/A
01-082-050A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-051	Elbow to 10" Sch 40 Pipe	SI-089-S006-B	C-F	Surf.	525115-ESS-093	N/A
01-082-051L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-052	10" Sch 40 SS Pipe to Elbow	SI-089-S007-C	C-F	Surf.	525115-ESS-093	N/A

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01-082-052A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-053	Elbow to 10" Sch 40 SS Pipe	SI-089-FW010	C-F	Surf.	525115-ESS-093	N/A
01-082-053L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-054	10" Sch 40 SS Pipe to Pipe (Note (1))	SI-089-FW011	C-F	Surf.	525115-ESS-093	N/A
01-082-054L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-055	10" Sch 40 SS Pipe to Elbow	SI-089-S008-A	C-F	Surf.	525115-ESS-093	N/A
01-082-055A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-056	Elbow to 10" Sch 40 SS Pipe	SI-089-FW012	C-F	Surf.	525115-ESS-093	N/A
01-082-056L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-082-057	10" Sch 40 SS Pipe to Elbow	SI-089-S010-A	C-F	Surf.	525115-ESS-093	N/A
01-082-057A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-058	Elbow to 10" Sch 40 SS Pipe	SI-089-S010-B	C-F	Surf.	525115-ESS-093	N/A
01-082-058L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-059	10" Sch 40 SS Pipe to Elbow	SI-089-S010-C	C-F	Surf.	525115-ESS-093	N/A
01-082-059A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-060	Elbow to 10" Sch 40 SS Pipe	SI-089-S010-D	C-F	Surf.	525115-ESS-093	N/A
01-082-060L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-061	10" Sch 40 SS Pipe to Elbow	SI-089-S010-E	C-F	Surf.	525115-ESS-093	N/A

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01-082-061A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-062	Elbow to 10" Sch 40 SS Pipe	SI-089-FW013	C-F	Surf.	525115-ESS-093	N/A
01-082-062L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-063	10" Sch 40 SS Pipe to Elbow	SI-089-S011-A	C-F	Surf.	525115-ESS-093	N/A
01-082-063A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-064	Elbow to 10" Sch 40 SS Pipe	SI-089-S011-B	C-F	Surf.	525115-ESS-093	N/A
01-082-064L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-065	10" Sch 40 SS Pipe to Reducer	SI-089-S011-C	C-F	Surf.	525115-ESS-093	N/A
01-082-065L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

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01-082-066	Reducer to 10" Sch 40 SS Pipe	SI-089-S011-D	C-F	Surf.	525115-ESS-093	N/A
01-082-066L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-082-067	10" Sch 40 SS Pipe to Valve 672	SI-089-FW014	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

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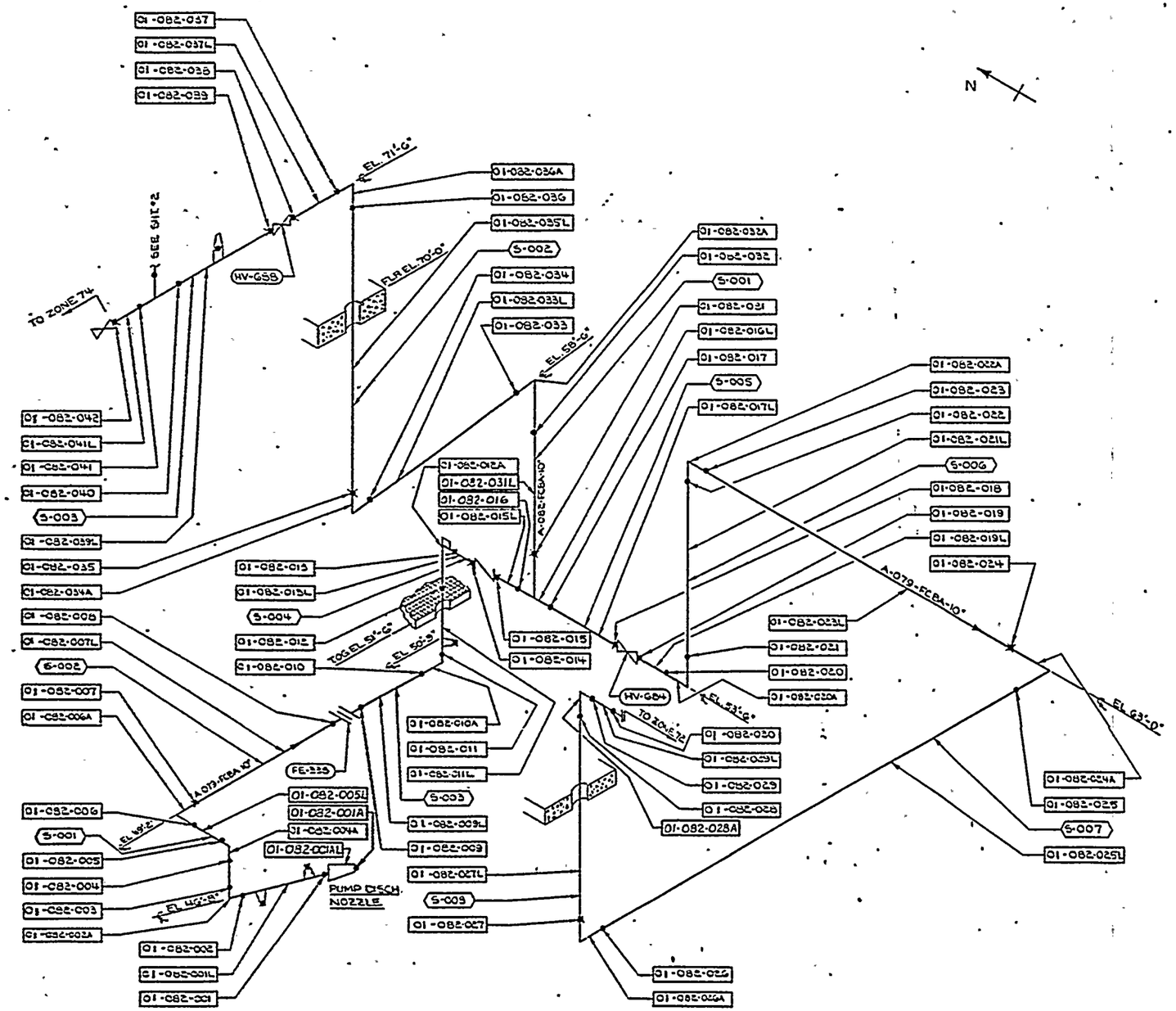


LEGEND

- ● SHOP WELD
- ✕ FIELD WELD
- 01-082-007 EXAMINATION AREA
- A-079-FCBA10 LINE DESIGNATION
- S-002 SPOOL PIECE Nº
- HV-684 VALVE DESIGNATION

ZONE 82		UNIT DWG Nº
LINE & SIZE	CHANGE	
01-079	S-001	F-230
	S-002	F-235
	S-003	F-237
	S-004	F-235
	S-005	F-237 REV 2
	S-006	F-237 REV 1
	S-007	F-236
	S-008	
01-082	S-001	F-231 REV 0
	S-002	F-231 REV 0
	S-003	

E-9678-501-185

APPROVED REFERENCE DESIGN

UNIT 1 ZONE 82

MK	DESCRIPTION				
1	REVISED & RESHAPED SHTS 2 ADDED PER REV REQ'S 178-182				

POWER SYSTEMS

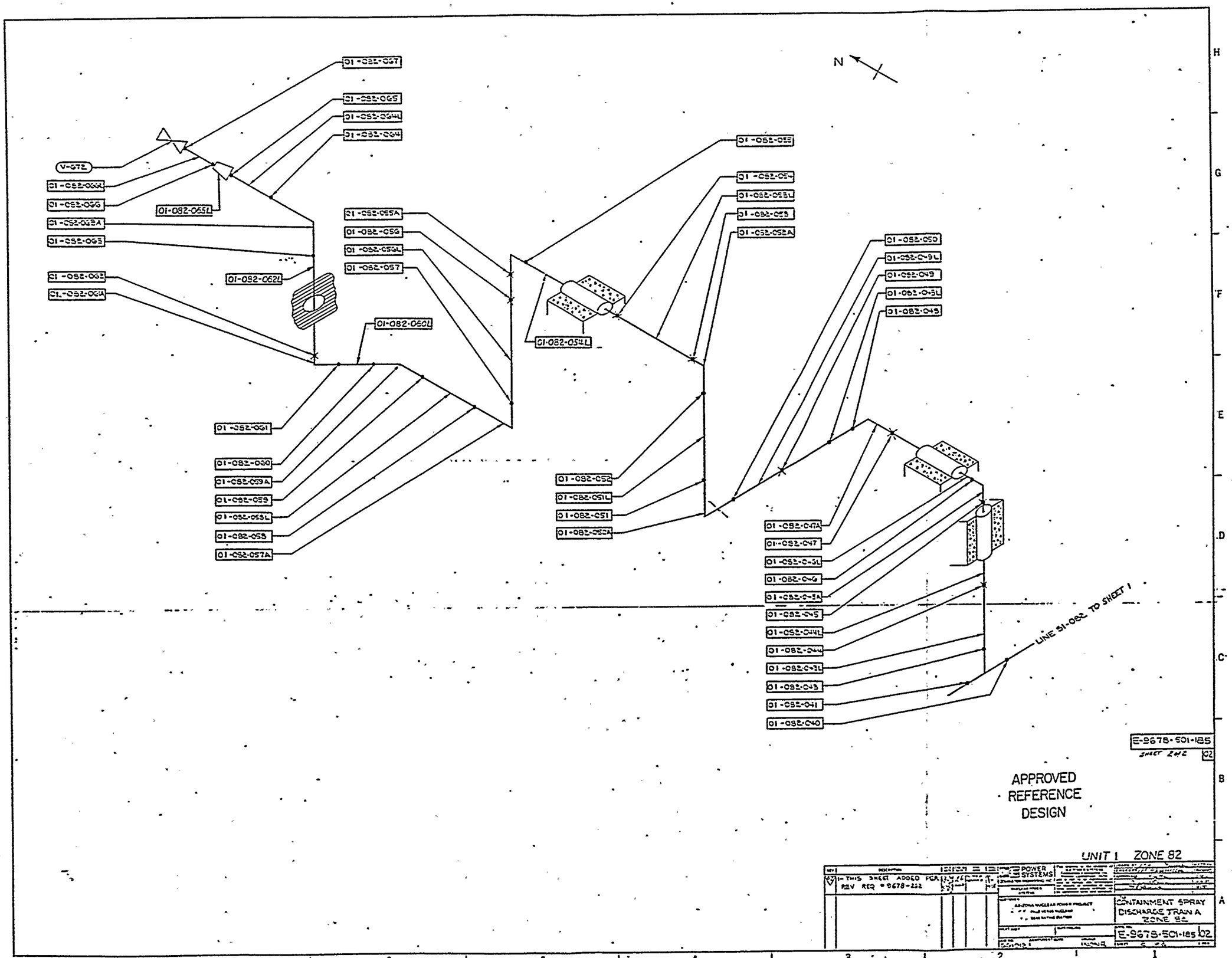
ARIZONA NUCLEAR POWER PROJECT

CONTAINMENT SPRAY DISCHARGE TRAIN A ZONE 82

E-9678-501-185 02

SCALE NONE

8 7 6 5 4 3 2 1


N
V-672
01-082-055L
01-082-062L
01-082-060L
01-082-054L
LINE 51-082 TO SHEET 1
APPROVED
REFERENCE
DESIGN
E-9678-501-185
SHEET 2 of 2
02
UNIT 1 ZONE 82
1- THIS SHEET ADDED PER REV REQ #9678-222
POWER SYSTEMS
CONTAINMENT SPRAY
DISCHARGE TRAIN A
ZONE 82
E-9678-501-185 02

COMBUSTION ENGINEERING, INC.

ZONE 83 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-186 Rev. 02

TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-001	Pump Discharge Nozzle to Reducer	SI-119-S001-A	C-F	Surf.	525115-ESS-093	N/A
01-083-001A	Reducer to 10" Sch 40 SS Pipe	SI-119-FW001	C-F	Surf.	525115-ESS-093	N/A
01-083-001AL	Longitudinal Seam in Reducer	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-001L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-002	10" Sch 40 SS Pipe to Elbow	SI-119-S001-B	C-F	Surf.	525115-ESS-093	N/A
01-083-002A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-003	Elbow to Elbow	SI-119-S001-C	C-F	Surf.	525115-ESS-093	N/A
01-083-003A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-004	Elbow to 10" Sch 40 SS Pipe	SI-119-S001-D	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

ZONE 83 CLASS 2
PROGRAM PLAN

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TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-004L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-005	10" Sch 40 SS Pipe to Elbow	SI-119-FW002	C-F	Surf.	525115-ESS-093	N/A
01-083-005A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-006	Elbow to 10" Sch 40 SS Pipe	SI-119-S002-A	C-F	Surf.	525115-ESS-093	N/A
01-083-006L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-007	10" Sch 40 SS Pipe to Flange	SI-119-S002-B	C-F	Surf.	525115-ESS-093	N/A
01-083-008	Flange to 10" Sch 40 SS Pipe	SI-119-S003-A	C-F	Surf.	525115-ESS-093	N/A
01-083-008L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-009	10" Sch 40 SS Pipe to Elbow	SI-119-S003-B	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
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/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 83 CLASS 2
PROGRAM PLAN

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TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-009A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-010	Elbow to 10" Sch 40 SS Pipe	SI-119-S003-C	C-F	Surf.	525115-ESS-093	N/A
01-083-010L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-011	10" Sch 40 SS Pipe to Elbow	SI-119-FW003	C-F	Surf.	525115-ESS-093	N/A
01-083-011A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-012	Elbow to 10" Sch 40 SS Pipe	SI-119-S004-A	C-F	Surf.	525115-ESS-093	N/A
01-083-012L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-013	10" Sch 40 SS Pipe to Valve	SI-119-FW004	C-F	Surf.	525115-ESS-093	N/A
01-083-014	Valve to 10" Sch 40 SS Pipe	SI-119-FW005	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
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COMBUSTION ENGINEERING, INC.

