

INSERVICE INSPECTION  
PROGRAM SUMMARY MANUAL

PALO VERDE  
NUCLEAR GENERATING STATION  
UNIT 2

ARIZONA PUBLIC SERVICE COMPANY  
P.O. Box 52034  
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PVNGS  
4 miles south  
Wintersburg, AZ 85343

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PALO VERDE  
NUCLEAR GENERATING STATION  
UNIT 2  
INSERVICE INSPECTION - PROGRAM SUMMARY

1.0 SUMMARY

This document contains a detailed description of the Inservice Inspection Program for Palo Verde Nuclear Generating Station (PVNGS), Unit 2. This program conforms to the requirements of 10 CFR 50.55a(g) and the PVNGS Technical Specifications. In addition, the information is presented in a form consistent with applicable requirements of Standard Review Plan Sections 5.2.4 and 6.6, and the recommendations contained in NRC letter dated July 17, 1981, from Mr. R.L. Tedesco, NRC, to E.E. Van Brunt, Jr. APS, "Guidance for Preparing Preservice and Inservice Inspection Programs and Relief Requests-Palo Verde Generating Station Units 1,2, and 3."

The revision is being prepared to include changes resulting from the NRC review and acceptance of Revision 0, see NRC letter dated October 21, 1987, from E.A. Licitra, NRC, to E.E. Van Brunt, Jr., ANPP, "Inservice Inspection Programs-Palo Verde Units 1, 2 & 3." The major changes in this revision are to establish a common interval date for all units, to update the Requests for Relief, to include the Zone Drawings, and to make small changes and corrections noted during the initial use of the program.

2.0 CODE APPLICABILITY

Based on paragraph 10 CFR 50.55a(b) (2) that was published 12 months prior to the date December 9, 1985 of issuance of the operating license, the 1980 Edition through and including the Winter 1981 Addenda of ASME Section XI was utilized to prepare this program. In addition, and in accordance with paragraph 10 CFR 50.55a(b) (2) (iv) (A), the extent of Class 2 piping welds for the PVNGS Safety Injection System: Reactor Residual Heat (RHR), Emergency Core Cooling System (ECCS), and Containment Heat Removal (CHR), was determined in accordance with the 1974 Edition through and including the Summer 1975 Addenda of ASME XI.

This program will be updated for each inspection interval to conform with the requirements of the latest edition and addenda of the ASME Section XI Code referenced in paragraph (b) of 10 CFR 50.55a. When a code-required examination is considered to be impractical, because of plant design or other conditions, a request for relief from that requirement will be prepared and included in the program at the beginning of that inspection interval (Section 9.0). If a code-required examination is identified to be impractical during the course of an inspection and the code-required percentages are not met, a request for relief will be prepared and submitted with the next revision to the program.

### 3.0 DESCRIPTION

#### 3.1 SCOPE

3.1.1 This Inservice Inspection Program Summary includes all applicable nondestructive examinations required by ASME Section XI and those identified in the PVNGS Technical Specifications as identified below:

1. Examination of ASME Class 1, 2, and 3 pressure retaining components and their supports.
2. Examination of the Reactor Coolant Pump Flywheels in accordance with PVNGS Technical Specifications Section 3/4.4.9.
3. Augmented high energy piping examination in accordance with PVNGS UFSAR Section 6.6.8.
4. Augmented examinations of CHR, RHR, and ECCS piping in accordance with 10 CFR 50.55a.
5. Special examinations to satisfy other commitments or concerns that are based on operating experiences, USNRC Circulars, Information Notices, Bulletins, Combustion Engineering Bulletins, INPO Reports, etc. These examinations are scheduled throughout this program and reference the applicable notification documents.

3.1.2 Those items that would generally be included in an Inservice Inspection Program, but are not included are identified below:

1. The inservice testing of snubbers will be performed in accordance with the PVNGS Technical Specifications Section 3/4.7.9.

Note: Request for Relief #1 in Section 9.0.

2. The pump and valve testing program is contained and submitted under a separate cover.

#### 3.2 SYSTEM BOUNDARIES

A complete set of Inservice Boundary drawings was included in Section 10.0 of Revision 0 of the Unit 1 Program, see Letter ANPP-33266-EEVB/KLM, dated August 26, 1985, from E.E. Van Brunt, Jr., ANPP, to George W. Knighton, NRC, "Palo Verde Nuclear Generating Station (PVNGS) Unit 1 Docket Nos. STN 50-528 (License No. NPF-41) Initial Inservice Inspection Program-PVNGS Unit 1". There have been no significant changes since those drawings were submitted; therefore, a new set is not being submitted with this revision. Please refer to these drawings for definition of the ASME Class 1, 2, and 3 systems; components; and boundaries scheduled for examinations and pressure testing. A set of zone drawings was requested to be submitted to the NRC for a thorough review of Revision 0. A copy of these are now included in Section 11.0.

### 3.3 ACCESSIBILITY

The preservice examinations were performed with examination techniques, both automated and manual, similar to those planned for use during Inservice Inspection. The examination limitations noted during the preservice examinations were documented in requests for relief submitted with the preservice examination program. There have been no additional code limitations noted during the formulation of this program other than those contained in the Request for Relief Section.

All items that are scheduled for examination will be examined to the extent practical. In addition, any code limitations that are noted during the examinations will be documented in the summary reports that are prepared after each outage.

### 3.4 EXAMINATION TECHNIQUES

The three types of examinations utilized to perform Inservice Inspections, along with the actual nondestructive examination technique, are identified in the legend below:

VT - Visual

VT - 1 (General Condition)

VT - 2 (Leakage)

VT - 3 (Structural Condition)

VT - 4 (Operability)

S - Surface

PT - Liquid Penetrant

MT - Magnetic Particle

ET - Eddy Current

Vol - Volumetric

UT - Ultrasonic

RT - Radiography

All the above nondestructive examination techniques will be performed using specific techniques and procedures that are identified in ASME Section XI, or alternative examinations that are demonstrated to be equivalent or superior to those identified.

### 3.5 INSPECTION INTERVALS

The Inservice Inspection Program was prepared in accordance with Program B of ASME Section XI. The initial 10-year inspection interval and corresponding inspection periods are defined below:

|                            |                     |
|----------------------------|---------------------|
| First Inspection Interval: | 9-19-86 to 3-17-97  |
| Period One :               | 9-19-86 to 7-17-90  |
| Period Two :               | 7-18-90 to 11-17-93 |
| Period Three:              | 11-18-93 to 3-17-97 |

These dates have been modified to a common interval start date for all three PVNGS units. This is in accordance with NRC letter dated October 21, 1987, from E.A. Licitra, NRC, to E.E. Van Brunt, Jr., ANPP, "Inservice Inspection Programs Palo Verde, Units 1, 2, and 3" to allow the three units to be under the same ASME Section XI edition and addenda. It should be noted that the intervals/periods may change between units to allow for extended outage durations per IWA-2400 of ASME Section XI.

### 3.6 EXAMINATION CATEGORIES

The examination categories of ASME Section XI were utilized to develop this program for all systems, components, and supports. The Program summary tables contained in Sections 4.0 and 5.0 are organized by examination category for ASME Class 1 and 2 systems, respectively. For each examination category, these tables identify the system, line number, nondestructive examination method, total number of items, required examination amount for each inspection period, and running percentage. For ASME Class 3 systems, the examinations categories are identified in Section 6.0.

### 3.7 EVALUATION AND REPAIR

The evaluation of all examination results will be performed in accordance with ASME Section XI Articles IWA and IWB-3000. In addition, all applicable repairs and replacements will be performed in accordance with ASME Section XI Articles IWA, IWB, IWC, IWD, and IWF-4000 and 7000. Pressure tests will be performed only on welded repairs or replacements, in accordance with IWA-4000 and 5000. Both the evaluations and repair or replacement will be performed in accordance with the 1980 Edition through and including the Winter 1981 Addenda of ASME Section XI, or later editions and addenda of ASME Section XI referenced in 10 CFR 50. All repairs and replacements will be documented in accordance with the Work Control program, and are maintained at Palo Verde for review.

### 3.8 SYSTEM PRESSURE TESTS

System pressure tests will be performed in accordance with ASME Section XI and as identified in Sections 4.0, 5.0, and 6.0 for ASME Class 1, 2, and 3, respectively. These tables also identify the type of pressure test, test frequency, any applicable requests for relief, and references the appropriate ASME Section XI Article for each of the ASME Code Classes.

### 3.9 AUGMENTED HIGH ENERGY PIPING

Based on the PVNGS UFSAR, an augmented examination is required for protection against postulated pipe failures. This augmented examination program includes the following high energy piping systems located between the containment penetration and the main steam support structure wall:

- Main Steam
- Feedwater
- Steam Generator Blowdown
- Downcomer Feedwater

The summary tables in Section 7.0 identify each system, along with the required examination amounts and frequencies. As shown by these tables, a volumetric examination of all longitudinal and circumferential welds is scheduled. These welds will be examined to the maximum extent practical. Any limitations to the examination will be included and documented in the examination report prepared in accordance with ASME Section XI.