ZONE 83 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

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TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-014L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-015	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-119-S005-A	C-F	Surf.	525115-ESS-093	N/A
01-083-015L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-016	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-119-S005-B	C-F	Surf.	525115-ESS-093	N/A
01-083-016L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-017	10" Sch 40 SS Pipe to Valve	SI-119-FW006	C-F	Surf.	525115-ESS-093	N/A
01-083-018	Valve to 10" Sch 40 SS Pipe	SI-119-FW007	C-F	Surf.	525115-ESS-093	N/A
01-083-018L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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VER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 83 CLASS 2
PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069
REFERENCE DRAWING NO.: E-9678-501-186 Rev. 02
TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-019	10" Sch 40 SS Pipe to Elbow	SI-119-S006-A	C-F	Surf.	525115-ESS-093	N/A
01-083-019A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-020	Elbow to 10" Sch 40 SS Pipe	SI-119-S006-B	C-F	Surf.	525115-ESS-093	N/A
01-083-020L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-021	10" Sch 40 SS Pipe to Elbow	SI-119-S006-C	C-F	Surf.	525115-ESS-093	N/A
01-083-021A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-022	Elbow to 10" Sch 40 SS Pipe	SI-119-S006-D	C-F	Surf.	525115-ESS-093	N/A
01-083-022L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-023	10" Sch 40 SS Pipe to Elbow	SI-119-FW008	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC

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PROGRAM PLAN

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TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-023A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-024	Elbow to 10" Sch 40 SS Pipe	SI-119-S007-A	C-F	Surf.	525115-ESS-093	N/A
01-083-024L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-025	10" Sch 40 SS Pipe to Elbow	SI-119-S007-B	C-F	Surf.	525115-ESS-093	N/A
01-083-025A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-026	Elbow to 10" Sch 40 SS Pipe	SI-119-FW-009	C-F	Surf.	525115-ESS-093	N/A
01-083-026L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-027	10" Sch 40 SS Pipe to Elbow	SI-119-S008-A	C-F	Surf.	525115-ESS-093	N/A
01-083-027A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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/ER SYSTEMS
COMBUSTION ENGINEERING, INC

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-028	Elbow to 10" Sch 40 SS Pipe	SI-119-S008-B	C-F	Surf.	525115-ESS-093	N/A
01-083-028L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-029	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-119-S008-E	C-F	Surf.	525115-ESS-093	N/A
01-083-030	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-147-FW001	C-F	Surf.	525115-ESS-093	N/A
01-083-030L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-031	10" Sch 40 SS Pipe to Elbow	SI-147-S001-A	C-F	Surf.	525115-ESS-093	N/A
01-083-031A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-032	Elbow to 10" Sch 40 SS Pipe	SI-147-S001-B	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

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COMBUSTION ENGINEERING, INC.

ZONE 83 CLASS 2

PROGRAM PLAN

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TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-032L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-033	10" Sch 40 SS Pipe to Elbow	SI-147-FW300	C-F	Surf.	525115-ESS-093	N/A
01-083-033A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-034	Elbow to 10" Sch 40 SS Pipe	SI-147-FW-002	C-F	Surf.	525115-ESS-093	N/A
01-083-034L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-035	10" Sch 40 SS Pipe to Elbow	SI-147-S002-A	C-F	Surf.	525115-ESS-093	N/A
01-083-035A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-036	Elbow to 10" Sch 40 SS Pipe	SI-147-S002-B	C-F	Surf.	525115-ESS-093	N/A
01-083-036L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
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/ER SYSTEMS
COMBUSTION ENGINEERING, INC

ZONE 83 CLASS 2
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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-037	10" Sch 40 SS Pipe to Valve	SI-147-FW003	C-F	Surf.	525115-ESS-093	N/A
01-083-038	Valve to 10" Sch 40 SS Pipe	SI-147-FW004	C-F	Surf.	525115-ESS-093	N/A
01-083-038L	Longitudinal Seams	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-039	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-134-S003-J	C-F	Surf.	525115-ESS-093	N/A
01-083-039L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-040	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-134-S003-H	C-F	Surf.	525115-ESS-093	N/A
01-083-040L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-041	10" Sch 40 SS Pipe to Valve 695	SI-134-FW004	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-042	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-134-S003-K	C-F	Surf.	525115-ESS-093	N/A
01-083-042L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-043	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-134-FW005	C-F	Surf.	525115-ESS-093	N/A
01-083-043L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-044	10" Sch 40 SS Pipe to Elbow	SI-134-FW006	C-F	Surf.	525115-ESS-093	N/A
01-083-044A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-045	Elbow to 10" Sch 40 SS Pipe	SI-134-S005-A	C-F	Surf.	525115-ESS-093	N/A
01-083-045L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-046	10" Sch 40 SS Pipe to Elbow	SI-134-S005-B	C-F	Surf.	525115-ESS-093	N/A
01-083-046A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-047	Elbow to 10" Sch 40 SS Pipe	SI-134-S005-C	C-F	Surf.	525115-ESS-093	N/A
01-083-047L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-048	10" Sch 40 SS Pipe to 10" Sch 40 SS Pipe (Note (1))	SI-134-FW007	C-F	Surf.	525115-ESS-093	N/A
01-083-048L	10" Sch 40 SS Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-049	10" Sch 40 SS Pipe to Elbow	SI-134-S006-A	C-F	Surf.	525115-ESS-093	N/A
01-083-049A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
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/ER SYSTEMS
COMBUSTION ENGINEERING, INC.

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-050	Elbow to 10" Sch 40 SS Pipe	SI-134-S006-B	C-F	Surf.	525115-ESS-093	N/A
01-083-050L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-051	10" Sch 40 SS Pipe to Elbow	SI-134-S006-C	C-F	Surf.	525115-ESS-093	N/A
01-083-051A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-052	Elbow to 10" Sch 40 Pipe	SI-134-FW008	C-F	Surf.	525115-ESS-093	N/A
01-083-052L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-053	10" Sch 40 SS Pipe to Elbow	SI-134-S007-A	C-F	Surf.	525115-ESS-093	N/A
01-083-053A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-054	Elbow to 10" Sch 40 SS Pipe	SI-134-S007-B	C-F	Surf.	525115-ESS-093	N/A

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AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-054L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-055	10" Sch 40 SS Pipe to Elbow	SI-134-S007-C	C-F	Surf.	525115-ESS-093	N/A
01-083-055A	Elbow Longitudinal	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-056	Elbow to 10" Sch 40 SS Pipe	SI-134-S007-D	C-F	Surf.	525115-ESS-093	N/A
01-083-056L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-057	10" Sch 40 SS Pipe to Reducer	SI-134-S007-H	C-F	Surf.	525115-ESS-093	N/A
01-083-057L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-058	Reducer to 10" Sch 40 SS Pipe	SI-134-S007-J	C-F	Surf.	525115-ESS-093	N/A
01-083-058L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)

COMBUSTION ENGINEERING, INC

ZONE 83 CLASS 2

PROGRAM PLAN

DOCUMENT NO.: TR-ESS-069

REFERENCE DRAWING NO.: E-9678-501-186 Rev. 02

TITLE: CONTAINMENT SPRAY DISCHARGE TRAIN B

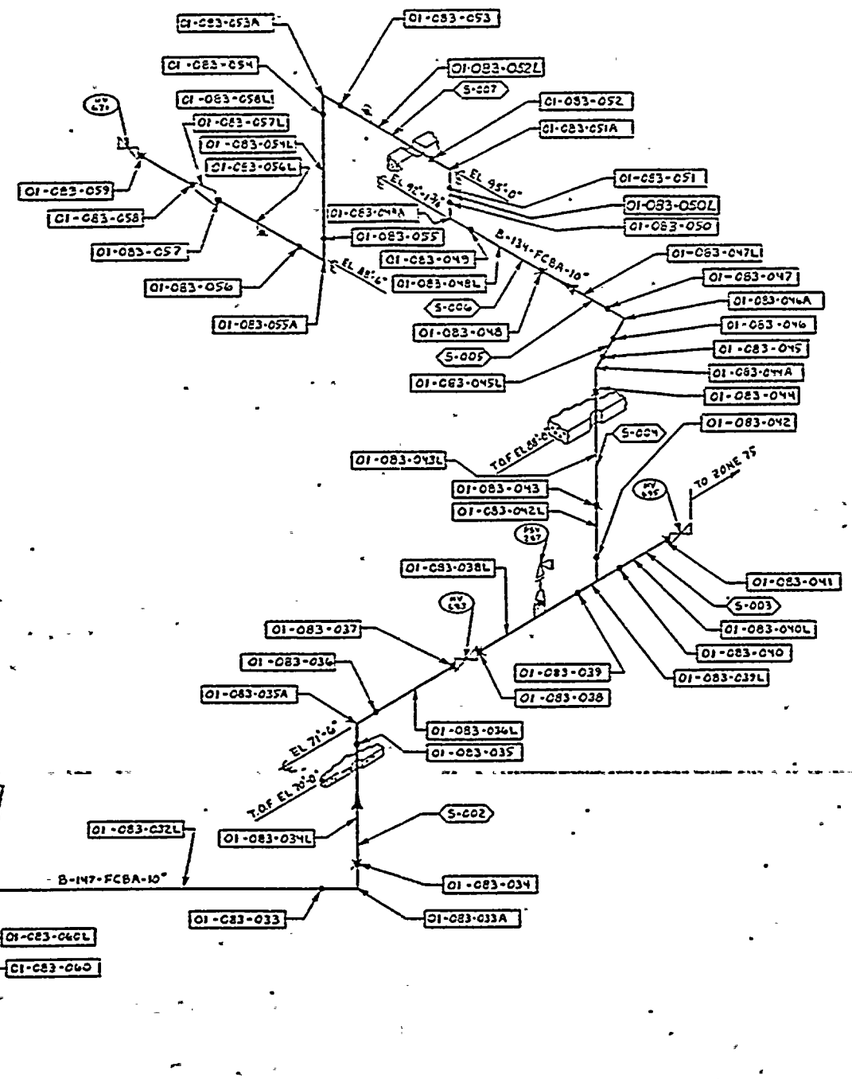
AREA DESIGNATION	AREA DESCRIPTION	MANUFACTURER'S OR INSTALLER'S WELD NUMBER	EXAMINATION CATEGORY IWC-2520	EXAMINATION METHOD IWC-2600	EXAMINATION PROCEDURE NUMBER	CALIBRATION BLOCK NO.
01-083-059	10" Sch 40 SS Pipe to Valve 671	SI-134-FW009	C-F	Surf.	525115-ESS-093	N/A
01-083-060	10" Sch 40 SS Pipe to Pipe (Note (1))	SI-147-FW301	C-F	Surf.	525115-ESS-093	N/A
01-083-060L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A
01-083-061	10" Sch 40 SS Pipe to Pipe	SI-119-S001-E	C-F	Surf.	525115-ESS-093	N/A
01-083-061L	Longitudinal Seam	N/A	C-F	Surf.	525115-ESS-093	N/A

Note (1): Required if within three (3) pipe diameters of pipe support or rigid anchor.

N/A NOT APPLICABLE
(H) DURING HYDROTEST

REVISION: 2

C-E 0090287 (Rev. 7/80)



LEGEND

•	SHOP WELD
X	FIELD WELD
01-083-XXX	EXAMINATION AREA
E-119-GCBC-10	LINE DESIGNATION
S-001	SPOOL Pc No.
V-671	VALVE DESIGNATION

REFERENCE DWG
BECHTEL: 13-P-SIF-208

ZONE 83			
LINE & SIZE		SPOOL Pc	DWG No
SI-119	10"	S-001	IF-214 REV 0
		S-002	IF-213 REV 0
		S-003	IF-212 REV 0
		S-004	IF-215 REV 0
		S-005	"
		S-006	"
		S-007	"
SI-147	10"	S-001	IF-226 REV 0
		S-002	IF-224 REV 0
		S-003	"
		S-004	"
SI-134	10"	S-004	IF-523 REV 0
		S-005	IF-524 REV 0
		S-006	IF-525 REV 0
		S-007	"

E-9678-501-186
SHEET 1 OF 2 02

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 83

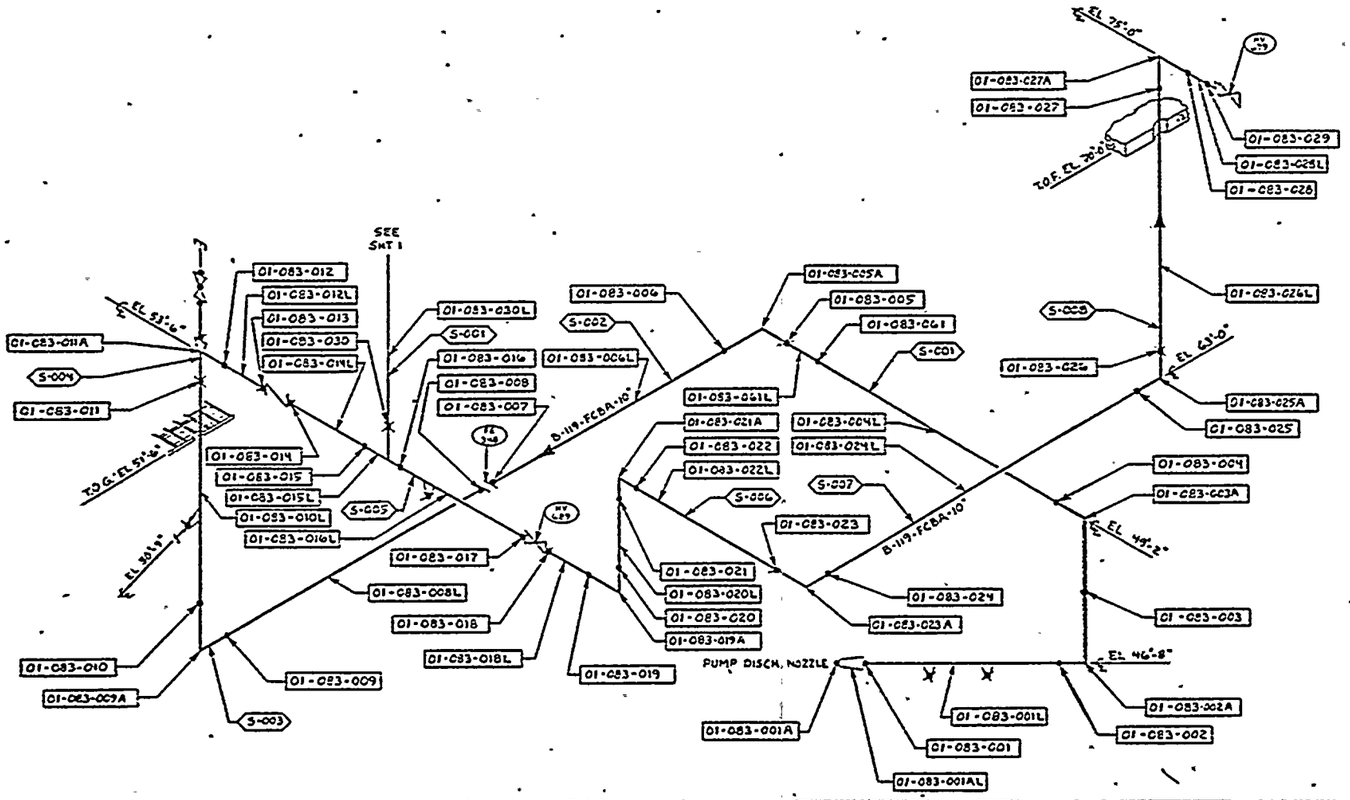
02	REVISED & REDRAWN (2-SHTS) ADDED FOR REV PCO 9678-502	