### 3.10 EXEMPTIONS

The exemption criteria identified in the 1980 Edition through and including the Winter 1981 Addenda of ASME Section XI was utilized for all ASME Class 1, 2, and 3 components and systems. This includes the PVNGS Safety Injection System (RHR, ECCS, and CHR systems) piping and components, even though 10 CFR 50.55a requires the 1974 Edition through and including the 1975 Summer Addenda be utilized. It was concluded after a detailed review that the exemption criteria identified in the Winter 1981 Addenda was more conservative in every case than those identified in the Summer 1975 Addenda, and more examinations would therefore be performed on safety injection systems piping and components.

A thorough review of all the systems and components was performed in accordance with the above exemptions and a complete set of color coded Inservice Inspection Boundary drawings was prepared. These drawings are maintained at the PVNGS site for review.

### 3.11 CODE CASES

ASME Section XI Code Case acceptability will be based on Regulatory Guide 1.147.

DEFINITION OF TERMS

|       |   |
|-------|---|
| AHE:  | Augmented High Energy                         |
| ANII: | Authorized Nuclear Inservice Inspector        |
| ANPP: | Arizona Nuclear Power Project                 |
| APS:  | Arizona Public Service                        |
| ASME: | American Society of Mechanical Engineers      |
| Aux:  | Auxiliary                                     |
| BWR:  | Boiling Water Reactor                         |
| CE:   | Combustion Engineering                        |
| CEDM: | Control Element Drive Mechanism               |
| CFR:  | Code of Federal Regulations                   |
| CH:   | Charging                                      |
| CHR:  | Containment Heat Removal                      |
| Circ: | Circumferential                               |
| CL:   | Cold Leg                                      |
| CRD:  | Control Rod Drive                             |
| CS:   | Containment Spray                             |
| CSP:  | Containment Spray Pump                        |
| DWG:  | Drawing                                       |
| ECCS: | Emergency Core Cooling System                 |
| FW:   | Feedwater                                     |
| HL:   | Hot Leg                                       |
| HPSI: | High Pressure Safety Injection                |
| Hx:   | Heat Exchanger                                |
| ICI:  | In Core Instrumentation                       |
| IEB:  | Inspection and Enforcement Bulletin           |
| IEIN: | Inspection and Enforcement Information Notice |
| Inj.  | Injection                                     |
| INPO: | Institute for Nuclear Power Operations        |
| ISI:  | Inservice Inspection                          |
| LPSI: | Low Pressure Safety Injection                 |
| MSSS: | Main Steam Support Structure                  |
| NDE:  | Nondestructive Examination                    |
| NRC:  | Nuclear Regulatory Commission                 |
| PDV:  | Pressure Differential Valve                   |
| PSV:  | Pressurizer Safety Valve                      |
| PWR:  | Pressurized Water Reactor                     |



Definition of Terms continued

|             |  |
|-------------|--|
| PVNGS:      | Palo Verde Nuclear Generating Station      |
| PZR:        | Pressurizer                                |
| RC:         | Reactor Coolant                            |
| RCP:        | Reactor Coolant Pump                       |
| Reg.:       | Regulatory                                 |
| REV:        | Revision                                   |
| RHR:        | Reactor Residual Heat Removal              |
| Recirc:     | Recirculation                              |
| RCS:        | Reactor Coolant System                     |
| RPV:        | Reactor Pressure Vessel                    |
| RVLMS:      | Reactor Vessel Level Monitoring System     |
| REM:        | Roentgen Equivalent Man                    |
| SDCHX:      | Shutdown Cooling Heat Exchanger            |
| SD:         | Shutdown                                   |
| SER:        | Significant Event Report                   |
| SG:         | Steam Generator                            |
| SI:         | Safety Injection                           |
| SN:         | Serial Number                              |
| T:          | Thickness                                  |
| Tech. Spec: | Technical Specification                    |
| UFSAR:      | Updated Final Safety Analysis Report       |
| USNRC:      | United States Nuclear Regulator Commission |
| UV:         | Multivariable Control Valve                |
| V:          | Valve                                      |

SECTION 4.0  
ASME CLASS 1  
EXAMINATION SUMMARY

# INDEX

## TABLE

## EXAM CATEGORIES

|       |                                  |  |
|-------|----------------------------------|--|
| 1-1   | B-A,                             | Pressure Retaining Welds in Reactor Vessel   |
| 1-2   | B-B,                             | Pressure Retaining Welds in Vessels Other Than Reactor Vessels   |
| 1-3   | B-D,                             | Full Penetration Welds of Nozzles in Vessels - Inspection Program B  |
| 1-4   | B-E,                             | Pressure Retaining Partial Penetration Welds in Vessels  |
| 1-5   | B-F,                             | Pressure Retaining Dissimilar Metal Welds  |
| 1-6   | B-G-1,                           | Pressure Retaining Bolting, Greater Than 2 in. in Diameter   |
| 1-7   | B-G-2,                           | Pressure Retaining bolting, 2 in. and Less in Diameter   |
| 1-8   | B-H,                             | Integral Attachments for Vessels   |
| 1-9   | B-J,                             | Pressure Retaining Welds in Piping   |
| 1-10  | B-K-1,                           | Integral Attachments for Piping, Pumps and Valves  |
| 1-12  | B-L-1 & B-M-1,<br>B-L-2 & B-M-2, | Pressure Retaining Welds in Pump Casings and Valve Bodies and<br>Pump Casings and Valve Bodies   |
| 1-13  | B-N-1,<br>B-N-2,<br>B-N-3,       | Interior of Reactor Vessel<br>Integrally Welded Core Support Structures and Interior Attachments to Reactor Vessels<br>Removable Core Support Structures |
| 1-14  | B-O,                             | Pressure Retaining Welds in Control Rod Housing  |
| 1-15  | B-P,                             | All Pressure Retaining Components  |
| 1-16  | B-Q,                             | Steam Generator Tubing   |
| 1-JWF | F-A,<br>F-B,<br>F-C,             | Plate and Shell Type Supports<br>Linear Type Supports<br>Component Standard Support  |
| 1-RCP | N/A,                             | Reactor Coolant Pump Flywheel Examinations<br>Reg. Guide 1.14  |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT  | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|--|----------------|---|---------------|----------------|------------------------|----------------------|-----------------|---|
| B 100               | EXAM CATEGORY B.A.<br>PRESSURE RETAINING<br>WELDS IN REACTOR<br>VESSEL |                |   |               |                |                        |                      |                 |   |
| 110                 | SHELL WELDS<br>CIRCUMFERENTIAL   |                |   |               |                |                        |                      |                 |   |
| 111                 | 1. Reactor Vessel  | Butt Welds     | SN 79173                                  | Vel           | 3 **           | 0<br>0<br>3            | One<br>Two<br>Three  | 0<br>0<br>100   |   |
| 112                 | LONGITUDINAL   |                |   |               |                |                        |                      |                 |   |
|                     | 1. Reactor Vessel  | Butt Welds     | SN 79173                                  | Vel           | 9 **           | 0<br>0<br>9            | One<br>Two<br>Three  | 0<br>0<br>100   |   |
| 120                 | HEAD WELDS   |                |   |               |                |                        |                      |                 |   |
| 121                 | CIRCUMFERENTIAL  |                |   |               |                |                        |                      |                 |   |
| 122                 | MERIDIONAL   | None           |   |               |                |                        |                      |                 |   |
|                     | 1. Reactor Vessel<br>Bottom Head                                       | Butt Weld      | SN 79173                                  | Vel           | 1              | 0<br>0<br>1            | One<br>Two<br>Three  | 0<br>0<br>100   | AUTOMATED<br>EXAM CORE<br>BARREL<br>REMOVED.<br>EXAMINE<br>ENTIRE<br>ACCESSIBLE<br>LENGTH         |
|                     | 2. Closure Head  | Butt Weld      | SN 79173                                  | Vel           | 1              | 33%<br>33%<br>34%      | One<br>Two<br>Three  | 33<br>66<br>100 | EXAMINE<br>ENTIRE<br>ACCESSIBLE<br>LENGTH   |
| 130                 | SHELL TO FLANGE WELD   |                |   |               |                |                        |                      |                 |   |
|                     | 1. Reactor Vessel  | Butt Weld      | SN 79173                                  | Vel           | 1              | 50% *<br>0%<br>100% ** | One<br>Two<br>Three  | 50<br>50<br>100 | * EXAM FROM<br>FLANGE<br>MATING<br>SURFACE.<br><br>**AUTOMATED<br>EXAM CORE<br>BARREL<br>REMOVED. |
| 140                 | HEAD TO FLANGE WELD  |                |   |               |                |                        |                      |                 |   |
|                     | 2. Closure Head  | Butt Weld      | SN 79173                                  | Vel, S        | 1              | 33%<br>33%<br>34%      | One<br>Two<br>Three  | 33<br>66<br>100 |   |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM        | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---------------------------------|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| 150<br>151          | REPAIR WELDS<br>BELTLINE REGION | None           |   |               |                |                       |                      |              |                                |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION       | DESCRIPTION<br>LINE NO. OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|--|----------------------|--|---------------|----------------|-----------------------|----------------------|-----------------|---|
| B 200               | EXAM CATEGORY B, B,<br>PRESSURE RETAINING<br>WELDS IN VESSELS<br>OTHER THAN REACTOR<br>VESSELS |                      |  |               |                |                       |                      |                 |   |
| 210                 | PRESSURIZER<br>SHELL TO HEAD WELDS   |                      |  |               |                |                       |                      |                 |   |
| 211                 | CIRCUMFERENTIAL AND<br>*LONGITUDINAL   |                      |  |               |                |                       |                      |                 |   |
| 212                 | 5. Pressurizer<br>Shell to bottom<br>Head  | Butt Weld            | SN 79373                                 | Vol           | 1              | 33%<br>33%<br>34%     | One<br>Two<br>Three  | 33<br>66<br>100 | *1 FOOT MINIMUM<br>OF EACH<br>LONGITUDINAL<br>WELD THAT<br>INTERSECTS<br>THE SCHEDULED<br>CIRCUMFERENTIAL<br>WELDS WILL<br>BE EXAMINED. |
| 220                 | 5. Pressurizer<br>Shell to Top Head  | Butt Weld            | SN 79373                                 | Vol           | 1              | 33%<br>33%<br>34%     | One<br>Two<br>Three  | 33<br>66<br>100 |   |
| 221                 | HEAD WELDS<br>CIRCUMFERENTIAL<br>MERIDIONAL  | None<br>None<br>None | -<br>-<br>-                              | -<br>-<br>-   | -<br>-<br>-    | -<br>-<br>-           | -<br>-<br>-          | -<br>-<br>-     |   |
| 230                 | STEAM GENERATORS<br>HEAD WELDS<br>CIRCUMFERENTIAL  |                      |  |               |                |                       |                      |                 |   |
| 231                 | 3. Steam Generator 1   | Butt Welds           | SN 79273-1                               | Vol           | 4              | 1<br>1<br>2           | One<br>Two<br>Three  | 25<br>50<br>100 | **STAY<br>CYLINDER<br>EXAMS   |
|                     | 4. Steam Generator 2   | Butt Welds           | SN 79273-2                               | Vol           | 4              | 1<br>1<br>2           | One<br>Two<br>Three  | 25<br>50<br>100 | **STAY<br>CYLINDER<br>EXAMS   |

# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

TABLE 1-2  
PAGE 2 OF 2

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---------------------------|----------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--------------------------------|
| 232                 | <u>MERIDIONAL</u>         |                |   |               |                |                       |                      |                 |                                |
|                     | 3. Steam Generator 1      | Butt Welds     | SN 79273-1                                | Vol           | 6              | 4<br>1<br>1           | One<br>Two<br>Three  | 66<br>83<br>100 |                                |
|                     | 4. Steam Generator 2      | Butt Welds     | SN 79273-2                                | Vol           | 6              | 0<br>5<br>1           | One<br>Two<br>Three  | 83<br>100       |                                |
| 240                 | <u>TUBESHEET TO HEAD</u>  |                |   |               |                |                       |                      |                 |                                |
|                     | 3. Steam Generator 1      | Butt Welds     | SN 79273-1                                | Vol           | 2              | 1<br>0<br>1 *         | One<br>Two<br>Three  | 50<br>50<br>100 | *STAY<br>CYLINDER<br>EXAMS     |
|                     | 4. Steam Generator 2      | Butt Welds     | SN 79273-2                                | Vol           | 2              | 0<br>1<br>1 *         | One<br>Two<br>Three  | 50<br>100       |                                |
| 250                 | <u>HEAT EXCHANGERS</u>    |                |   |               |                |                       |                      |                 |                                |
| 251                 | <u>HEA / WELDS</u>        | None           | -   | -             | -              | -                     | -                    | -               |                                |
| 252                 | <u>CIRC/MERIDIONAL</u>    | None           | -   | -             | -              | -                     | -                    | -               |                                |
| 253                 | <u>MERIDIONAL</u>         | None           | -   | -             | -              | -                     | -                    | -               |                                |
| 260                 | <u>LONGITUDINAL</u>       |                |   |               |                |                       |                      |                 |                                |
| 261                 | <u>TUBESHEET TO SHELL</u> |                |   |               |                |                       |                      |                 |                                |
|                     | (OR HEAD) WELDS           | None           | -   | -             | -              | -                     | -                    | -               |                                |
|                     | <u>TUBESHEET TO SHELL</u> | None           | -   | -             | -              | -                     | -                    | -               |                                |

REV 1  
12-23-91

| ASME<br>ITEM<br>NO. | ZONE/COMPONENT OR SYSTEM   | IDENTIFICATION                       | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|--|--------------------------------------|---|---------------|----------------|-----------------------|----------------------|-----------------|---|
| B 300               | EXAM CATEGORY B.D;<br>FULL PENETRATION<br>WELDS OF NOZZLES IN<br>VESSEL 5. INSPECTION<br>PROGRAM B |                                      |   |               |                |                       |                      |                 |   |
| 390                 | REACTOR VESSEL<br>NOZZLE TO VESSEL<br>WELDS<br>AND<br>NOZZLE INSIDE RADIUS<br>SECTION              |                                      |   |               |                |                       |                      |                 |   |
| A 3100              | 1. Reactor Vessel  | Outlets - 2<br>Inlets - 4            | SN 79173                                  | Vol           | 6              | 2<br>0<br>4 *         | One<br>Two<br>Three  | 33<br>33<br>100 | *AUTOMATED<br>EXAMS FROM<br>SHELL SIDE<br>WITH CORE<br>BARRIER<br>REMOVED |
| 3110                | PRESSURIZER<br>NOZZLE TO VESSEL<br>WELDS   |                                      |   |               |                |                       |                      |                 |   |
| A 3120              | AND<br>NOZZLE INSIDE RADIUS<br>SECTION   |                                      |   |               |                |                       |                      |                 |   |
|                     | 5. Pressurizer   | Surge - 1<br>Spray - 1<br>Safety - 4 | SN 79173                                  | Vol           | 6              | 2<br>2<br>2           | One<br>Two<br>Three  | 33<br>66<br>100 |   |
| 3130                | STEAM GENERATORS<br>NOZZLE TO VESSEL<br>WELDS  |                                      |   |               |                |                       |                      |                 |   |
| A 3140              | AND<br>NOZZLE INSIDE RADIUS<br>SECTION   |                                      |   |               |                |                       |                      |                 |   |
|                     | 3. Steam Generator 1   | Inlet - 1<br>Outlet - 2              | SN 79273.1                                | Vol           | 3              | 1<br>1<br>1           | One<br>Two<br>Three  | 33<br>66<br>100 |   |
|                     | 4. Steam Generator 2   | Inlet - 1<br>Outlet - 2              | SN 79273.2                                | Vol           | 3              | 1<br>1<br>1           | One<br>Two<br>Three  | 33<br>66<br>100 |   |



# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS I

TABLE 1.3  
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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                     | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| 3150                | HEAT EXCHANGERS                              | None           |   |               |                |                       |                      |              |                                |
|                     | NOZZLE TO VESSEL                             | None           |   |               |                |                       |                      |              |                                |
| 3160                | WELDS AND<br>NOZZLE INSIDE RADIUS<br>SECTION | None           |   |               |                |                       |                      |              |                                |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION  | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%  | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|---|-----------------|---|---------------|----------------|-----------------------|----------------------|---------------|--|
| B 400               | EXAM CATEGORY B E,<br>PRESSURE RETAINING<br>PARTIAL PENETRATION<br>WELDS IN VESSELS |                 |   |               |                |                       |                      |               |  |
| 410                 | PARTIAL PENETRATION<br>WELDS  | None            |   |               |                |                       |                      |               |  |
| 411                 | VESSEL NOZZLES  |                 |   |               |                |                       |                      |               |  |
| 412                 | CONTROL ROD DRIVE<br>NOZZLES  |                 |   |               |                |                       |                      |               |  |
|                     | Reactor Vessel<br>Closure Head  | CEHM<br>Nozzles | SN 79173                                  | VT-2          | 97             | 8<br>8<br>9           | One<br>Two<br>Three  | 8<br>16<br>26 | ALL EXAMS<br>PERFORMED<br>IN CON-<br>JUNCTION<br>WITH EXAM<br>CATEGORY<br>B-P  |
| 413                 | INSTRUMENT NOZZLES  |                 |   |               |                |                       |                      |               |  |
|                     | Reactor Vessel  | Bottom Head     | SN 79173                                  | VT-2          | 61             | 5<br>5<br>6           | One<br>Two<br>Three  | 8<br>16<br>26 |  |
| 420                 | PRESSURIZER<br>HEATER PENETRATION<br>WELDS  |                 |   |               |                |                       |                      |               |  |
|                     |   | Bottom Head     | SN 79373                                  | VT-2*         | 36             | 3<br>3<br>3           | One<br>Two<br>Three  | 8<br>17<br>26 | * A SUPPLEMENTAL<br>VT-2 EXAM WILL BE<br>PERFORMED ON ALL<br>STANTON AND<br>HEATER NOZZLES<br>EACH REFUELING<br>OUTAGE (SEE CE<br>INFORMATION<br>BULLETIN 89-06) |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                         | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.                         | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|---|--|---|---------------|----------------|-----------------------|----------------------|-----------------|---|
| B 500               | EXAM CATEGORY B-E;<br>PRESSURE RETAINING<br>DISSIMILAR METAL<br>WELDS                 |  |   |               |                |                       |                      |                 |   |
| 510                 | REACTOR VESSEL<br>NOMINAL PIPE SIZE 24<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS        | None                                   |   |               |                |                       |                      |                 |   |
| 520                 | NOMINAL PIPE SIZE < 4<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS                         | None                                   |   |               |                |                       |                      |                 |   |
| 530                 | NOZZLE TO SAFE END<br>SOCKET WELDS  | None                                   |   |               |                |                       |                      |                 |   |
| 540                 | PRESSURIZER<br>NOMINAL PIPE SIZE 24<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS           |  |   |               |                |                       |                      |                 |   |
|                     | 20 Pressurizer Surge<br>29 Combined Pressurizer Spray*<br>31 Pressurizer Safeties (4) | Butt Welds<br>Butt Welds<br>Butt Welds | RC 18.12"<br>RC 18.4"<br>RC 1.6"<br>RC 3.6"<br>RC 5.6"<br>RC 7.6" | 5, Vol        | 6              | 2<br>2<br>2           | One<br>Two<br>Three  | 33<br>66<br>100 | * RT SUPPL-<br>EMENTAL<br>EXAM FOR<br>THERMAL<br>SLEEVE<br>INTEGRITY<br>(NOTE BEEN<br>RT 099) |
| 550                 | NOMINAL PIPE SIZE < 4<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS                         | None                                   |   |               |                |                       |                      |                 |   |
| 560                 | NOZZLE TO SAFE END<br>SOCKET WELDS  | None                                   |   |               |                |                       |                      |                 |   |
| 570                 | STEAM GENERATOR<br>NOMINAL PIPE SIZE 24<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS       | None                                   |   |               |                |                       |                      |                 |   |
| 580                 | NOMINAL PIPE SIZE < 4<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS                         | None                                   |   |               |                |                       |                      |                 |   |

# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--|
| 590                 | NOZZLE TO SAFE END<br>SOCKET WELDS   | None           |   |               |                |                       |                      |              |  |
| 5100                | HEAT EXCHANGERS<br>NOMINAL PIPE SIZE ≥ 4<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS | None           |   |               |                |                       |                      |              |  |
| 5110                | NOMINAL PIPE SIZE < 4<br>IN. NOZZLE TO SAFE<br>END BUTT WELDS                    | None           |   |               |                |                       |                      |              |  |
| 5120                | NOZZLE TO SAFE END<br>SOCKET WELDS   | None           |   |               |                |                       |                      |              |  |
| 5130                | PIPING<br>NOMINAL PIPE SIZE ≥ 4<br>IN. DISSIMILAR<br>METAL BUTT WELDS            |                |   |               |                |                       |                      |              | ITEMS B5.130<br>& B5.140<br>SYSTEMS COMBINED<br>FOR PERCENTAGE                           |
|                     | 20 Pressurizer Surge   | Butt Weld      | RC-28-12"                                 | S, Vol        | 1              | 1                     | Three                |              |  |
|                     | 21 Shutdown Cooling Loop 1   | Butt Weld      | RC-51-16"                                 | S, Vol        | 1              | 1                     | One                  |              |  |
|                     | 22 Shutdown Cooling Loop 2   | Butt Weld      | RC-68-16"                                 | S, Vol        | 1              | 1                     | Two                  |              |  |
|                     | 23 Safety Injection 1A   | Butt Weld      | SI-207-14"                                | S, Vol        | 1              | 1                     | One                  |              |  |
|                     | 24 Safety Injection 1B   | Butt Weld      | SI-223-14"                                | S, Vol        | 1              | 1                     | Three                |              |  |
|                     | 25 Safety Injection 2A   | Butt Weld      | SI-160-14"                                | S, Vol        | 1              | 1                     | Two                  |              |  |
|                     | 26 Safety Injection 2B   | Butt Weld      | SI-179-14"                                | S, Vol        | 1              | 1                     | Three                |              |  |
| 5140                | NOMINAL PIPE SIZE < 4<br>IN. DISSIMILAR<br>METAL BUTT WELDS                      |                |   |               |                |                       |                      |              |  |
|                     | 27 Pressurizer Spray 1A  | Butt Weld      | RC-62-3"                                  | S             | 1              | 1                     | One                  |              |  |
|                     | 28 Pressurizer Spray 1B  | Butt Weld      | RC-17-3"                                  | S             | 1              | 1                     | Two                  |              |  |
|                     | 32 Drain Line 1A   | Butt Weld      | RC-60-2"                                  | S             | 1              | 1                     | One                  | 29           |  |
|                     | 33 Drain Line 1B   | Butt Weld      | RC-38-2"                                  | S             | 1              | 1                     | Two                  |              |  |
|                     | 34 Drain Line 2A   | Butt Weld      | RC-96-2"                                  | S             | 1              | 1                     | Three                |              |  |
|                     | 36 Leedown Line  | Butt Weld      | RC-91-2"                                  | S             | 1              | 1                     | Three                | 100          |  |
|                     | 37 Charging Line*  | Butt Weld      | CH-5-3"                                   | S             | 1              | 1                     | Two                  | 64           |  |
| 5150                | DISSIMILAR METAL<br>SOCKET WELDS   | None           |   |               |                |                       |                      |              | *RT SUPPLE-<br>MENTAL EXAM<br>FOR THERMAL<br>SLEEVE<br>INTEGRITY<br>(NOTE BEEN<br>82.09) |

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| ASME<br>ITEM<br>NO. | ZONE/COMPONENT OR SYSTEM   | IDENTIFICATION      | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS                   |
|---------------------|--|---------------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--|
| B 600               | EXAM CATEGORY B.O.I.<br>PRESSURE RETAINING<br>BOLTING GREATER<br>THAN 2 IN. IN<br>DIAMETER |                     |   |               |                |                       |                      |                 |  |
| 610                 | REACTOR VESSEL<br>CLOSURE HEAD NUTS  |                     |   |               |                |                       |                      |                 |  |
|                     | 2. Closure Head  | None                | 7.237" x<br>7.91"                         | 5             | 54             | 18<br>18<br>18        | One<br>Two<br>Three  | 33<br>66<br>100 |  |
| 620                 | CLOSURE STUDS, IN<br>PLACE   | None*               |   |               |                |                       |                      |                 | *STUDS WILL<br>BE REMOVED<br>FOR EXAM.<br>NATION |
| 630                 | CLOSURE STUDS, WHEN<br>REMOVED   |                     |   |               |                |                       |                      |                 |  |
|                     | 2. Closure Head  | Studs               | 7.380" x<br>76.37"                        | 5, Vol        | 54             | 18<br>18<br>18        | One<br>Two<br>Three  | 33<br>66<br>100 |  |
| 640                 | THREADS IN FLANGES   |                     |   |               |                |                       |                      |                 |  |
|                     | 1. Reactor Vessel  | Flange<br>Ligaments | SN 79173                                  | Vol           | 54             | 0<br>0<br>54          | One<br>Two<br>Three  | 0<br>0<br>100   |  |
| 650                 | CLOSURE WASHERS,<br>BUSHINGS   |                     |   |               |                |                       |                      |                 |  |
|                     | 1. Reactor Vessel  | Washers             | 7.50" x 1.27"                             | VT-1          | 54             | 18<br>18<br>18        | One<br>Two<br>Three  | 33<br>66<br>100 |  |
| 660                 | PRESSURIZER  |                     |   |               |                |                       |                      |                 |  |
| 670                 | BOLTS AND STUDS<br>FLANGE SURFACE, WHEN<br>CONNECTION DISAS-                               | None<br>None        |   |               |                |                       |                      |                 |  |
| 680                 | SEMBLED<br>NUTS, BUSHINGS, AND<br>WASHERS  | None                |   |               |                |                       |                      |                 |  |