POWER SYSTEMS

CONTAINMENT SPRAY DISCHARGE TRAIN B ZONE 83

E-9678-501-186 02

G.E.101Z NONE



E-9678-501-186
SHEET 2 OF 2 02

APPROVED
REFERENCE
DESIGN

UNIT 1 ZONE 83

POWER SYSTEMS	CONTAINMENT SPRAY DISCHARGE TRAIN B ZONE 83
	E-9678-501-186 02

8 7 6 5 4 3 2 1

EXCLUSIONS AND EXCEPTIONS

The following items identify those areas where strict compliance with the preservice examination requirements of the 1974 Edition of Section XI of the ASME Boiler and Pressure Vessel Code and Summer 1975 Addenda is limited. While specific areas are delineated below, the general reasons for limited compliance are lack of access, availability of material for calibration, standards and lack of code requirements. Technically sound, reasonable alternatives have been imposed in these areas. Application of the rules of the 1975 Edition of Section XI of the ASME Code and Summer 1975 Addenda and Appendix III of Winter 1975 Addenda was selected with the intent of meeting these requirements to the maximum extent practical.

1. Paragraph I-3121 of Section XI requires that Calibration Standards be fabricated from component nozzle dropouts, a component prolongation, or, when these are not available, from material of the same specification as the component. Material code numbers for each standard have been recorded and are traceable to the source of those materials in every case. Some of the steam generator blocks, for this program, however, were fabricated from materials of the same specification as the component rather than from actual dropouts or prolongations. The calibration standards are the property of the utility and will be retained on site for use in all future inservice examinations. This statement also applies to the calibration standards for the Letdown and Shutdown Cooling Heat Exchangers.

   Since the Unit 2 and 3 NSSS components have been fabricated to the same specification, product form, and specified heat treatment as the Unit 1 components, the set of NSSS calibration blocks fabricated for Unit 1 will, as permitted by the Summer 1978 Addenda, be utilized for the examinations of the Unit 2 and 3 components also.

   All BOP Piping Blocks are fabricated in accordance with the requirements of Appendix III to Section XI.

2. Paragrpah I-5212 of Section XI requires verification of penetration by obtaining an observable back reflection. The geometry of component areas with non-parallel back surfaces that prevents total compliance with this requirement of Section XI are; (1) Steam Generator Stay Cylinder Welds in the Tube Sheet Area.

3. Table IWB-2600, Category B-K-1, requires that integrally welded external support attachments to the Class 1 piping pressure boundary receive a volumetric examination. The Construction Code, ASME Section III, and current ASME Section XI Addenda, require only a surface examination. In addition, recognizing that volumetric

EXCLUSIONS AND EXCEPTIONS
(continued)

examinations are not practical for this weld configuration, only a surface examination will not be performed on integrally welded external support attachments, in accordance with the requirements of the Summer 1978 Addenda.

4. Table IWB-2500, Category B-G-2 is entitled "Pressure Retaining Bolting, Smaller Than 2 Inches in Diameter". However, Summer 1976 Addenda changed that title to read "Pressure Retaining Bolting, 2 Inches and Smaller in Diameter". Because all pressure retaining bolting, two inches and smaller will receive only a visual (VT-1) examination during its lifetime, an exception is taken to performing a volumetric and surface examination during the preservice. Therefore, all bolting, 2 inches and smaller, will receive only a visual examination, in accordance with the requirements of the 1978 Addenda.

5. Table IWB-2500, Category B-J, requires piping branch nozzles connections to be volumetrically examined from both sides of the weld; i.e., nozzle side and base metal on the main coolant piping side. An exception is required to allow examination from the main coolant piping side only due to restricted access from the nozzle forging side because of weld and nozzle configuration.

6. Table IWC-2520, Category C-D is entitled, "Pressure Retaining Bolting Exceeding 1" in Diameter". However, the 1976 Summer Addenda to Section XI changed that title to read, "Pressure Retaining Bolting Exceeding 2" in Diameter". Because all bolting 2" and smaller will not be subject to volumetric examination inservice, an exception to the preservice requirement to allow volumetric examination of bolting greater than 2" only, will be taken, in accordance with the requirements of the 1978 Addenda.

7. With respect to the primary piping and Reactor Coolant Pumps, Section XI Ultrasonic Preservice Examinations are required to be conducted in accordance with Section XI, Paragraph IWA-2232, which states:

   "Ultrasonic examination shall be conducted in accordance with the provisions of Appendix I. Where Appendix I (I-1200) is not applicable, the provisions of Article 5 of Section V shall apply."

EXCLUSIONS AND EXCEPTIONS
(continued)

Paragraph I-1200 states:

> "The methods are limited to Class 1 and 2 ferritic vessels, 2-1/2 in. and over in wall thickness. Clad vessels are included."

Since the reactor coolant pumps are not vessels, the examinations must be conducted in accordance with Article 5 of Section V.

After a careful consideration, C-E recommends that an exception be taken to this requirement of Section XI and that a program utilizing Appendix I techniques with 50%-50% sizing be implemented for the reasons provided below. It is our belief that such a program is superior to what is required by the Code and avoids many of the problems associated with conducting a Section V, Article 5 program.

First, the Article 5 examinations must be conducted in accordance with Paragraph T-530, which requires in sub-paragraph T-535.1(d) that a transfer method be utilized which requires a reference reflector (drilled hole or notch) to be provided in the part to be examined. It is also required that this reference reflector be removed after examination. It is therefore obvious that Article 5 addresses production testing and not the concerns of Section XI. Removal of the reference reflector eliminates any change of repeatability of subsequent inservice examinations. The undesireability of including a reference reflector in the primary coolant pump is apparent. Since the transfer technique could not be utilized in performing examinations to Article 5, an exception to the Code would have to be taken whether performing examinations to Article 5 of Section V or Appendix I of Section XI.

Secondly, the Article 5 calibration techniques for both angle beam and straight beam examinations (see Figures T-535(a) and T-536(a)) require the calibration to be performed from both sides of the calibration standard, which means that the calibration standard cannot be clad (as is the actual component). Section XI, Appendix I requires the calibration block to be clad if the component is clad. This allows the calibration standard to be more representative of the component being examined. If ANPP desires to use a clad calibration standard to perform Article 5 examinations, then an exception to the requirements of Article 5 would have to be taken.

EXCLUSIONS AND EXCEPTIONS
(continued)

Thirdly, Article 5, paragraph T-535.1(c)(1) requires that the first point on the DAC curve be no less than a 3/8 vee-path or two (2) inches whichever is less. The second point of the DAC curve is at 5/8 vee-path. Section XI, Appendix I examinations utilizes a 1/4T (1/8 vee-path), 1/2T (2/8 vee-path), 3/4T (3/8 vee-path), and 1-1/4T (5/8 vee-path) calibration. It is obvious that the Appendix I DAC curve is more representative of the actual behaviour of the sound beam in the material. A similar analysis can be extended to straight beam calibrations.

Finally, Article 5 utilizes a 50% reference level for straight beam examinations while Appendix I utilizes an 80% reference level. This higher reference level allows for increased reliability in reporting and evaluating reflectors.

8. The 1974 Code does not require that a surface exam be performed on all Class I and Class II piping. In anticipation of adoption of the 1977 Edition through Summer 1978 Addenda of Section XI, 100 percent of the welds in the Class I and II piping are given surface exams, as required, in this later edition of the code.

9. Summer 1975 Addenda of 1974 Edition of Section XI ASME Code required volumetric exams of all Class II welds. In view of the fact that preservice surface exams were performed using the Summer 1978 Addenda for acceptance criteria and in anticipation of future updating to Summer 1978 Addenda or later the inservice examination in Zones 80 through 83 piping with wall thickness 1/2 inch or less received only surface examinations. (Unit I only) This is consistant with the later approved Addenda of Section XI of the ASME Code.

   This provision will be applied to all the zones of Units II and III (where applicable).

QUALITY ASSURANCE

All engineering services and component examinations described elsewhere in this program plan will be conducted to meet the applicable quality assurance criteria of 10CF50, Appendix B.

The Combustion Engineering Quality documents which apply to this program are the "Development Department Quality Assurance Program Description" dated 1-14-80, and the "Quality Assurance Program for Service Activities," document 00000-ESS-155, Rev. 03, dated 4-21-81. This document supersedes "Program Controls Procedure for Inservice Inspection, 00000-NLE-056.

Copies of these two documents are included in this plan.

QUALITY ASSURANCE PROGRAM

FOR

SERVICE ACTIVITIES

00000-ESS-155

ENGINEERING DEVELOPMENT AND SERVICES
DEVELOPMENT DEPARTMENT
NUCLEAR POWER SYSTEMS DIVISION
COMBUSTION ENGINEERING, INC.
WINDSOR, CONNECTICUT

Prepared By: _____ Date: 9/28/79
Quality Assurance Coordinator

Approved By: _____ Date: 11-1-79
Supervisor, Inspection Services Development

Approved By: _____ Date: 11-7-79
Manager, Inservice Inspection

Approved By: _____ Date: 11/7/79
Director, Engineering Development and Services

Approved By: _____ Date: 11/7/79
Director, Group Quality Assurance

Original Issue
Date: November 7, 1979

Revision No: 3
Date: 4-21-81

Procedure Revision History Sheet

Procedure: 00000-ESS-155 Title: Quality Assurance Program for Service Activities

RECORD OF REVISIONS

No.	Date	Pages Involved/ General Description	Purpose of Revision	Revision Prepared By	Revision Approved By
1	Dec.21,79	3,5,6,9,11,13,15,16,19, 20,22,24,25,26.	General Revisions for clarification.	G.Zuromsky	E.J.Parent E. D'Amaddio B. J. Selig C. W. Hoffman
2	June2,80	All pages	General Revisions in response to Audits	G. Zuromsky	E. J. Parent E. D'Amaddio B. J. Selig C. W. Hoffman
3	April21,81	1,2,4,5,7,8,9,10,13 16,19,21,24,29,30, 33,34	General Revisions in Response to Audits	G. Zuromsky	E. J. Parent E. D'Amaddio B. J. Selig C. W. Hoffman

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QUALITY ASSURANCE PROGRAM FOR SERVICE ACTIVITIES

A. PURPOSE

This program defines the quality assurance requirements for the preparation and implementation of service activities on structures, systems and components in compliance with Section XI of the American Society of Mechanical Engineers (ASME) Code, applicable standards, Regulatory Guides, Technical Specifications, or Industrial Codes.

This program is organized in accordance with and meets the quality assurance criteria of 10CFR50, Appendix B and conforms to the Development Department Quality Assurance Program Description and the applicable portions of CENPD-210-A.

The policies, requirements and procedures specified in this program apply to service activity requirements imposed on C-E by the utility customers and then imposed on vendor service organizations. These policies, requirements and procedures are identified in procurement documents and program plans.

B. SCOPE

This procedure pertains to those aspects of Service Activities that include any or all of the following:

- Engineering Support Services
- Examination Criteria
- Component Preparation for Nondestructive Examinations
- Shop and/or Field Preoperational Service Activities (including ASME Section XI Preservice Examinations)
- Post-Operational Service Activities (including Inservice Inspection per ASME Section XI)
- Final Report on Nondestructive Examinations

C. REFERENCES

The addenda, issues or editions of the following documents in effect on the date of the contract are applicable. Later addenda, issues or editions may be made applicable through a contract change.

- ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," and Addenda referenced in the contract.
- Code of Federal Regulation, 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants."
- 10CFR Part 21, Reporting of Defects and Noncompliance, and CE Power Systems Group Administrative Policy Instruction (API) No. 17, Reporting of Safety Hazards.
- ANSI N45.2-1977, "Quality Assurance Requirements for Nuclear Power Plants."
- CE Power Systems Group Quality Assurance Manual, CENPD-210-A.
- CE Development Department Quality Assurance Program Description.
- CE Group Quality Assurance Manual (QAPs).
- ASNT, SNT-TC-1A, "Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing."
- Procedure for the Preparation and Control of Procedures, 00000-ESS-109.
- Procedure for Preparation, Maintenance and Retention of Daily Field Activities Log, 00000-ESS-143.
- Procedures for the Preparation of Procurement Documents for Service Activities, 00000-ESS-156.
- Vendor Performance Requirements for Examination Services, 00000-ESS-163.
- Procedure for Control of Eddy Current Examination Data, 00000-ESS-070.
- Personnel Training Program for Field Service Activities, 00000-ISI-031.
- Procedure for the Control and Distribution of NDE Data, 00000-ISI-032.
- Submittal Instructions for Deviation of Contract Requirements (DCR), Specification 00000-WCC 15.1.

D. DEFINITIONS

Some of the following definitions are not in accordance with ANSI N45.2.10 since it is intended that they reflect commonly understood meanings related to field service activities (e.g., ASME Section XI) rather than the general definitions of the ANSI document.

Audit - A comprehensive, periodic evaluation of quality assurance practices, procedures and instructions and the effectiveness of their implementation and conformance with policy directives. An audit should not be confused with a surveillance or an inspection that is conducted for the sole purpose of process control or product acceptance.

Baseline Examination - See Preservice Examination.

Certification - The action of determining, verifying and attesting in writing, to the qualifications of personnel, equipment or material.

The Code - Generally refers to the ASME Boiler and Pressure Vessel Code, but may be any official regulatory standard that applies to a specific task. The standards may include ASTM and ANSI codes and standards, Codes of Federal Regulations and plant technical specifications.

Cognizant Engineer - A technically qualified individual who is responsible for those activities that are necessary to assure the timely and appropriate preparation, application and updating of a specific project (also may be referred to as the Project Engineer).

Component Preparation - Those activities that are performed on a component for preservice/inservice examinations and may include the following:

- Procurement of calibration standards
- Drawings to locate examination areas
- Identification and preparation of examination areas on the component

Controlled Document - Any document that is uniquely identifiable by plant, item, subject, document number and date and is readily retrievable.

Customer - The organization responsible for the establishment of procurement requirements and for the issuance and administration of procurement documents.

Engineering Support Services - Activities performed prior to the examinations and may include the following:

- Review of general plant design drawings to determine accessibility for the performance of examinations
- Preparation of examination boundary drawings
- Identification of examination areas
- Preparation and/or updating of examination procedures
- Code interpretation for applicability to the examination program
- Preparation of program plans and schedules for service activities
- Consultation services pertaining to service activities

Examination (ANSI) - An element of inspection consisting of the investigation of materials, components, supplies or services to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gauging and measurements.

Examination (ASME Code) - Examination denotes performance of visual observations and nondestructive examinations such as ultrasonic, eddy current, radiography, liquid penetrant and magnetic particle methods.

Inspector or Authorized Nuclear Inservice Inspector (ANII) (State or Code) - A qualified individual employed by a legally instituted agency of a municipality or State of the United States or by an authorized inspection agency and having jurisdiction at the manufacturing or installation site.

Inspection - The witnessing or otherwise verifying by an Inspector of the performance of quality-related examinations.

Item - Any level of unit assembly including structure, component, system, subsystem, subassembly, part or material.

Preservice Examinations - A term used interchangeably with Baseline Examination. Those examinations that are performed prior to initial operation of a plant and in compliance with the requirements of Section XI of the Code. The procedures, techniques and equipment are selected for their applicability to satisfy future Inservice Inspection requirements.

Program Plan - A comprehensive description of a preservice or inservice inspection program or other similar field service activity. This document contains many if not all of the following features: identification of the areas to be examined and the applicable NDE procedures (including volumetric, surface, visual, or hydrostatic pressure test procedures), calibration standards required, remote equipment requirements, exclusions or exceptions, and the applicable quality assurance program requirements.

Supplier - Any organization that furnishes items or services to a procurement document. Supplier may also be referred to as Vendor, Seller, Contractor, Fabricator, Consultant and subtier levels.

Surveillance - The review, observation and inspection of a supplier's personnel, equipment, processes and test results at selected stages of manufacture to establish that the action/document is completed in accordance with contract requirements.

E. RESPONSIBILITIES

Manager, Field Service Activities

These responsibilities apply to the Manager, Inservice Inspection and to the Manager, Systems Integrity Services unless otherwise noted.

- Responsible for the establishment, timely implementation and administration of the programs for field service activities.

- Determines that the terms of contracts are in compliance with applicable Codes, specifications, standards and regulatory guides.

- Assures that Contract Quality Assurance (CQA) reviews contract documents to assess quality requirements and determine impact.

- Responsible for the resolution of conflicts with the customer's project manager involving the proper requirements and implementation of quality-related activities, in conjunction with Group Quality Assurance (CQA) and the QA Coordinator.

- Manager ISI only: Approves certification of NDE Level III examiners in accordance with the requirements of Power Systems Group Procedure "Documented Certification Program for Level III NDT Personnel" (Quality Policy Statement Number 11) which meets the requirements of ASNT SNT-TC-1A, 1975 Edition, and the ASME Code.

Consulting Engineer, Inservice Inspection

- Responsible to the Manager, Inservice Inspection for the overall implementation of this quality assurance program and for establishing quality guidelines and policies that affect ED&S field service activities.

- Responsible for the overall quality-related and NDE training program for ED&S services personnel.

Supervisor, Field Service Projects

These responsibilities apply to the Inservice Inspection Projects Supervisor, the Inspection Services Development Supervisor; the Core Service Supervisor; and the Component Examination Services Supervisor unless otherwise noted.

- Responsible for the selection and assignment of qualified personnel (as determined by experience and prior duties) as Cognizant Engineers for specific tasks, studies or programs.

- Reviews and approves assignments completed by the Cognizant Engineers.

- Responsible for the selection of personnel for training and qualification to the appropriate levels of ASNT SNT-TC-1A and Section XI of the ASME Code, for conducting, monitoring or evaluating nondestructive examinations or the operation of remote examination equipment.

- Responsible for the establishment, maintenance, retention of programs and correspondence relating to quality-related documents of service contracts and the overall coordination of CE's quality matters at the supplier or customer site location.

- Core Services Supervisor only: Responsible for the selection, training, qualification, and certification of personnel conducting poolside examinations of irradiated fuel assemblies and associated core components.

- Inspection Services Development Supervisor only: Responsible as NDE Level III for review and approval of CE and subcontractor NDE procedures, certifying qualification of NDE personnel, content of training program for NDE personnel, evaluation of examinations, and for reviewing adequacy of NDE data.

Cognizant Engineer

- Responsible for the technical direction and performance of specifically assigned field service activities.

- Prepares procurement requisitions for equipment, materials, and services from approved, qualified suppliers.

- Controls and maintains service activity documents such as procedures, specifications, instructions, drawings and correspondence on assigned contracts using a documented filing and retrieval system.

- Responsible for the administration of contracts for nondestructive examinations and/or services as well as the selection of subcontractors for specialized support in service-related activities.

- Reviews and comments on the ASME Code, technical procedures, specifications and regulatory guide developments as applicable to shop or field service activities.

- Reviews and comments on drawings, and specifications of structures, systems, and components supplied by CE or others for accessibility for examination services.

- Conducts engineering support services, studies, and development projects.

- Prepares examination program plans including procedures, instructions, drawings, and schedules for management and QA review and approval, as applicable.

- Supervises/conducts nondestructive examinations at the supplier/customer site location within the limitations of his SNT-TC-1A qualifications.

- Prepares technical reports on field service activities.

- Coordinates CE Power Systems Group Quality Assurance scheduled activities at the site location when required by contract.

Quality Assurance Coordinator

- Responsible for the implementation of the ED&S Quality Assurance Program for field service activities including maintaining and updating the program as necessary (under the direction of the Consulting Engineer).

- Interfaces with Group Quality Assurance on internal and vendor audits.

- Interfaces with Group Quality Assurance on audits of ED&S field service activities.

- Reviews and approves procurement requisitions for quality-related requirements.

- Conducts internal verification reviews of the ED&S field service activities on a prescribed schedule.

- Conducts indoctrination and training sessions for personnel performing activities affecting quality. Maintains associated procedures and documentation, ascertains the overall scope, nature and effectiveness of the program. Coordinates training programs for NDE training activities to assure that they are are effectively implemented and maintained in accordance with ASNT SNT-TC-1A and the ASME Code (in cooperation with appropriate Level III personnel).

- Provides resolution together with GQA of conflicts between customer QA requirements and the requirements of this program for manager approval.

1.0 ORGANIZATION

1.1 The organization charts of CE Power Systems Group Management and the Field Service Groups within Engineering Development and Services (ED&S) are shown in Exhibits I and II.

The ED&S field service organization interfaces with other CE organizations such as Group Quality Assurance in areas of quality-related activities.

The ED&S field service organization consists of the following functional groups:

1.1.1 Inservice Inspection

- Conducts ASME Section XI Code preservice/inservice examinations and interfaces with CE Power Systems Group design, engineering and manufacturing personnel.
- Responsible for the development, implementation, and administration of all quality-related aspects of ED&S field service activities.
- Preparation, review and approval of NDE procedures.
- Training, qualification and certification of examination personnel.
- Administration of R&D contracts and PED tasks.

1.1.2 Systems Integrity Services

- Conducts nondestructive examinations of steam generator tubing, fuel assemblies and associated core components, and reactor vessel internal core support structures, as required by the ASME Code or plant technical specifications, as applicable.

1.2 Internal QA audits of field service activities are conducted by Group Quality Systems (GQS) on an annual basis, as a minimum, to assure that this QA Program is established and effectively implemented. GQS provides consultation and assistance in the development and maintenance of this QA program.

1.3 The following services are the responsibility of Group Quality Control (GQC) on quality-related activities.

1.3.1 Review of program plans and procurement documents to assure that quality provisions have been incorporated or referenced.

1.3.2 Surveillance and audit of on-site service activities to verify compliance with operating procedures.

1.3.4 Qualification of suppliers of services and equipment by audit and surveillance.

2.0 QUALITY ASSURANCE PROGRAM

2.1 The Development Department field service organization complies with the applicable requirements of the ASME Code, 10CFR Part 50, Appendix B criteria, CENPD-210A and specific contract requirements through the implementation of this QA Program.

2.2 The Director of ED&S and the Director of GQA are jointly responsible for overall implementation of this QA Program. They are regularly apprised of the program's implementation and effectiveness via reports from the Manager, Field Service Activities, site audit/surveillance reports by Group Quality Control, and internal audits by Group Quality Systems.

2.3 Quality Control requirements of field service activities are incorporated into instructions, procedures, drawings and examination plans which are developed for each contract and included in the program plans. These documents cover the requirements for personnel and equipment qualifications and special process controls and are reviewed for quality requirements by the QA Coordinator. GQC also reviews the program plans and resolves discrepancies with the QA coordinator.

2.4 An indoctrination and training program is implemented to assure that CE field services personnel are knowledgeable and proficient in quality-related service activities. Suppliers of subcontracted NDE services employ training programs to assure that their personnel are qualified as required by SNT-TC-1A and Section XI of the ASME Code.

2.5 Revisions to this Quality Assurance Program shall be reviewed and approved by those personnel approving the original document.

3.0 DESIGN CONTROL

3.1 Design control functions, when applicable, are carried out per CENPD-210A, Section 17.3, in accordance with the Development Department Quality Assurance Program Description.

3.2 The field services groups are involved in specific areas of the design, procurement, performance testing and field operation of remote handling equipment such as:

3.2.1 Special examination devices, e.g., eddy current test probes for detection of local wall degradation of fuel bundle guide tubes, dent profiling of steam generator tubing and fuel clad oxide film thickness measurements.

3.2.2 Automated manipulative examination equipment.

3.2.3 Special tooling, some one-of-a-kind, for the repair/modification of reactor components (fuel bundles, CEAs, steam generator tubes).

3.2.4 Review of design specifications and drawings of new and/or installed reactor coolant structures, systems or components for accessibility to Inservice Inspection personnel and examination equipment and recommended design changes to improve the extent of accessibility.

3.3 In those cases where the remote handling equipment/device is procured from an outside supplier, the Cognizant Engineer shall specify the requirements in the procurement document including materials, processes, workmanship, acceptance criteria, engineering drawings and applicable codes, standards and regulations.

3.4 The Cognizant Engineer shall establish the requirements of the performance qualification of the remote handling equipment/device as well as specialized personnel training for field operation and maintenance.

4.0 PROCUREMENT DOCUMENT CONTROL

4.1 In general, materials, parts, equipment and components, procured by the field services group, are not quality-related and can be purchased commercially, as assembled, or as modified units to meet the intended requirements of the field service program.

4.2 The Cognizant Engineer initiates the procurement requisition by completing the item number, quantity, component code and description and charge number on the standard CE requisition form. Procurement of non-quality-related items and services is governed by commercial standards, and, as required, by pertinent specifications, instructions and drawings. The procurement documents for quality-related items and services requiring Section XI ASME Code conformance must specify an approved supplier, selected from CE PSG Approved Vendor List. The requirements for the preparation and control of procurement documents for services and associated equipment and materials are defined in procedure 00000-ESS-156.

4.3 The requisitions are reviewed and approved by the Quality Assurance Coordinator, the Supervisor, the Manager and other management personnel (project managers or vice presidents), depending on financial authority limits. The requisitions for commercial items and services are processed by the Purchasing Department and transmitted directly to the supplier as purchase orders. Requisitions for quality-related items and services and their supporting documents are further reviewed and approved by Group Quality Control to assure that quality provisions of the procurement documents have been invoked. Supplements to the procurement documents are prepared and handled in the same manner as the original purchase requisition.

5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 Field service activities involving nondestructive examinations, training, and qualification of examination personnel and acceptance criteria for materials and equipment are implemented through approved instructions, procedures and drawings. These documents are referenced or contained in Program Plans for each contract, are prepared by qualified personnel and are reviewed for technical, administrative and quality requirements by the Inservice Inspection and Group Quality Control organizations prior to approval and release for use. The Manager or his delegate is responsible for assuring the preparation, review, approval and implementation of these documents.

Changes or revisions to these documents are provided the same review, approval and control as the original documents.

5.2 Quality-related instructions, procedures, and drawings submitted by a supplier shall be reviewed and approved for technical content, quality requirements, completeness and adherence to contract requirements by the same methods and personnel as for CE instructions, procedures and drawings (00000-ESS-163).

5.3 The customer or his agent shall be included in the review and approval of instructions, procedures and drawings prior to initiation of field service activities, if required by the contract.

6.0 DOCUMENT CONTROL

6.1 Instructions, procedures and specifications for nondestructive examinations, personnel and equipment qualifications, and service activity acceptance criteria are prepared, reviewed, approved, revised and controlled in accordance with the guidelines of the Procedure for the Preparation and Control of Procedures, 00000-ESS-109.

6.2 The QA Coordinator, Supervisor and the Manager or his designated alternate, review and approve the documents. The Cognizant Engineer is responsible for the timely issuance of appropriate documents via services program plans for planned activities at the customer/supplier location. Revisions are handled and approved in the same manner as the original documents. Superseded documents are replaced in a timely manner with updated documents to assure that the latest documents are used, in accordance with the documentation system (00000-ESS-109).

6.3 The Cognizant Engineer maintains the service activity documents in the ISI filing area that is current and complete, with an established index listing system to control their distribution and disposition. Upon completion of a contract, the pertinent documents are consolidated and stored in accordance with approved records retention/retrieval procedures. Reports on nonconformance and corrective action, supplier deviation reports, procurement documents, correspondence and memoranda on each contract are controlled by logs to provide adequate accessibility and traceability. The Inservice Inspection documentation system is periodically audited by Group Quality Systems for compliance with the governing procedures.