| ASME<br>ITEM<br>NO. | ZONE/COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION,<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|----------------|--|---------------|----------------|-----------------------|----------------------|-----------------|--|
| 600                 | STEAM GENERATOR'S<br>BOLTS AND STUDS<br>FLANGE SURFACE, WHEN<br>CONNECTION DISAS-<br>SEMBLED | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6110                | NUTS, BUSHINGS, AND<br>WASHERS   | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6120                | HEAT EXCHANGERS  | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6130                | BOLTS AND STUDS<br>FLANGE SURFACE, WHEN<br>CONNECTION DISAS-<br>SEMBLED                      | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6140                | NUTS, BUSHINGS, AND<br>WASHERS   | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6150                | PIPING   | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6160                | BOLTS AND STUDS<br>FLANGE SURFACE, WHEN<br>CONNECTION DISAS-<br>SEMBLED                      | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6170                | NUTS, BUSHINGS, AND<br>WASHERS   | None           | -  | -             | -              | -                     | -                    | -               |  |
| 6180                | PUMPS<br>BOLTS AND STUDS**   | None           | -  | -             | -              | -                     | -                    | -               |  |
|                     | 16 Reactor Coolant<br>Pump 1A  | Flange Studs   | 4.33" x<br>32.87"                          | Vol*          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 | *A SUPPLEMENTAL<br>VT-1 EXAM WILL BE<br>PERFORMED 100% PER<br>REVIEWING OUTAGE<br>(SEE ITEM 80.27)<br>**SUPPLEMENTED BY<br>VISUAL (EACH<br>REMOVAL) AND SUR-<br>FACE (AT 5 YEAR<br>INTERVALS) EXAMS<br>WHICH REMOVED<br>(SEE ITEM 82.02) |
|                     | 17 Reactor Coolant<br>Pump 1B  | Flange Studs   | 4.33" x<br>32.87"                          | Vol*          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |
|                     | 18 Reactor Coolant<br>Pump 2A  | Flange Studs   | 4.33" x<br>32.87"                          | Vol*          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |
|                     | 19 Reactor Coolant<br>Pump 2B  | Flange Studs   | 4.33" x<br>32.87"                          | Vol*          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION          | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.                                 | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|-------------------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--|
| 6190                | FLANGE SURFACE, WHEN<br>CONNECTION DISAS-<br>SEMBLED   |                         |   |               |                |                       |                      |                 |  |
|                     | 16-Reactor Coolant Pump 1A, 17-Reactor<br>Coolant Pump 1B, 18-Reactor Coolant<br>Pump 2A, 19-Reactor Coolant Pump 2B | Flange<br>Surface       | CASING SN<br>1A - 1110-1A<br>1B - 1110-1B<br>2A - 1110-2A<br>2B - 1110-2B | VT-1          | 16 per<br>pump | *<br>*<br>*           | One<br>Two<br>Three  | *<br>*<br>*     | *100% EXAM WHEN<br>DISASSEMBLED<br>(THERE ARE NO<br>BUSHINGS IN THE<br>PUMP FLANGES)<br>**THE CLAMPING<br>RING WILL BE<br>EXAMINED (THERE<br>ARE NO WASHERS) |
| 6200                | NUTS, BUSHINGS AND<br>WASHERS**  |                         |   |               |                |                       |                      |                 |  |
|                     | 16-Reactor Coolant<br>Pump 1A  | Nuts &<br>Clamping Ring | 4.528" x<br>7.283"  | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |
|                     | 17-Reactor Coolant<br>Pump 1B  | Nuts &<br>Clamping Ring | 4.528" x<br>7.283"  | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |
|                     | 18-Reactor Coolant<br>Pump 2A  | Nuts &<br>Clamping Ring | 4.528" x<br>7.283"  | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |
|                     | 19-Reactor Coolant<br>Pump 2B  | Nuts &<br>Clamping Ring | 4.528" x<br>7.283"  | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100 |  |
| 6210                | VALVES<br>BOLTS AND STUDS<br>FLANGE SURFACE, WHEN<br>CONNECTION DISAS-<br>SEMBLED                                    | None<br>None            | -<br>-  | -<br>-        | -<br>-         | -<br>-                | -<br>-               | -<br>-          |  |
| 6230                | NUTS, BUSHINGS, AND<br>WASHERS   | None                    | -   | -             | -              | -                     | -                    | -               |  |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION                       | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%      | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|--|--------------------------------------|---|---------------|----------------|-----------------------|----------------------|-------------------|---|
| B 700               | EXAM. CATEGORY B-Q-2;<br>PRESSURE RETAINING<br>BOLTING 2 IN. AND<br>LESS IN DIAMETER |                                      |   |               |                |                       |                      |                   |   |
| 710                 | REACTOR VESSEL<br>BOLTS, STUDS AND<br>NUTS   | None                                 |   |               |                |                       |                      |                   |   |
| 720                 | PRESSURIZER<br>BOLTS, STUDS AND<br>NUTS  |                                      |   |               |                |                       |                      |                   |   |
|                     | 5. Pressurizer<br>Manway   | Studs & Nuts                         | 1.5" x 14.5"                              | VT-1          | * 20<br>pairs  | 20<br>20<br>20        | One<br>Two<br>Three  | 100<br>100<br>100 | *SUPPLEMENTED<br>BY VISUAL (EACH<br>REMOVAL) AND<br>SURFACE (AT 5 YEAR<br>INTERVALS) EXAMS<br>WHEN REMOVED<br>(SEE IEB #2-02) |
| 730                 | STEAM GENERATORS<br>BOLTS, STUDS AND<br>NUTS   |                                      |   |               |                |                       |                      |                   |   |
|                     | 3. Steam Generator 1<br>CL and HL<br>Manways   | Studs & Nuts                         | 1.5" x 14.5"                              | VT-1          | * 40<br>Pairs  | 40<br>40<br>40        | One<br>Two<br>Three  | 100<br>100<br>100 |   |
|                     | 4. Steam Generator 2<br>CL and HL<br>Manways   | Studs & Nuts                         | 1.5" x 14.5"                              | VT-1          | * 40<br>Pairs  | 40<br>40<br>40        | One<br>Two<br>Three  | 100<br>100<br>100 |   |
| 740                 | HEAT EXCHANGERS  | None                                 |   |               |                |                       |                      |                   |   |
| 750                 | PIPING<br>BOLTS, STUDS AND<br>NUTS   |                                      |   |               |                |                       |                      |                   |   |
|                     | 31 Pressurizer Safeties  | Flange<br>Flange<br>Flange<br>Flange | RC-1-6"<br>RC-3-6"<br>RC-5-6"<br>RC-7-6"  | VT-1          | * 4            | 1<br>1<br>2           | One<br>Two<br>Three  | 25<br>50<br>100   |   |
|                     | 37 Charging Line   | Flange                               | CH-5-3"                                   | VT-1          | 1              | 1<br>0<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |   |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                            | IDENTIFICATION                    | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.            | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%     | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|-----------------------------------|--|---------------|----------------|-----------------------|----------------------|------------------|--------------------------------|
| 760                 | PUMPS<br>BOLTS, STUDS AND<br>NUTS                   |                                   |  |               |                |                       |                      |                  |                                |
|                     | 16 Reactor Coolant<br>Pump 1A<br>Seal Cover Bolting | Seal Cover<br>Studs & Nuts        | 1.5" x 8.27"   | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100  |                                |
|                     | 17 Reactor Coolant<br>Pump 1B<br>Seal Cover Bolting | Seal Cover<br>Studs & Nuts        | 1.5" x 8.27"   | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100  |                                |
|                     | 18 Reactor Coolant<br>Pump 2A<br>Seal Cover Bolting | Seal Cover<br>Studs & Nuts        | 1.5" x 8.27"   | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100  |                                |
|                     | 19 Reactor Coolant<br>Pump 2B<br>Seal Cover Bolting | Seal Cover<br>Studs & Nuts        | 1.5" x 8.27"   | VT-1          | 16             | 5<br>5<br>6           | One<br>Two<br>Three  | 31<br>62<br>100  |                                |
| 770                 | VALVES<br>BOLTS, STUDS AND<br>NUTS                  |                                   |  |               |                |                       |                      |                  |                                |
|                     | 21 Shutdown Cooling Loop 1                          | UV-651<br>UV-653                  | RC-051-16"<br>SI-240-16"                             | VT-1          | 2              | 1<br>0<br>1           | One<br>Two<br>Three  | 50<br>50<br>100  |                                |
|                     | 22 Shutdown Cooling Loop 2                          | UV-652<br>UV-654                  | RC-068-16"<br>SI-193-16"                             | VT-1          | 2              | 1<br>1<br>0           | One<br>Two<br>Three  | 50<br>100<br>100 |                                |
|                     | 23 Safety Injection Loop 1A                         | V-235<br>UV-634<br>V-237<br>V-542 | SI-207-14"<br>SI-207-14"<br>SI-207-14"<br>SI-203-12" | VT-1          | 4              | 1<br>2<br>1           | One<br>Two<br>Three  | 25<br>75<br>100  |                                |
|                     | 24 Safety Injection Loop 1B                         | V-245<br>UV-644<br>V-247<br>V-543 | SI-223-14"<br>SI-223-14"<br>SI-223-14"<br>SI-221-12" | VT-1          | 4              | 1<br>2<br>1           | One<br>Two<br>Three  | 25<br>75<br>100  |                                |
|                     | 25 Safety Injection Loop 2A                         | V-215<br>UV-614<br>V-217<br>V-540 | SI-160-14"<br>SI-160-14"<br>SI-160-14"<br>SI-156-12" | VT-1          | 4              | 1<br>1<br>2           | One<br>Two<br>Three  | 25<br>50<br>100  |                                |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM      | IDENTIFICATION                           | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.            | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%      | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|-------------------------------|--|--|---------------|----------------|-----------------------|----------------------|-------------------|--------------------------------|
| 770                 | CONTINUED                     |  |  |               |                |                       |                      |                   |                                |
|                     | 26-Safety Injection Loop 2B   | V-225<br>UV-624<br>V-227<br>V-541        | SL-179-14"<br>SL-179-14"<br>SL-179-14"<br>SL-175-12" | VT-1          | 4              | 1<br>2<br>1           | One<br>Two<br>Three  | 25<br>75<br>100   |                                |
|                     | 27-Pressurizer Spray Loop 1A  | V-240<br>PV-100E<br>V-243                | RC-62-3"<br>RC-62-3"<br>RC-16-3"                     | VT-1          | 3              | 0<br>1<br>2           | One<br>Two<br>Three  | 0<br>33<br>100    |                                |
|                     | 28-Pressurizer Spray Loop 1B  | V-241<br>PV-100F<br>V-242                | RC-17-3"<br>RC-17-3"<br>RC-18-3"                     | VT-1          | 3              | 2<br>1<br>0           | One<br>Two<br>Three  | 66<br>100<br>100  |                                |
|                     | 29-Combined Pressurizer Spray | V-244                                    | RC-18-4"   | VT-1          | 1              | 0<br>0<br>1           | One<br>Two<br>Three  | 0<br>0<br>100     |                                |
|                     | 31-Pressurizer Safeties       | PSV-200<br>PSV-201<br>PSV-202<br>PSV-203 | RC-1-6"<br>RC-1-6"<br>RC-3-6"<br>RC-3-6"             | VT-1          | 4              | 1<br>1<br>2           | One<br>Two<br>Three  | 25<br>50<br>100   |                                |
|                     | 32-Drain Line 1A              | V-334<br>V-234                           | RC-60-2"<br>RC-60-2"                                 | VT-1          | 2              | 2<br>0<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |                                |
|                     | 33-Drain Line 1B              | V-335<br>V-235                           | RC-58-2"<br>RC-58-2"                                 | VT-1          | 2              | 0<br>2<br>0           | One<br>Two<br>Three  | 0<br>100<br>100   |                                |
|                     | 34-Drain Line 2A              | V-333<br>V-233                           | RC-96-2"<br>RC-96-2"                                 | VT-1          | 2              | 0<br>2<br>0           | One<br>Two<br>Three  | 0<br>100<br>100   |                                |
|                     | 35-Drain Line 2B              | V-332<br>V-232                           | RC-89-2"<br>RC-89-2"                                 | VT-1          | 2              | 0<br>0<br>2           | One<br>Two<br>Three  | 0<br>0<br>100     |                                |
|                     | 36-Leakdown Line              | UV-515<br>UV-516                         | RC-91-2"<br>CH-1-2"                                  | VT-1          | 2              | 0<br>0<br>2           | One<br>Two<br>Three  | 0<br>0<br>100     |                                |
|                     | 37-Charging Line              | PDV-240                                  | CH-5-3"  | VT-1          | 1              | 1<br>0<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |                                |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                  | IDENTIFICATION          | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%     | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|-------------------------|---|---------------|----------------|-----------------------|----------------------|------------------|--------------------------------|
| 770                 | CONTINUED                                 |                         |   |               |                |                       |                      |                  |                                |
|                     | 38-Drain Line Loop 1                      | V-215<br>V-216          | RC-70-2"<br>RC-70-2"                      | VT-1          | 2              | 1<br>0<br>1           | One<br>Two<br>Three  | 50<br>50<br>100  |                                |
|                     | 39-HPSI Long Term Recirc 1                | V-523<br>V-522<br>V-957 | SI-248-3"<br>SI-248-3"<br>SI-248-3"       | VT-1          | 3              | 1<br>2<br>0           | One<br>Two<br>Three  | 33<br>100<br>100 |                                |
|                     | 40-HPSI Long Term Recirc 2                | V-533<br>V-532<br>V-958 | SI-199-3"<br>SI-199-3"<br>SI-199-3"       | VT-1          | 3              | 0<br>1<br>2           | One<br>Two<br>Three  | 0<br>33<br>100   |                                |
| 780                 | CRD HOUSINGS<br>BOLTS, STUDS, AND<br>NUTS |                         |   |               |                |                       |                      |                  |                                |
|                     | 2 Closure Head<br>RVLMS locations         | Mazmon Clamps           | CEDM 92<br>CEDM 96                        | VT-1          | 2              | 1<br>0<br>1           | One<br>Two<br>Three  | 50<br>50<br>100  |                                |