6.4 When required by the C-E procurement document, suppliers employ an effective document control system which is verified by GQC during normal surveillances and audits.

6.5 An Engineering Notice (EN) is a change notice for modifications to previously approved and released program plans, procedures, specifications and drawings in order to expedite field service operations and/or avoid costly delays. Only one document is affected by each EN. EN's become incorporated initially as temporary field revisions and subsequently as revisions to the affected document. The EN form is shown in Exhibit III.

The Cognizant Engineer or the Shift Supervisor is responsible for the initiation, preparation, control and implementation of EN's as well as approvals by the customer or supplier, if applicable. This responsibility may be delegated contractually to a supplier (for the supplier's procedures only) provided that the supplier has a change notice procedure approved by the Cognizant Engineer. All EN's shall be approved by the Authorized Nuclear Inservice Inspector prior to implementation. In instances where the release of the EN is essential to the validity of the examination results, then the time (date) after which that EN must be implemented shall be specified on the EN. Example, "This EN shall be implemented on or before (date)". The EN's are documented in the following manner.

a. The affected document is identified on the EN by title, number, revision and date of issue description of the changes and the reason for the changes. The EN may contain a brief statement on a minor or single change or a detailed complex description that requires additional attachments to the EN.

b. The EN is assigned an identification number that consists of a prefix such as MP2-____, to identify the contract or utility number, and a suffix for identifying consecutively issued numbers. The EN is attached to a marked copy of the affected document that carries the following information:

MARKED COPY

Field Revision:_____(use A, B, C, etc.)

Date:_____

EN Number:_____

Signature:_____
(Cognizant Engineer)

c. The Cognizant Engineer or Shift Supervisor is responsible for the distribution of approved EN's to each individual in possession of controlled copies of the affected documents. The holders of the controlled copies shall mark the EN number on each affected page of the document in the right hand column opposite the line(s) affected to identify the changes to the document. The original copy and marked copy of the affected document are retained at the site file location.

d. A log of all EN's issued against the documents for any field service activity is maintained by the Cognizant Engineer and provides a means of establishing the EN's that are outstanding against the documents at any time.

7.0 CONTROL OF PURCHASED MATERIALS, EQUIPMENT AND SERVICE

7.1 Materials, equipment and services are purchased (either directly or through a supplier) to the technical and quality requirements specified in the procurement document. Procurement documents are prepared in accordance with Procedure 00000-ESS-156. A current listing of approved suppliers is maintained by the Purchasing Department and Group Quality Control. Files are maintained by GQC which contain information on the scope of supplier's services and capability along with audit results, as required. Suppliers providing off-the-shelf items such as consumable examination materials, where the required quality may be determined from receiving inspections, as specified in procurement documents and/or tests, may be excluded from surveillance and audits.

7.2 Purchased material and equipment including calibration blocks and standards are properly identified, inspected or tested for cleanliness, appropriate chemical and physical property certifications to permit traceability and to verify conformance to the procurement documents. The procurement document is used as a checklist for receiving inspection. Nonconformities are clearly identified per Section 15, and the affected material or equipment labeled and segregated for the required disposition or corrective action. Source inspection and audits of suppliers are performed by Group Quality Control in accordance established procedures (QAPs).

7.3 Services, including nondestructive examinations, are obtained from approved suppliers. The procurement document and the governing specification (00000-ESS-163) cover the approval and performance requirements of suppliers of NDE service activities. Certifications of NDE personnel, qualified to the required SNT-TC-1A levels, are provided by the supplier prior to the start of the examinations. Copies of the certifications are obtained prior to the examinations and are retained in the field service group files for the duration of the examinations. The Supplier's Quality Assurance Program is reviewed and approved prior to the initiation of field service activities.

7.4 Consumable examination materials, i.e., UT couplants, penetrant dyes, emulsifiers and developers, cleaning solutions and marking pens, used in nondestructive examinations are specified in procurement documents and/or examination procedures. The examination materials are clearly identified by lot/batch number or other means for traceability to chemical and physical property certifications and include manufacturer's instructions on avoiding contamination and deterioration. Receiving inspection is performed by qualified NDE personnel using the procurement document as a checklist. Examination materials that do not meet the requirements of the procurement document and/or examination procedures are nonconforming and disposed as rejected materials.

8.0 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

8.1 Materials, parts and components, including partially fabricated assemblies, are appropriately identified and controlled in accordance with the requirements of the procurement document. Methods of identification include use of low-stress steel stamps, color-coded tags, indelible ink markers, labels, imprinted tape or stencil markings. The markings on materials, parts and components shall be done by methods that are positive in identification and traceability and do not adversely affect the integrity of the item. Each item is identified by lot, heat, serial number, material certification number or other pertinent information to provide sufficient identity.

8.2 Large quantities of a small item or groups of an item may be identified by lot, heat or batch number by applying the marking to the storage or shipping container, provided that positive identification and traceability is maintained for the individual item during handling, shipping, storage and use. When lots are subdivided during processing, each sublot of items, as required, may be identified to its parent lot. Partially fabricated assemblies may include the identification of the parts along with documentation on heat, serial or part number for assuring acceptability of the assembly and its component parts. When codes, standards or specifications require traceability of materials, parts or components to specific inspection or test records, the program shall be designed to provide this traceability.

8.3 If the traceability of the material or part of a component is lost or if the identification is incorrect, the item shall be segregated and handled as nonconforming until the nonconformance is resolved (Section 15).

8.4 When required by contract or when deemed necessary by the Cognizant Project Engineer, specific procedures are issued and referenced in the program plans.

9.0 CONTROL OF SPECIAL PROCESSES

9.1 Nondestructive examination is the primary special processes service that CE Engineering Development and Services provides to its customers.

9.2 Examination Personnel

9.2.1 Personnel performing nondestructive examinations, as part of a service activity, are trained, qualified and certified to the appropriate level of ASNT SNT-TC-1A, as defined by the procurement document and Section XI of the ASME Code, in accordance with established and approved procedures. The current certifications of examination personnel are maintained at the site during the examinations and at the CE home office. The qualification records of certified individuals are maintained and controlled by the Manager or his designee, using the established filing system. The supplier provides nondestructive examination personnel as specified in the procurement document and the field services program plan. The personnel are qualified in accordance with the supplier's written procedures which are approved by CE and meet applicable ASNT and ASME Code requirements.

9.2.2 Nondestructive examinations of some components, irradiated fuel subassemblies and associated core components may not be covered by Section XI of the ASME Code. The Supervisor, with the approval of the Manager, appoints personnel with the necessary knowledge, experience and qualifications to conduct the required examinations at the reactor site in accordance with approved procedures.

9.3 Nondestructive Examinations Procedures

9.3.1 Nondestructive examinations employing visual, surface and volumetric techniques are conducted to the requirements of written, approved procedures. The procedures are identified to specific contracts unless they are generic in nature. The procedures are prepared in accordance with the Procedure for the Preparation and Control of Procedures 00000-ESS-109, and applicable portions of Section XI of the Code.

9.3.2 Nondestructive examination procedures and revisions are reviewed and approved by CE Level III examination personnel. Supplier nondestructive examination procedures are reviewed and approved by both supplier and CE Level III personnel, as specified in the procurement document.

9.3.3 The Manager, or his designated alternate, assures that complete and current files are maintained on CE and supplier nondestructive examination procedures.

9.4 Nondestructive Examination Equipment

9.4.1 A program for the control and calibration of test and measuring equipment used for acceptance purposes, is utilized during the procurement, manufacture and installation of equipment/material necessary to support field service activity.

9.4.2 Examination equipment and ancillary instrumentation (including, where applicable, electronic and mechanical equipment, data acquisition systems, remote handling equipment, transducers and probes) are identified, maintained, calibrated, labeled and controlled in accordance with written, approved procedures. The examination equipment is calibrated at schedules based on elapsed time or usage, employing certified standards that are traceable to the National Bureau of Standards or the basis for calibration is properly documented. The intervals between calibrations are determined by the type and purpose of the equipment, stability characteristics and degree of accuracy needed. Calibration records, including the last and the due calibration dates, are documented for each equipment and become part of permanent records of the examinations.

9.4.3 When examination equipment is found to be out of calibration because of usage or damage, the equipment is removed from service and properly identified for evaluation and recalibration. If the equipment cannot be calibrated in accordance with the requirements of applicable procedures or instructions, the equipment is identified and segregated as nonconforming and subject to repair/recalibration or rejected for disposition.

9.5 Nondestructive Examinations

9.5.1 Nondestructive examinations are conducted under the supervision of the qualified Level III examiner, whereas, the Cognizant Engineer is responsible for the planning, coordination and performance of the examinations. The examinations are conducted in accordance with written, approved program plans. The plans are based on Component Preparation and Engineering Support Services activities and delineate Code and specification requirements as well as the type, scope, sequence and schedule of the planned examinations.

9.5.2 The Code examinations are witnessed by an Authorized Nuclear Inservice Inspector and the customer, at his discretion, and to the extent necessary to meet the requirements of Section XI of the ASME Code. Examinations that do not involve Section XI of the ASME Code, not witnessed by an Authorized Nuclear Inservice Inspector, may be witnessed by representatives of the customer and/or regulatory agencies, as deemed appropriate by the customer.

9.5.3 Periodic surveillance or system audits may be scheduled and performed during the time of the examinations by Power Systems Group Quality Assurance, per Section 18.

9.5.4 The examination data, records and drawings are documented and controlled to the requirements of appropriate examination data control procedures (00000-ISI-032 and 00000-ESS-070).

10.0 INSPECTION

10.1 Code-Related Activities

10.1.1 The Code examinations are witnessed by an Authorized Nuclear Inservice Inspector, at his discretion, and to the extent necessary to meet the requirements of Section XI of the ASME Code.

10.1.2 The inspection records shall be maintained by the Cognizant Engineer and shall meet the minimum requirements of Section XI of the ASME Code or the procurement document, as applicable.

10.2 In-Process Inspection (Suppliers)

10.2.1 In-process inspection is performed and documented by suppliers during the manufacture of special NDE items, such as calibration blocks, to specification and drawing requirements and as indicated in the procurement document. If direct inspection of processed items is not possible or practical, indirect control by monitoring of processing methods, equipment and personnel are used.

10.2.2 Documented QA program plans, procedures or instructions may specify mandatory inspection hold points, as applicable, beyond which work cannot proceed without appropriate inspection action. The inspection results are documented and evaluated prior to release of the item for shipment to assure that inspection requirements are satisfied and properly documented.

11.0 TEST CONTROL

11.1 Not Applicable to Field Service Activities.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 Measuring and test equipment and devices such as tools, gages, instruments, fixtures and reference standards used in field service activities are specified in the examination procedures. The measuring and test instruments are maintained and stored in the electronic and optical laboratories. The measuring and test equipment are calibrated at scheduled intervals, using approved procedures, against certified standards that are validly related to nationally recognized standards. Where such standards do not exist, the basis for calibration is documented. Calibration intervals depend on type of equipment, application, usage, required accuracy and stability characteristics.

12.2 Requirements for supplier control of measuring and test equipment are specified in the procurement document. CE surveillance of supplier activities includes periodic reviews of the performance and effectiveness of the supplier control of measuring and test equipment. Suppliers on the Approved Vendors List (AVL) are required to have an effective and operational system for the maintenance, calibration and storage of measuring and test equipment.

12.3 When measuring or test equipment is found to be out of calibration, an evaluation is made and documented to determine the validity of prior examination or test results and disposition of previously examined or tested items. Measuring and test equipment found to be worn or consistently out of calibration are repaired or replaced (See Section 9.4). Each person using the measuring or test equipment is responsible for ensuring that this equipment is within the calibration due date prior to performing the inspection or test operation.

13.0 HANDLING, STORAGE AND SHIPPING

13.1 The control of the cleaning, handling, storage, packaging and shipping of equipment and materials to preclude damage, deterioration and loss is in accordance with approved procedures and practices, as appropriate to the item. As required, special markings and instructions are provided, to identify, maintain and preserve special items such as remote examination equipment (RPV PaR device, ET finger walker, spent fuel inspection stand), including the requirements for special control during storage and in-plant examinations.

14.0 INSPECTION, TEST AND OPERATING STATUS

14.1 The status of the completion of required field service activities, defined in the Program Plan, is provided on a continuous basis by the Cognizant Engineer. A daily log of activities in the field is maintained in accordance with procedure, 00000-ESS-143.

14.2 The inspection of supplier procured equipment and material is in accordance with Sections 7 and 10 of this Quality Assurance Program. Interim inspection status of these procured items is not pertinent since all inspections are related to the finished item.

14.3 Overall status of the examination program is maintained through the use of appropriate checklists and data control procedures, e.g., 00000-ISI-032 and 00000-ESS-070.

15.0 NONCONFORMING MATERIAL, PARTS OR COMPONENTS

15.1 The Cognizant Engineer is responsible for the procurement of acceptable nondestructive examination equipment, instrumentation and calibration standards. Equipment and instrumentation found to be defective or nonconforming during receiving inspection are controlled by marking, tagging and physical segregation by the receiving inspector to prevent their inadvertent use, and are repaired or replaced in accordance with requirements of the procurement document and/or the supplier warranty. Nonconformances that affect the final product shall be reported to the customer. The Cognizant Engineer assures that calibration standards are fabricated to comply with applicable drawings and/or specifications and are suitable for their intended use by review of the final inspection reports. Appropriate corrective action on nonconformance and any impact on the design of the calibration standard are processed through the Cognizant Engineer and Customer.

15.2 Suppliers conducting field service activities are required to report nonconformances of their NDE equipment and examination materials at the plant site to the CE Cognizant Engineer. Measures for the supplier control of nonconformances include item identification, documentation, item segregation to avoid inadvertent use and resolution/disposition, in accordance with CE approved-supplier NDE procedures. Typical supplier nonconformances in the field involve nonoperating or out-of-calibration equipment that is tagged and physically segregated, and promptly replaced by operating, calibrated spare equipment. The Cognizant Engineer shall report any nonconformances to the QA Coordinator.

15.3 Nonconforming items are either accepted for use, as is, repaired, reworked, returned to the supplier or rejected in accordance with a documented disposition, via a Deviation of Contract Requirement (DCR) form, Reference 00000-NQC 15.1 (supplier instruction). Nonconforming items identified as rework or repair are reprocessed and reinspected in accordance with the original inspection instructions or special instructions approved by the cognizant engineer and GQA, as applicable.

15.4 All NDE personnel are responsible for the reporting of defects that could cause a substantial safety hazard, as defined in 10CFR Part 21, and in accordance with CE Power Systems Group Administration Manual, API-17.

16.0 CORRECTIVE ACTION

16.1 Cognizant C-E personnel may identify conditions adverse to quality in activities performed by field service suppliers. In the case of significant conditions adverse to quality, the supplier shall document the cause of the conditions, the corrective action taken to correct the condition and the corrective action taken to prevent recurrence of the condition. The QA Coordinator initiates and resolves the corrective action via QAP 16.1.

16.2 Supplier Quality Assurance personnel shall take the necessary action to assure that the corrective actions are effectively implemented to prevent recurrence.

17.0 QUALITY ASSURANCE RECORDS

17.1 The Manager is responsible for the implementation of a quality assurance records retention, filing and indexing system that provides identification, traceability and retrievability. The records, including revisions and supplements are logged and maintained to preclude deterioration, loss or damage to the documents. Access to the files is controlled to authorized personnel.

17.2 The controlled records include equipment calibration and examination procedures, instructions, training, qualifications and certifications of personnel and equipment and CE and supplier examination and inspection results and reports, and records of nonconformances and their resolutions. These records will be made available to the Customer, upon request.

17.3 Records and correspondence pertaining to procurement documents are maintained for the duration of the contract and for a definite period (usually one year) after issuance of the final examination report. External suppliers of examination equipment may be permitted by the procurement document to retain custody of certain records if the supplier has adequate retention procedures and storage facilities.

17.4 Final examination reports are issued to the customer after each completed phase of service activities, as required by contract.

18.0 AUDITS

18.1 Quality assurance audits of field service activities are conducted by Group Quality Assurance. GQC performs external audits as required during applicable phases of a field service contract. GQS performs an annual internal audit to determine compliance with this program. Audit results are reported in writing to the proper levels of management and followup is made to assure corrective action is implemented.

The Quality Assurance Coordinator shall conduct at least one internal verification review per year on contracts in each area of ED&S service activities.

EXHIBIT I

C-E POWER SYSTEMS GROUP ORGANIZATION

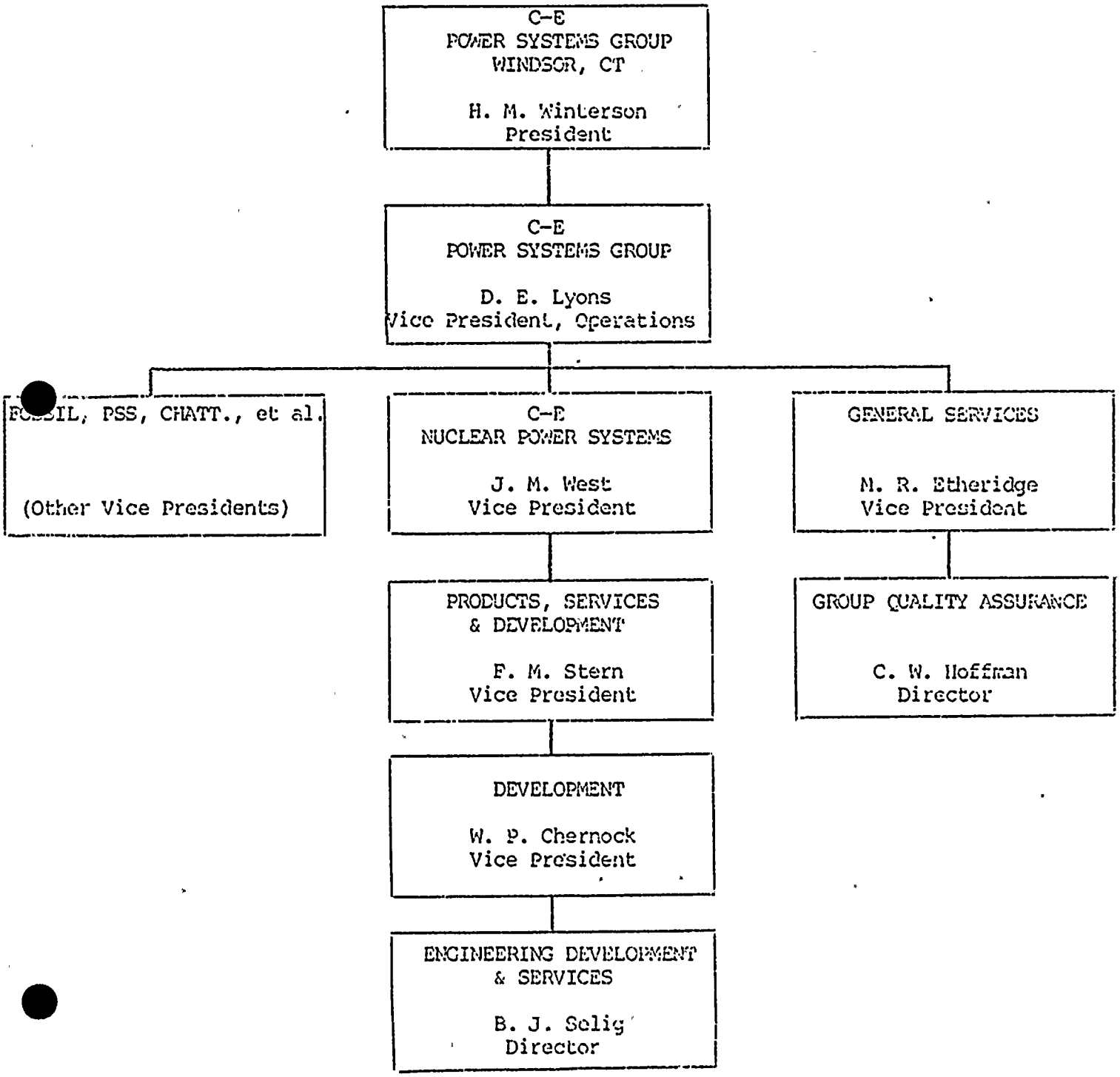

EXHIBIT II

FIELD SERVICE ACTIVITIES - DEVELOPMENT DEPARTMENT

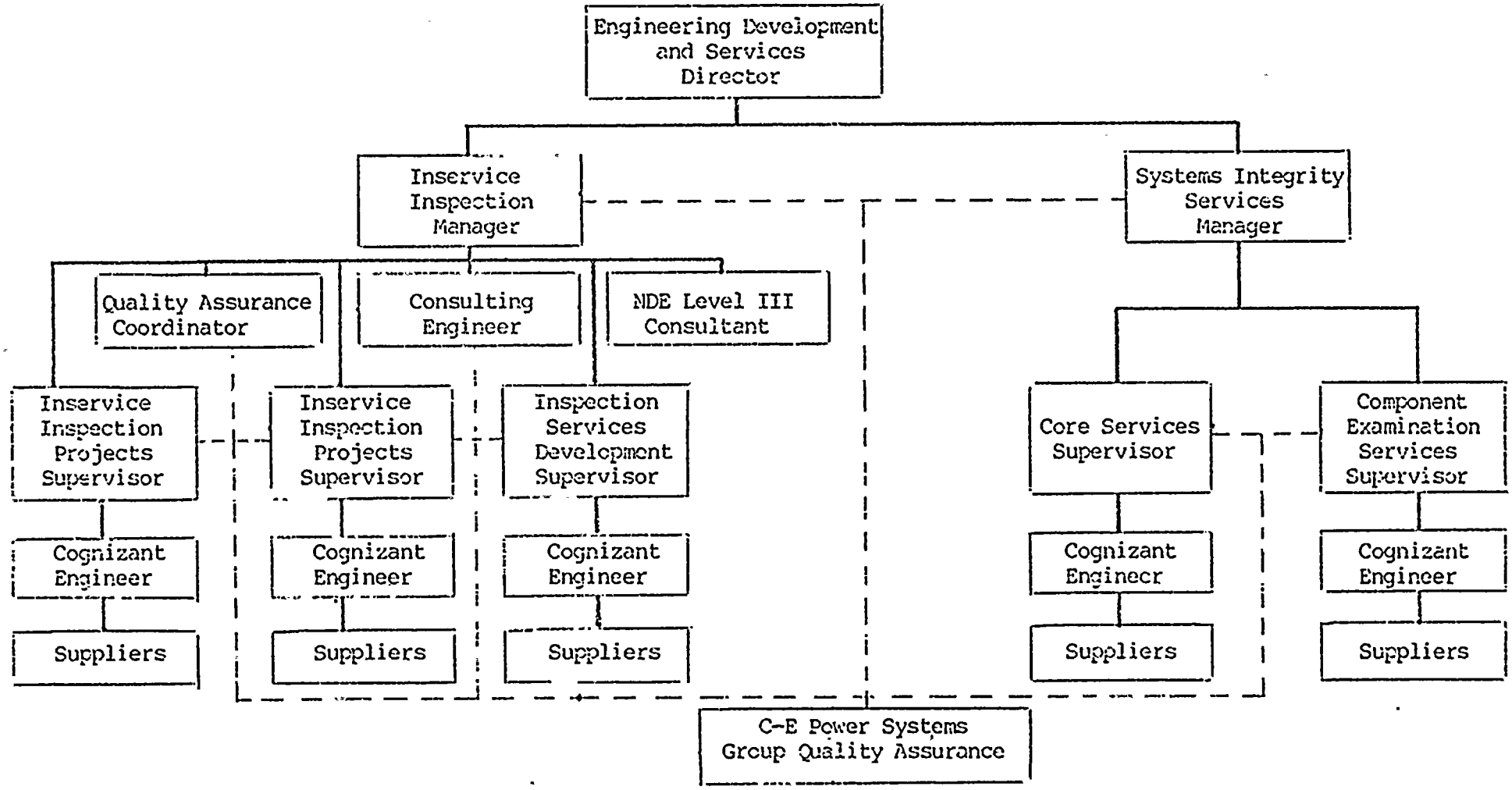

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EXHIBIT III

DEVELOPMENT DEPARTMENT
NUCLEAR POWER SYSTEMS DIVISION
COMBUSTION ENGINEERING, INC.
WINDSOR, CONNECTICUT

ENGINEERING NOTICE

E.N. No._____

Effective for Unit 1 ☐ 2 ☐ 3 ☐

Page _____ of _____

Distribution:	Document Title: Rev.:	Originator
	Number:	
	Approvals Name:_____ Date:_____ Name:_____ Date:_____ Name:_____ Date:_____	

Reason for Change:_____

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EXHIBIT III

EN#_____ ENGINEERING NOTICE

Page_____of_____ (continuation)

DEVELOPMENT DEPARTMENT
QUALITY ASSURANCE PROGRAM
DESCRIPTION

COMBUSTION ENGINEERING, INC.
POWER SYSTEMS GROUP
GROUP QUALITY ASSURANCE
WINDSOR, CONNECTICUT

APPROVED BY _____ DATE 1/11/80
Director, Group Quality Assurance

APPROVED BY _____ DATE 1/14/80
Vice-President, Development Dept.

Original Issue
DATE January 14, 1980

DEVELOPMENT DEPARTMENT QUALITY ASSURANCE PROGRAM DESCRIPTION

1.0 PURPOSE/SCOPE

1.1 To define the various Quality Assurance Programs in support of the applicable portions of CENPD-210-A used by the Development Department when providing nuclear safety related services, material or equipment and to describe the mechanism for their implementation.

1.2 To clarify the Quality Assurance Programs utilized for non-safety related work.

2.0 REFERENCES

2.1 CENPD-210-A - Quality Assurance Program
2.2 QADM-Quality Assurance of Design Procedures
2.3 QAM-Group Quality Assurance Procedure Manual (QAP)
2.4 00000-ESS-155-Quality Assurance Program for Service Activities
2.5 NPM Quality Assurance Program Manual - Fuel
2.6 NPM East Windsor Quality Assurance Program Manual

3.0 ORGANIZATION/RESPONSIBILITIES AND QUALITY ASSURANCE INTERFACE

The Development Department Vice-President is responsible for the execution of the Development Department's Quality Assurance Programs through the Directors reporting to him. (see Figure 1) These Directors are responsible for execution of the program through the referenced documents.

To provide Quality Assurance Program continuity, Quality Assurance coordinators have been designated to act as the focal point on Quality Assurance matters within their cognizant areas.

The Manager of Health Physics has been assigned responsibility for coordinating corrective action and follow-up on quality problems identified by interfacing Quality Assurance organizations.

The three sections within the Development Department which provide nuclear safety related services and material or equipment, are shown in Figure 1. Their general responsibilities are outlined as follows:

3.1 Fuels Development

Establishes experimental basis for fuel system designs, specifies materials for fuel fabrication; reviews drawings, specifications and other documents for fuel system components.

Design and development activities are performed within the framework of the QADM and are audited by Engineering Quality Assurance.

Support Nuclear Products Manufacturing (NPM) in in-process control testing of fuel fabrication which is monitored by NPMQA under their Quality Assurance program.

3.2 Engineering Development and Services

Verifies design calculations and reactor servicing equipment compatibility by testing; performs dynamic and structural testing of reactor components; develops testing programs for mechanical and hydraulic components; evaluates test data and test results; provides inservice inspection and component field inspections.

Design and development activities are performed within the framework of the QADM and are audited by Engineering Quality Assurance.

Inspection of discharged and/or experimental fuel is conducted according to 0000Q-ESS-155. Inspection and/or repair of fuel (under warranty or contract) is conducted under Nuclear Products Manufacturing (NPM) Quality Assurance Program.

Inservice inspection and component field inspection are conducted according to the Development Department's 00000-ESS-155. Group Quality Assurance conducts surveillance on inservice and component field inspections and audits the Quality Assurance Program according to 00000-ESS-155 and applicable QAPs.

Engineering Development and Services procurement, assembly and testing activities of Boronometers and Loose Parts Monitoring Equipment are non-safety related and as such are not subject to the same level of Quality Assurance as other aspects of the Development Department's activities. This equipment is procured from approved suppliers and is assembled and tested in the Development Department. Surveillance is provided by Group Quality Assurance in accordance with applicable QAPs.