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| ASME<br>ITEM<br>NO. | ZONE/COMPONENT OR SYSTEM                                     | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS                       |
|---------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--|
| B 800               | EXAM CATEGORY B, H,<br>INTERNAL ATTACH-<br>MENTS FOR VESSELS |                |   |               |                |                       |                      |                 |  |
| 810                 | REACTOR VESSEL<br>INTERIORALLY WELDED<br>ATTACHMENTS         | None           |   |               |                |                       |                      |                 |  |
| 820                 | PRESSURIZER<br>INTERIORALLY WELDED<br>ATTACHMENTS            |                |   |               |                |                       |                      |                 |  |
|                     | 3. Pressurizer   | Support Skirt  | SN 79273                                  | S and<br>Vol  | 1              | 33%<br>33%<br>34%     | One<br>Two<br>Three  | 33<br>66<br>100 |  |
| 830                 | STEAM GENERATORS<br>INTERIORALLY WELDED<br>ATTACHMENTS       |                |   |               |                |                       |                      |                 |  |
|                     | 3. Steam Generator 1   | Support Skirt  | SN 79273-1                                | Vol           | 1              | 33%<br>*              | One<br>Two<br>Three  | 33*<br>*        | * MULTIPLE<br>VESSELS,<br>EXAMINATIONS<br>TOTAL 100% |
|                     | 4. Steam Generator 2   | Support Skirt  | SN 79273-2                                | Vol           | 1              | *<br>33%<br>*         | One<br>Two<br>Three  | *<br>66<br>*    | SUPPORT<br>SKIRT WELD<br>IN 1 STEAM<br>GENERATOR     |
| 840                 | HEAT EXCHANGERS<br>INTERIORALLY WELDED<br>ATTACHMENTS        | None           |   |               |                |                       |                      |                 |  |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                                    | IDENTIFICATION   | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.  | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|---|--|--|---------------|----------------|-----------------------|----------------------|----------------|--|
| B 900               | EXAM CATEGORY B-1,<br>PRESSURE RETAINING<br>WELDS IN PIPING |  |  |               |                |                       |                      |                |  |
| 910                 | NOMINAL PIPE SIZE ≥ 4<br>IN.                                |  |  |               |                |                       |                      |                |  |
| 911                 | CIRCUMFERENTIAL AND   |  |  |               |                |                       |                      |                |  |
| 912                 | *LONGITUDINAL WELDS   |  |  |               |                |                       |                      |                | * THE LESSER<br>OF 12" OR 1<br>PIPE DIAMETER<br>LENGTH FROM<br>SCHEDULED CIRC<br>WELD INTERSECTION<br>WILL BE EXAMINED |
|                     | 6- RCS Primary Piping                                       | HL 1<br>HL 2<br>CL 1A to RCP<br>CL 1B to RCP<br>CL 2A to RCP<br>CL 2B to RCP<br>CL 1A to RPV<br>CL 1B to RPV<br>CL 2A to RPV<br>CL 2B to RPV | RC-32-42" ID<br>RC-63-42" ID<br>RC-33-30" ID<br>RC-30-30" ID<br>RC-73-30" ID<br>RC-84-30" ID<br>RC-34-30" ID<br>RC-31-30" ID<br>RC-79-30" ID<br>RC-93-30" ID | S, Vol        | 62             | 7<br>6<br>9           | One<br>Two<br>Three  | 11<br>21<br>35 | AUTOMATED EXAM<br>OF NOZZLE TO<br>EXTENSION AND<br>EXTENSION TO PIPE<br>WELDS  |
|                     | 20-Pressurizer Surge  | Butt Welds   | RC-28-12"  | S, Vol        | 11             | 1<br>0<br>2           | One<br>Two<br>Three  | 9<br>9<br>27   |  |
|                     | 21-Shutdown Cooling Loop 1                                  | Butt Welds   | RC-51-16"<br>SI-240-16"  | S, Vol        | 19             | 2<br>2<br>2           | One<br>Two<br>Three  | 11<br>21<br>32 |  |
|                     | 22-Shutdown Cooling Loop 2                                  | Butt Welds   | RC-68-16"<br>SI-193-16"  | S, Vol        | 19             | 2<br>2<br>3           | One<br>Two<br>Three  | 11<br>21<br>37 |  |
|                     | 23-Safety Injection 1A                                      | Butt Welds   | SI-207-14"<br>SI-203-12"   | S, Vol        | 18             | 3<br>0<br>2           | One<br>Two<br>Three  | 17<br>17<br>28 |  |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                                  | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|---|----------------|---|---------------|----------------|-----------------------|----------------------|----------------|---|
| 911<br>&<br>912     | CONTINUED   |                |   |               |                |                       |                      |                |   |
|                     | 24-Safety Injection 1B                                    | Butt Welds     | SI-223-14"<br>SI-221-12"                  | S, Vol        | 18             | 0<br>3<br>2           | One<br>Two<br>Three  | 0<br>16<br>28  |   |
|                     | 25-Safety Injection 2A                                    | Butt Welds     | SI-160-14"<br>SI-156-12"                  | S, Vol        | 22             | 2<br>3<br>1           | One<br>Two<br>Three  | 9<br>23<br>27  |   |
|                     | 26-Safety Injection 2B                                    | Butt Welds     | SI-179-14"<br>SI-175-12"                  | S, Vol        | 18             | 2<br>1<br>2           | One<br>Two<br>Three  | 11<br>17<br>28 |   |
|                     | 28-Pressurizer Spray 1B, 29-Combined<br>Pressurizer Spray | Butt Welds     | RC-18-4"                                  | S, Vol        | 15             | 2<br>1<br>2           | One<br>Two<br>Three  | 13<br>20<br>33 |   |
|                     | 31-Pressurizer Safeties                                   | Butt Welds     | RC-1-6"<br>RC-3-6"<br>RC-5-6"<br>RC-7-6"  | S, Vol        | 12             | 1<br>2<br>2           | One<br>Two<br>Three  | 8<br>25<br>42  |   |
|                     | 36 Letdown Line<br>Delay Coil                             | Butt Welds     | RC-91-16"                                 | S, Vol        | 4              | 0<br>1<br>0           | One<br>Two<br>Three  | 0<br>25<br>25  |   |
| 920                 | NOMINAL PIPE SIZE < 4<br>IN.                              |                |   |               |                |                       |                      |                | * THE LESSER OF 12<br>INCHES OR ONE PIPE<br>DIAMETER LENGTH<br>FROM SCHEDULED<br>CIRCUMFERENTIAL<br>WELD INTERSECTION<br>WILL BE EXAMINED |
| 921<br>&<br>922     | CIRCUMFERENTIAL AND<br>*LONGITUDINAL WELDS                |                |   |               |                |                       |                      |                |   |
|                     | 27-Pressurizer Spray 1A                                   | Butt Welds     | RC-62-3"<br>RC-16-3"                      | S             | 38             | 3<br>3<br>4           | One<br>Two<br>Three  | 8<br>16<br>26  |   |
|                     | 28-Pressurizer Spray 1B                                   | Butt Welds     | RC-17-3"<br>RC-18-3"                      | S             | 36             | 4<br>3<br>3           | One<br>Two<br>Three  | 11<br>19<br>28 |   |
|                     |   |                |   |               |                |                       |                      |                |   |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|----------------------------|----------------|---|---------------|----------------|-----------------------|----------------------|----------------|--|
| 921<br>8<br>922     | CONTINUED                  |                |   |               |                |                       |                      |                | * VOL EXAM OF 2<br>WELDS AND BASE-<br>METAL DOWN-<br>STREAM OF V-431<br>PER IIR 88-08. |
|                     | 30-Aux Pressurizer Spray   | Butt Welds     | CH-009-2"<br>CH-520-2"<br>CH-521-2"       | S             | 11             | 2<br>2<br>0           | One*<br>Two<br>Three | 15<br>36<br>36 |  |
|                     | 32-Drain Line 1A           | Butt Welds     | RC-60-2"                                  | S             | 5              | 2<br>0<br>0           | One<br>Two<br>Three  | 40<br>40<br>40 |  |
|                     | 33-Drain Line 1B           | Butt Welds     | RC-58-2"                                  | S             | 5              | 0<br>2<br>0           | One<br>Two<br>Three  | 0<br>40<br>40  |  |
|                     | 34-Drain Line 2A           | Butt Welds     | RC-96-2"                                  | S             | 5              | 0<br>0<br>2           | One<br>Two<br>Three  | 0<br>0<br>40   |  |
|                     | 35-Drain Line 2B           | Butt Welds     | RC-89-2"                                  | S             | 5              | 0<br>0<br>2           | One<br>Two<br>Three  | 0<br>0<br>40   |  |
|                     | 36-Letdown Line            | Butt Welds     | RC-91-2"                                  | S             | 70             | 4<br>6<br>8           | One<br>Two<br>Three  | 6<br>14<br>26  |  |
|                     | 37-Charging Line           | Butt Welds     | CH-5-3"                                   | S             | 60             | 5<br>6<br>6           | One<br>Two<br>Three  | 8<br>18<br>28  |  |
|                     | 38-Drain Line Loop 1       | Butt Welds     | RC-70-2"                                  | S             | 4              | 0<br>1<br>0           | One<br>Two<br>Three  | 0<br>25<br>25  |  |
|                     | 39-HPSI Long Term Recirc 1 | Butt Welds     | SL-248-3"                                 | S             | 36             | 2<br>3<br>4           | One<br>Two<br>Three  | 6<br>14<br>25  |  |
|                     | 40-HPSI Long Term Recirc 2 | Butt Welds     | SL-199-3"                                 | S             | 25             | 3<br>2<br>2           | One<br>Two<br>Three  | 12<br>20<br>28 |  |

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|---------------------|-----------------------------------|------------------|---|---------------|----------------|-----------------------|----------------------|--------------|---|
| 930                 | BRANCH PIPE CON-<br>NECTION WELDS |                  |   |               |                |                       |                      |              |   |
| 931                 | NOMINAL PIPE SIZE ≥ 4<br>IN.      |                  |   |               |                |                       |                      |              | ITEM B9.31,<br>SYSTEMS<br>COMBINED<br>FOR<br>PERCENTAGE |
|                     | 6- RCS Primary Piping             | Surge            | RC-32-42" ID                              | S, Vol        | 1              | 1                     | Three                | -            |   |
|                     |                                   | SD Cooling 1     | RC-32-42" ID                              | S, Vol        | 1              | 0                     | -                    | -            |   |
|                     |                                   | SD Cooling 2     | RC-63-42" ID                              | S, Vol        | 1              | 0                     | -                    | -            |   |
|                     |                                   | SI 1A            | RC-34-30" ID                              | S, Vol        | 1              | 1                     | One                  | 14           |   |
|                     |                                   | SI 1B            | RC-31-30" ID                              | S, Vol        | 1              | 1                     | Three                | -            |   |
|                     |                                   | SI 1C            | RC-79-30" ID                              | S, Vol        | 1              | 1                     | Two                  | 29           |   |
|                     |                                   | SI 1D            | RC-93-30" ID                              | S, Vol        | 1              | 1                     | Three                | 71           |   |
| 932                 | NOMINAL PIPE SIZE<br>≤ 4 IN.      |                  |   |               |                |                       |                      |              | ITEM B9.32,<br>SYSTEMS<br>COMBINED<br>FOR<br>PERCENTAGE |
|                     | 6- RCS Primary Piping             | Drain 1A         | RC-33-30" ID                              | S             | 1              | 1                     | One                  | -            |   |
|                     |                                   | PZR Spray 1A     | RC-34-30" ID                              | S             | 1              | 0                     | -                    | -            |   |
|                     |                                   | Drain 1B         | RC-30-30" ID                              | S             | 1              | 0                     | -                    | -            |   |
|                     |                                   | PZR Spray 1B     | RC-31-30" ID                              | S             | 1              | 0                     | -                    | -            |   |
|                     |                                   | Drain 2A         | RC-73-30" ID                              | S             | 1              | 0                     | -                    | -            |   |
|                     |                                   | Charging         | RC-79-30" ID                              | S             | 1              | 1                     | Two                  | -            |   |
|                     |                                   | Letdown          | RC-84-30" ID                              | S             | 1              | 1                     | Three                | 42           |   |
|                     | 21-Shutdown Cooling Loop 1        | 2" Drain         | RC-051-16"                                | S             | 2              | 0                     | One                  | -            |   |
|                     |                                   | 3" HPSI          |   |               |                | 0                     | Two                  | -            |   |
|                     |                                   |                  |   |               |                | 0                     | Three                | -            |   |
|                     | 22-Shutdown Cooling Loop 2        | 3" HPSI          | RC-068-16"                                | S             | 1              | 1                     | One                  | 14           |   |
|                     |                                   |                  |   |               |                | 0                     | Two                  | -            |   |
|                     |                                   |                  |   |               |                | 0                     | Three                | -            |   |
|                     | 36-Letdown Line                   | 2" Delay<br>Coil | RC-091-16"                                | S             | 4              | 0                     | One                  | -            |   |
|                     |                                   |                  |   |               |                | 2                     | Two                  | 36           |   |
|                     |                                   |                  |   |               |                | 0                     | Three                | -            |   |
| 940                 | SOCKET WELDS                      |                  |   |               |                |                       |                      |              |   |
|                     | 32-Drain Line 1A                  | Socket Welds     | RC-060-2"                                 | S             | 3              | 1                     | One                  | 33           |   |
|                     |                                   |                  |   |               |                | 0                     | Two                  | 33           |   |
|                     |                                   |                  |   |               |                | 0                     | Three                | 33           |   |
|                     | 33-Drain Line 1B                  | Socket Welds     | RC-058-2"                                 | S             | 3              | 0                     | One                  | 0            |   |
|                     |                                   |                  |   |               |                | 1                     | Two                  | 33           |   |
|                     |                                   |                  |   |               |                | 0                     | Three                | 33           |   |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|--------------------------|----------------|---|---------------|----------------|-----------------------|----------------------|----------------|--------------------------------|
| 9-80                | CONTINUED                |                |   |               |                |                       |                      |                |                                |
|                     | 34-Drain Line 2A         | Socket Welds   | RC-096 2"                                 | S             | 3              | 0<br>1<br>0           | One<br>Two<br>Three  | 0<br>33<br>33  |                                |
|                     | 35-Drain Line 2B         | Socket Welds   | RC-089 2"                                 | S             | 3              | 0<br>0<br>1           | One<br>Two<br>Three  | 0<br>0<br>33   |                                |
|                     | 38-Drain Line Loop 1     | Socket Welds   | RC-070 2"                                 | S             | 3              | 1<br>0<br>0           | One<br>Two<br>Three  | 33<br>33<br>33 |                                |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION | DESCRIPTION<br>LINE NO. OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS           |
|---------------------|---|----------------|--|---------------|----------------|-----------------------|----------------------|--------------|--|
| B1000               | EXAM CATEGORY B K.L.<br>INTEGRAL ATTACHMENTS<br>FOR FITTING, PUMPS,<br>AND VALVES |                |  |               |                |                       |                      |              |  |
| 1010                | PITING<br>INTEGRALLY WELDED<br>ATTACHMENTS  |                |  |               |                |                       |                      |              |  |
|                     | 22 Shutdown Cooling Loop 2  | Logs           | SI-193-15"                               | 5             | 1              | 1                     | Two                  |              | ITEM B1010<br>COMBINED<br>FOR PERCENTAGE |
|                     | 24 Safety Injection 1B  | Strachion      | SI-223-14"                               | 5             | 1              | 1                     | Three                |              |  |
|                     | 25 Safety Injection 2A  | Strachion      | SI-160-14"                               | 5             | 1              | 1                     | Three                | 100          |  |
|                     | 26 Safety Injection 2B  | Strachion      | SI-179-14"                               | 5             | 1              | 1                     | One                  |              |  |
|                     | 36 Lockdown Line  | Logs           | RC-091-16"                               | 5             | 2              | 1                     | One<br>Two           | 33<br>66     |  |
| 1020                | PUMPS<br>INTEGRALLY WELDED<br>ATTACHMENTS   | None           |  |               |                |                       |                      |              |  |
| 1030                | VALVES<br>INTEGRALLY WELDED<br>ATTACHMENTS  | None           |  |               |                |                       |                      |              |  |