3.3 Materials and Chemistry Development

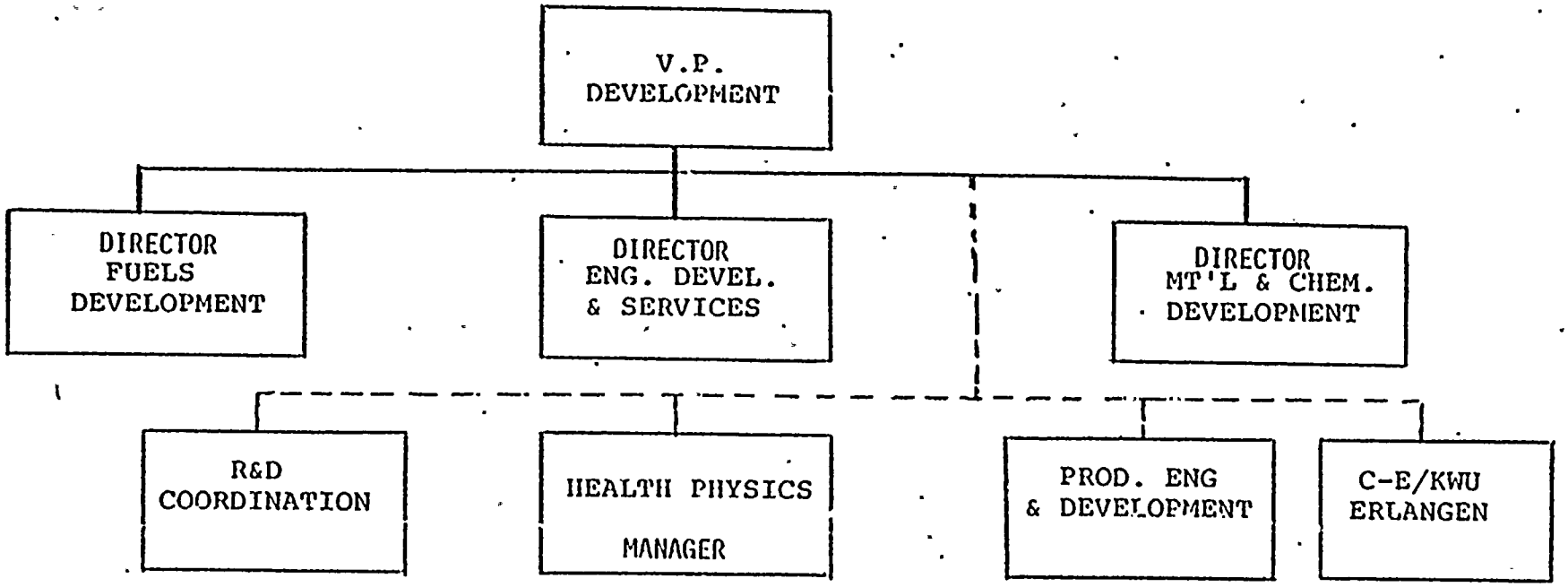
Reviews material specifications; analyzes material problems; recommends materials for specific applications and environments; reviews fabrication and test procedures; develops and maintains chemistry specifications; performs metallurgical and chemical testing; develops procedures for chemical cleaning and decontamination; analyzes chemistry related problems; provides for the reactor vessel surveillance program; predicts the effects of irradiations on material properties; performs fracture toughness testing.

Design and development services associated with safety related equipment are performed within the specified framework of the QADM and are audited by Engineering Quality Assurance. In addition, Materials and Chemistry Development supports Nuclear Products Manufacturing process control testing of fuel and component fabrication. This activity is monitored by NPM Quality Assurance under their Quality Assurance Program.

Materials and Chemistry Development fabrication and procurement activities associated with surveillance capsules are conducted in accordance with applicable QAPs. Inspection of assembly operations is conducted by NPM Quality Assurance.

FIGURE-1

DEVELOPMENT DEPARTMENT ORGANIZATION



NOTE:

DOTTED LINE FUNCTIONS DO NOT DIRECTLY PROVIDE NUCLEAR SAFETY RELATED SERVICES, MATERIAL OR EQUIPMENT.

REPORTS

Following the completion of the examinations, a detailed report will be submitted to the owner, as required by Article IWA-6000 of Section XI of the ASME Boiler and Pressure Vessel Code.

This report will include the following information:

1. Form NIS-1 (Appendix II, 1974 Edition of Section XI), Owners' Data Report for Inservice Inspection, which contains the signature of the Authorized Inspector.

2. Summary of examinations performed.

3. Results and recommendations.

4. Procedures employed.

5. Examination data.

6. Examination personnel certifications.

7. Equipment descriptions.

8. Summary of Dispositons.

Report distribution will be made in accordance with the Preservice Examination contractor.

UT CALIBRATION STANDARDS

Calibration standards are required for use as reference standards when conducting ultrasonic examinations in order to assure standardization and repeatability of the essential test instrument parameters prior to the preservice and each recurring inservice examination. These standards have been fabricated to meet the requirements of Section XI, ASME Boiler and Pressure Vessel Code, Summer 1975 Addenda for NSSS components. The balance of plant standards are fabricated in accordance with the requirements found in Appendix III, Winter 1975 Addenda. Drilled holes and notches have been provided to serve as calibration reflectors in order to establish a primary reference response of examination equipment. This information is used to establish the distance amplitude curve for ultrasonic pulse-echo response over the entire thickness being inspected.

The NSSS calibration standards have been ultrasonically examined, where applicable, with a straight beam search unit to ensure that areas which contain indications that exceed the remaining back reflection have not been included in the required calibration beam paths. The standards have been fabricated from reactor vessel nozzle cutouts wherever possible. These standards will be used for examination of the steam generators and the pressurizer as well as the reactor vessel. The 1974 Edition of Section XI requires calibration standards to be manufactured from component prolongation or cutouts. This exception to Section XI is more fully explained in Section VI of this program. The material has been heat treated for a minimum of two (2) hours at a temperature of 1150 degrees F. Cladding has been provided on those standards where the applicable component part is clad. The surface finish of the calibration standard is representative of the surface finishes of the component.

The balance of plant calibration standards have been fabricated from material (pipe) of the same nominal diameter and nominal wall thickness or pipe schedule as those to be examined. The standards were also fabricated from one of the materials specified for the piping being joined by the weld. The surface finish of the calibration standard are representative of the surface finishes of the piping.

The calibration standards are used for preservice examination. After completion of those examinations, the standards become the property of the plant owner and will be stored at the plant site for use during subsequent inservice examinations. Each standard is identified to provide a positive cross-reference to the applicable component part by a stamped identification number. The material source code is also permanently stamped on the calibration standard.

A listing of all calibration standards used during the preservice examinations and calibration standard drawings are included in this section.

TABLE 1
PALO VERDE UNITS 1, 2 AND 3
UT CALIBRATION STANDARDS

Standard No.	Description	Drawing	Use
UT-1	11.35" thick	E-78173-196-002-4	a. Flange-to-Upper Shell Weld b. Upper Shell Longitudinal Welds c. Upper-Shell-to-Intermediate Shell Weld d. Nozzle-to-Upper Shell Welds
UT-2	9" thick	E-78173-196-002-4	a. Upper-to-Intermediate Shell Weld b. Intermediate and Lower Shell Weld c. Intermediate and Lower Shell Longitudinal Welds d. Reactor Vessel Closure Head Welds
UT-2A	9" thick	E-78273-296-001-2	a. Steam Generator Primary Head Welds b. Steam Generator Primay Extension Rings
UT-3	7" thick	E-78173-196-002-4	a. Reactor Vessel Bottom Head Welds
UT-4	5" thick	E-78373-696-002-3	a. Pressurizer Longitudinal Welds b. Pressurizer Girth Welds c. Pressurizer Upper and Lower Head Girth and Nozzle Welds d. Steam Generator Inlet Nozzle Extension Piece Welds e. Reactor Vessel Outlet Nozzle Extension Piece Welds

TABLE 1 (continued)
PALO VERDE UNITS 1, 2 AND 3
UT CALIBRATION STANDARDS

Standard No.	Description	Drawing	Use
UT-6	4.921" Dia. X 32.486" Long	B-158-1720	a. Reactor Coolant Pump Closure Studs
UT-6A	7" Long X 4.92" Dia.	D-9678-501-179-1	a. Reactor Coolant Pump Closure Studs
UT-7	3" thick unclad	E-78273-296-003-3	a. Steam Generator Stay Cap-to-Tubesheet Weld b. Pressurizer Support Skirt Weld
UT-8	11"X7"X32.32"	E-78173-196-002-4	a. Reactor Vessel Flange-to-Shell Weld b. Reactor Vessel Flange Ligaments
UT-9	11.25" X 23" X 30.50"	E-78173-196-001-6	a. Reactor Vessel Inlet Nozzle-to-Shell Welds b. Reactor Vessel Nozzle Inner Radii
UT-10	11.25" X 21" X 33.25"	E-78173-196-001-6	a. Reactor Vessel Outlet Nozzle-to-Shell Welds
UT-15	6.38" rad. X 10.5" Long Segment	E-78473-796-001-3	a. Shutdown Cooling Nozzle-to-Safe End Weld
UT-16	5.10" rad. X 11" X 12" Segment	E-78373-696-001-4	a. Pressurizer Surge Nozzle Safe-End Weld
UT-17	2.6" rad. X 12" Long Segment	E-78373-696-002-3	a. Pressurizer Safety Nozzle Safe-End
UT-18	3.2" rad. X 8" Long Segment	E-78473-796-003-1	a. Charging Nozzle-to-Safe End Weld
UT-19	4.6" rad. X 12" Long Segment	E-78373-696-002-3	a. Pressurizer Spray Nozzle Safe-End

TABLE 1 (continued)
PALO VERDE UNITS 1, 2 and 3
UT CALIBRATION STANDARDS

Standard No.	Description	Drawing	Use
UT-20	7.38" dia. X 41.19" Long	E-78173-196-003-3	a. Reactor Vessel Stud b. Reactor Vessel Nozzle Extension Weld
UT-22	4" X 6" X 20" Long	E-78173-196-001-6	a. Reactor Vessel Nozzle Extension Weld b. Primary Piping; Hot and Cold Legs
UT-22A	4.07" thick X 15" X 15.5" Segment	E-78473-796-002-4	a. Primary Piping - Hot Legs (42" I.D.)
UT-24	7" thick X 7" X 27" Long	E-78273-296-002-4	a. Steam Generator Shell Cone Welds
UT-25	5" thick X 6" X 21" Long	E-78273-296-002-4	a. Steam Generator Top Head Welds b. Steam Generator Secondary Shell Welds c. Steam Generator Support Skirt Weld
UT-26A	3.32" thick X 11.5" X 12.5" Long Segment	E-78473-796-002-4	a. Primary Piping - Cold Legs (30" I.D.)
UT-27	7" thick	E-78273-296-001-2	a. Steam Generator Primary Head Welds
UT-27A	5.38" rad. X 10.5" Long Segment	E-78473-796-001-3	a. Safety Injection Nozzle Safe End
UT-28A	4" thick	E-78273-296-001-2	a. Steam Generator Primay Inlet Nozzle Extension Piece Weld b. Steam Generator Outlet Nozzle Extension Piece Weld

TABLE 1 (continued)
PALO VERDE UNITS 1, 2 and 3
UT CALIBRATION STANDARDS

Standard No.	Description	Drawing	Use
UT-29	8.25" rad. X 12" Long Segment	E-78273-296-002-4	a. Steam Generator Feedwater Nozzle Extension Piece Weld
UT-30	1.25" thick X 12" Long Segment	E-78273-296-003-3	a. Steam Generator Auxiliary Feedwater Nozzle Extension Piece
UT-32	2" thick X 12" Long Segment	E-78273-296-003-3	a. Steam Generator Stay Cap Dome Weld
UT-33	3.3" rad. X 6" X 12" Long Segment	E-78473-796-003-1	a. Primary Piping Safe-End Welds
UT-34	4.38" rad. X 8.6" Long Segment	E-78473-796-003-1	a. Spray Nozzle-to-Safe End Weld
UT-35	5-5/8" thick X 6" X 24" Clad Segment	D-158-1718	a. Reactor Coolant Pump Girth Weld b. Outlet Nozzle to Casing Weld
UT-38	3.047" thick X 9" X 18"	D-158-1719	a. Reactor Coolant Pump Nozzle-to-Extension Piece Weld

TABLE 1 (continued)
PALO VERDE UNITS 1, 2 AND 3
UT CALIBRATION STANDARDS

Standard No.	CE Drawing Rev.	Calibration Block Description
50	E-9678-501-025-01	2-BCAA-S-160
51	E-9678-501-026-01	3-BCAA-S-160
52	E-9678-501-027-02	4-BCAA-S-160
53	E-9678-501-028-02	6-BCAA-S-160
54	E-9678-501-029-02	12-BCAA-S-160
55	E-9678-501-030-03	14-BCAA-S-160
56	E-9678-501-031-03	16-BCAA-S-160
57	E-9678-501-022-01	6-FCBA-S-40S-S
58	E-9678-501-018-02	10-FCBA-S-40S-W
59	E-9678-501-013-03	2-FCBA-S-40S-W
60	E-9678-501-017-02	14-FCBA-S-STD-W
61	E-9678-501-015-02	20-FCBB-S-30-W
62	E-9678-501-016-03	10-GCBC-S-20-W
63	E-9678-501-021-02	14-GCBC-S-20-W
64	E-9678-501-020-02	16-GCBC-S-20-W
65	E-9678-501-019-02	18-GCBC-S-20-W
66	E-9678-501-014-02	20-GCBC-S-020-W
68	E-9678-501-011-01	6-DCBA-S-120-376
69	E-9678-501-024-03	12-CCBA-S-140-376
70	E-9678-501-002-01	6-DLBB-S-80
71	E-9678-501-005-01	8-DLBB-S-80
72	E-9678-501-012-02	16-DLBB-S-80
73	E-9678-501-004-03	24-DLBB-S-80
74	E-9678-501-007-02	12-DLBB-S-100
75	E-9678-501-008-02	14-DLBB-S-100
76	E-9678-501-003-02	24-DLBB-S-100
77	E-9678-501-006-01	8-DLBB-S-120
78	E-9678-501-032-03	24-DLBB-S-120
79	E-9678-501-009-02	28-DLBB-1.75" min. wall
80	E-9678-501-010-02	28-DLBB-1.25" min. wall
81	E-9678-501-033-02	12-GCBC-S-20
83	E-9678-501-095-01	6-DABA-S-120

TABLE 1 (continued)
PALO VERDE UNITS 1, 2 AND 3
UT CALIBRATION STANDARDS

Standard No.	CE Drawing No.	Calibration Block Description
84	E-9678-501-103-01	2.37" CEDM Upper Pressure Housing Welds
85	E-9678-501-098-01	6.44" CEDM Upper Motor Housing Weld
86	E-9678-501-099-01	7.18" CEDM Lower Motor Housing Weld
87	D-9678-501-104-01	Shutdown Cooling Heat Exchanger
88	E-9678-501-115-02	Main Steam Line 32" to 28" Concentric Reducer
89	E-9678-501-116-02	Feedwater Pipe Brake Restraint 30.5" OD X 3" Wall
90	E-9678-501-114-02	Main Steam Pipe Brake Restraint 26" OD X 3" Wall
95	E-9678-501-110-01	Regenerative Heat Exchanger
96	E-9678-501-111-01	Letdown Heat Exchanger
99	E-9678-501-117	8" FCBA-S-40 Safety Injection 12-P-SIF-207 and 208
100	E-9678-501-118	9" OD DLBB-1.50" Min. Wall Main Steam Line Safety Relief Valves
101	E-9678-501-180	16" Sch 30 .375" thickness

REMOTE EXAMINATION EQUIPMENT

ASME Boiler and Pressure Vessel Code, Section XI, requires that preservice examinations be done using the same equipment and techniques which are used during inservice inspections. Descriptions of the equipment used for the remote examinations follow:

1. Vessel Weld and Nozzle Inspection Device

   The vessel shell welds, flange-to-vessel weld, nozzle-to-shell welds, and nozzle radius sections are examined by means of the C-E ISI-2 positioner. This device is mounted on the flange of the vessel and positions the search unit fixtures within the vessel. An electric hoist atop the mast provides the vertical movement along the vessel centerline by actuating a multisectional telescoping tube. An inspection boom is mounted at the bottom of the tube and is rotated through 360 degrees by means of an electric motor. The end of the boom is extended outward by a hydraulic mechanism. At the end of the boom is a rotator upon which the various UT examination devices (sleds) are mounted. In this way, complete flexibility of motion is provided to carry out the required Code examinations. The operating team includes an individual who controls the positioning device console and monitors physical behavior of the UT ultrasonic examination devices (sleds) and surface condition during examination.

   The control console of the CE ISI Positioner contains digital readouts for the hoist, rotation and extension motions, and the control module for the rotator contains a digital readout for its rotational position. The initial alignment of the device is provided by its mounting on three guide pins located in predetermined stud holes in the reactor pressure vessel flange. Reference locations on the reactor vessel shell which are used to locate the weld seams are provided by accurately located weld buildup index pads on the outside of the vessel, adjacent to the intersection of the longitudinal and circumferential welds and which are located ultrasonically. Details can be found in CE Procedure 9678-ISI-053 and its data sheet, which are contained in Volume 2 for the Operation of the Inservice Inspection Positioner of the Preservice Examination Program.

2. Nozzle Scanner

   The examination of the vessel nozzle-to-shell from the vessel ID is performed using the nozzle inspection tool which is mounted on the end of the main boom and is aligned on each nozzle centerline by means of the ISI-2 control consoles.

It is rotated about the nozzle centerline by the rotator on the end of the main boom, and has an independent mechanism for radial motion. Provision is also made for keeping the UT search units (sleds) in contact with the vessel wall as the fixture is rotated around the compound curvature of the vessel ID. In this way, flexibility of motion is provided to carry out the necessary examinations. The examination of the nozzle-to-shell welds from the bore side are performed using a nozzle ID examination tool.

3. Remote Data Acquisition System

The CE ISI-2 Positioner and associated equipment operate in conjunction with a remote RPV Examination System NR-3B. This system consists of three, simultaneously fired, Type UM 771B reflectoscopes, a transponding ultrasonic calibrator (TUC), an ultrasonic data strip chart recorder, and a CCTV video tape recorder.

The NR-3B utilizes up to three, independent, ultrasonic inspection channels; synchronized to operate with ultrasonic test heads (sleds) incorporating up to three transducers (0 degree, 45 degree, 60 degree angles). Each inspection channel consists of a complete Type UM 771B reflectoscope, and is equipped with timer, 10 N dB pulser/receiver and Distance Amplitude Correction (DAC) and Transigate modules. The synchronization of the three reflectoscopes is accomplished through a system pulse rate (repetition rate) master, which provides for pulse rate adjustment while providing continuous digital display of the pulse rate.

The TUC serves as an aid to initial setup and calibration as well as to periodic system performance checks. It generates a series of equally spaced pulses which simulate the complete response characteristics from a specific transducer and calibration standard combination. Use of the TUC does not eliminate the requirements for associated calibration procedures.

The Type H transigate or equivalent recorder module, in conjunction with a four channel, Model 1200 Gould Strip Chart Recorder, provides continuous monitoring and recording of the DAC corrected amplitude of any indication within the gated region and the back echo signal from the 0 degree channel. In addition to this, a video tape record is made of each examination scan. This video tape record contains the dynamic ultrasonic presentation of the complete scan sequence, along with the X and Y coordinate information from the ISI-2 control console corresponding to the sled movement. This video tape recording allows examination personnel to dynamically review examination results without impacting ongoing examinations.

[redacted]

The NR-3B employs examination personnel for full time monitoring of all three examination channels. An immediate disposition of ultrasonic signals occuring during examination is made by the examiner and is immediately noted directly on the strip chart. This notation may require that the indication received further evaluation, or, may indicate a specific condition which does not require further action. The former situation would include actual reflections within the examination volume or geometric conditions requiring verification. The latter category might include electrical interference or a back echo moving into the gated area because of variation in thickness.

Upon completion of an examination sequence, the strip chart data is reviewed in conjunction with the videotape record to assure appropriate disposition of all indications. The videotape also provides a valuable display and detailed data analysis aid for explanation and overcheck purposes.

The examination data sheets and supplement from appropriate procedures will constitute the official examination record.

4. Stay Cylinder Scanner

The ASME Section XI ultrasonic examination of the steam generator stay cylinder welds will be performed with the stay cylinder scanner which consists of separate climbing and scanning mechanisms that are attached together. An operator inserts the scanning device into the stay cylinder and programs the scanner's climb and transducer position for the exams. Position read-outs are provided on the control analog and digital outputs for permanent records. The most up-to-date ultrasonic techniques and equipment are used for the system, and controls for the scanner can be located away from high radiation areas for the protection of inspection crews.

EXAMINATION PROCEDURES

As stated in previous sections, the Arizona Nuclear Power Project, Palo Verde Nuclear Generating Station, Units No. 1, 2 and 3 Preservice Inspection Program is based upon meeting the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through the Summer of 1975 Addenda to the maximum extent possible. Paragraph IWA-1400 of the Code requires the preparation of written procedures necessary for the conduct of the nondestructive examinations associated with the program. Accordingly, written procedures have been prepared for the conduct of all examinations. The procedures have been approved by the utility (ANPP) and the inservice inspection contractor (C-E/NES).

Volumetric examinations will be performed using ultrasonic methods. The procedures prepared for the examinations comply with Appendix I and Appendix III, as applicable, of the 1974 Edition of Section XI. All procedures will be retained by the utility and will be retained for use on subsequent inservice examinations. Revisions to any procedures deemed necessary because of experience gained by utilization will be made and recorded using acceptable quality assurance practices.

A standard format has been employed during the preparation of all ultrasonic examination procedures. A typical outline has been included in this section to acquaint the user with structure, organization and content of the procedures.

A table is also contained in this section which gives a complete listing of all volumetric examination procedures required to perform the preservice examinations associated with the Palo Verde Nuclear Generating Station, Unit No. 1, 2 and 3 plants. A second table lists all other procedures used in the examinations.

The examination procedures are contained in Volume 2 of this program.

UT PROCEDURE OUTLINE

1.0 SCOPE

- 1.1 Area of Examination
- 1.2 Type of Examination
- 1.3 Time of Examination
- 1.4 Materials

2.0 REFERENCES

- 2.1 Reference Documents
- 2.2 Applicable Drawings
- 2.3 Operational Manuals

3.0 PROCEDURE COMPLIANCE

4.0 PERSONNEL CERTIFICATION

- 4.1 Personnel Certification Requirements
- 4.2 Personnel Records

5.0 EXAMINATION REQUIREMENTS

- 5.1 Examination Frequency
- 5.2 Examination Angles and Coverage
- 5.3 Liquid Couplant
- 5.4 Surface Preparation
- 5.5 Scan Coverage
- 5.6 Weld Identification
- 5.7 Datum Point

6.0 EQUIPMENT REQUIREMENTS

- 6.1 Examination Contractor's Equipment
- 6.2 Plant Owner's Equipment

7.0 CALIBRATION REQUIREMENTS

- 7.1 Calibration Data Sheets
- 7.2 Calibration Standards
- 7.3 Reference Sensitivity Level
- 7.4 Times of Calibration
- 7.5 Calibration Response

UT PROCEDURE OUTLINE
(continued)

8.0 EXAMINATION SYSTEM CALIBRATION

The individual subsections of this Section vary from one procedure to another due to differences in the types of equipment used. In general, the subsections specify the procedures to be used in calibrating the particular piece(s) of equipment and in performing calibration checks on the equipment.

9.0 EXAMINATION PROCEDURES

The individual subsections of this Section vary from one procedure to another due to differences in the types of welds and the variety of components being examined. Please refer to the individual procedures for a detailed breakdown.

10.0 EVALUATION CRITERIA

10.1 Recording of Indications
10.2 Evaluation of Indications

11.0 EXAMINATION RECORDS

11.1 Certification of Records
11.2 Filing of Records
11.3 Procedure Corrections and Additions

TABLE 1
LIST OF PROCEDURES

Procedure No.	
NIP-937	Ultrasonic Examination Procedures for Reactor Vessel Nozzle to Transition Piece, Transition Piece to Pipe and Pipe to Ell Welds (Mechanical and Manual Examinations).
NIP-940	Ultrasonic Examination Procedures for CEDM Motor Housing Upper and Lower Welds.
NIP-943	Ultrasonic Examination Procedures for Closure Head Studs and Nuts.
NIP-944	Ultrasonic Examination Procedures for Shutdown Cooling Heat Exchanger Welds.
NIP-945	Ultrasonic Examination Procedures for the Letdown Heat Exchanger Welds.
NIP-952	Ultrasonic Examination Procedures for Reactor Coolant Pump Studs and Nuts.
NIP-953	Ultrasonic Examination Procedures for Flywheels.
NIP-954	Ultrasonic Examination Procedures for Class I and II Austenitic Piping, CEDM Upper Pressure Housing Welds
NIP-955	Ultrasonic Examination Procedures for Primary Piping Welds.
NIP-956	Ultrasonic Examination Procedures for Class II Ferritic Piping.
NIP-963	Ultrasonic Examination Procedures for Nozzle to Safe-End Welds.
NIP-966	Ultrasonic Examination Procedures for Reactor Coolant Pump Casing Girth Welds, Nozzle to Casting Welds and Nozzle to Extension Piece Welds
9878-ISI-006	Automated Ultrasonic Examination Procedures for Reactor Vessel to Nozzle Welds and Extension Piece to Nozzle Welds from Nozzle Bore

TABLE 2
LIST OF PROCEDURES
(ANPP 1)

Other procedures to be used in the performance of the preservice examinations.

VISUAL EXAMINATION PROCEDURES

525115-ESS-091	Visual Examination Procedure for Preservice and Inservice Inspection.
525115-ESS-092	Procedure for the Operation of the Inservice Inspection Positioning Device and Remote Actuated Television System for the Visual Examination of Reactor Pressure Vessel Interior Areas.
00000-ESS-119	Procedure for the Visual Examination of the Interior of the Reactor Vessel.

SURFACE EXAMINATION PROCEDURES

9678-ISI-038	Procedure for the Preservice and Inservice Eddy Current Examination of Reactor Coolant Pump Flywheels in accordance with Regulatory Guide 1.14.
9678-ISI-051	Procedure for the Preservice and Inservice Eddy Current Examination of Reactor Pressure Vessel Closure Studs in accordance with Section XI of ASME Boiler and Pressure Vessel Code.
9878-ISI-057	Procedure for the Preservice and Inservice Eddy Current Examination of Reactor Pressure Vessel Nuts in accordance with Section XI of the ASME Boiler and Pressure Vessel Code.
525115-ESS-093	Liquid Penetrant Examination Procedure for Preservice and Inservice Inspection.

MECHANICAL EXAMINATION PROCEDURES

9678-ISI-053	Procedure for the Operation of the Inservice Inspection Positioning Device for the Inside Surface Ultrasonic Examination of the Reactor Pressure Vessel for Arizona Nuclear Power Project Unit 1.
9878-ISI-056	Automated Ultrasonic Examination Procedures for Steam Generator Stay Cylinder Welds.

[illegible]

EVALUATION CRITERIA

It is the intent of this program to utilize to the maximum extent possible, the latest published evaluation criteria. A listing of the various Code examination categories and the applicable evaluation criteria follows:

Examination Category	Evaluation Criteria Used
B-E-1	IWB-3513, Summer 1975 Addenda to Section XI
B-F, B-J-1	IWB-3514, Summer 1975 Addenda to Section XI
B-G-1	IWB-3515, Summer 1978 Addenda to Section XI
B-K-1	IWB-3516, Summer 1978 Addenda to Section XI
B-L-1, B-M-1	IWB-3518, Summer 1975 Addenda to Section XI
B-L-2, B-M-2	IWB-3519, Summer 1975 Addenda to Section XI
C-A	IWB-3511, Summer 1975 Addenda to Section XI
C-B	IWB-3512, Summer 1975 Addenda to Section XI
C-C	IWB-3516, Summer 1978 Addenda to Section XI
C-D	IWB-3515, Summer 1978 Addenda to Section XI
C-F	IWB-3514, Summer 1975 Addenda to Section XI Surface Exams - IWC-3000 1977 Edition of Section XI
C-G	IWB-3514, Summer 1975 Addenda to Section XI Surface Exams - IWC-3000 1977 Edition of Section XI