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## ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION   | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.  | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT                         | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|---|--|--|---------------|----------------|---|----------------------|--------------|---------------------------------|
| B1200               | EXAM CATEGORY B-L-1,<br>B-M-1, PRESSURE<br>RETAINING WELDS IN<br>PUMP CASINGS AND<br>VALVE BODIES;<br>EXAM CATEGORY B-L-2,<br>B-M-2, PUMP CASINGS<br>AND VALVE BODIES |  |  |               |                |   |                      |              |                                 |
| 1210                | PUMPS<br>PUMP CASING WELDS  |  |  |               |                |   |                      |              |                                 |
|                     | 16 Reactor Coolant Pump 1A<br>17 Reactor Coolant Pump 1B<br>18 Reactor Coolant Pump 2A<br>19 Reactor Coolant Pump 2B  | Circ Casing<br>Welds   | 1255<br>1257<br>1256<br>1258   | Vol           | 4              | Examine the<br>Weld in 1<br>Pump              | *                    | 100          |                                 |
|                     | 16 Reactor Coolant Pump 1A<br>17 Reactor Coolant Pump 1B<br>18 Reactor Coolant Pump 2A<br>19 Reactor Coolant Pump 2B  | Outlet Nozzle<br>To Casing<br>Welds  | 1255<br>1257<br>1256<br>1258   | Vol           | 4              | Examine the<br>Weld in 1<br>Pump              | *                    | 100          | * BY THE END OF<br>THE INTERVAL |
| 1220                | PUMP CASINGS  |  |  |               |                |   |                      |              |                                 |
|                     | 16 Reactor Coolant Pump 1A<br>17 Reactor Coolant Pump 1B<br>18 Reactor Coolant Pump 2A<br>19 Reactor Coolant Pump 2B  | Internal<br>Surfaces   | 1255<br>1257<br>1256<br>1258   | VT-3          | 4              | Examine the<br>Internal surfaces<br>in 1 Pump | *                    | 100          | * BY THE END OF<br>THE INTERVAL |
| 1230                | VALVES<br>VALVES, NOMINAL PIPE<br>SIZE < 4 IN. VALVE<br>BODY WELDS  | None   |  |               |                |   |                      |              |                                 |
| 1240                | VALVES, NOMINAL PIPE<br>SIZE ≥ 4 IN. VALVE<br>BODY WELDS  |  |  |               |                |   |                      |              |                                 |
|                     | Borg Warner<br>Gate Valves<br>Utilizing Forged<br>Construction  | UV-651<br>UV-653<br>UV-652<br>UV-654<br>UV-634<br>UV-644<br>UV-614<br>UV-624 | RC-51-16"<br>SI-240-16"<br>RC-68-16"<br>SI-193-16"<br>SI-207-14"<br>SI-223-14"<br>SI-160-14"<br>SI-179-14" | Vol           | 8              | Examine the<br>Weld in<br>1 Valve             | *                    | 100          | * BY THE END OF<br>THE INTERVAL |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION   | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.  | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT                          | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|---|--|--|---------------|----------------|--|----------------------|--------------|---------------------------------|
| 1240                | <u>CONTINUED</u>  |  |  |               |                |  |                      |              |                                 |
|                     | Borg Warner<br>Check Valve<br>Utilizing Forged<br>Construction        | V-244  | RC-18.4"   | Vol           | 1              | 1  | *                    | 100          | * BY THE END OF<br>THE INTERVAL |
|                     | Dresser Pressure<br>Safety Valves<br>Utilizing Forged<br>Construction | PSV-200<br>PSV-201<br>PSV-202<br>PSV-203   | RC-1.6"<br>RC-3.6"<br>RC-5.6"<br>RC-7.6"   | Vol           | 4              | Examine the<br>Weld in<br>1 Valve              | *                    | 100          |                                 |
| 1250                | <u>VALVE BODY EXCEED-<br/>ING 4 IN. NOMINAL<br/>PIPE SIZE</u>         |  |  |               |                |  |                      |              |                                 |
|                     | Borg Warner<br>Gate Valves<br>Utilizing Forged<br>Construction        | UV-651<br>UV-653<br>UV-652<br>UV-654<br>UV-634<br>UV-644<br>UV-614<br>UV-624                             | RC-51-16"<br>SI-240-16"<br>RC-68-16"<br>SI-193-16"<br>SI-207-14"<br>SI-223-14"<br>SI-160-14"<br>SI-179-14"   | VT-3          | 8              | Examine the<br>Internal Surfaces<br>of 1 Valve | *                    | 100          |                                 |
|                     | Borg Warner<br>Check Valves<br>Utilizing Forged<br>Construction       | V-235<br>V-237<br>V-542<br>V-245<br>V-247<br>V-543<br>V-215<br>V-217<br>V-540<br>V-225<br>V-227<br>V-541 | SI-207-14"<br>SI-207-14"<br>SI-203-12"<br>SI-223-14"<br>SI-223-14"<br>SI-221-12"<br>SI-160-14"<br>SI-160-14"<br>SI-156-12"<br>SI-179-14"<br>SI-179-14"<br>SI-173-12" | VT-3          | 12             | Examine the<br>Internal Surfaces<br>of 1 Valve | *                    | 100          |                                 |
|                     | Dresser Pressure<br>Safety Valves<br>Utilizing Forged<br>Construction | PSV-200<br>PSV-201<br>PSV-202<br>PSV-203   | RC-1.6"<br>RC-3.6"<br>RC-5.6"<br>RC-7.6"   | VT-3          | 4              | Examine the<br>Internal Surfaces<br>of 1 Valve | *                    | 100          |                                 |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION   | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS         | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD   | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|--|---|---------------|------------------------|-----------------------|------------------------|-----------------|--|
| B1300               | EXAM CATEGORY B-N-1;<br>INTERIOR OF REACTOR<br>VESSEL, B-N-2,<br>INTEGRALLY WELDED<br>CORE SUPPORT STRUCTURES<br>AND INTERIOR ATTACH-<br>MENTS TO REACTOR<br>VESSELS, B-N-3,<br>REMOVABLE CORE<br>SUPPORT STRUCTURES |  |   |               |                        |                       |                        |                 |  |
| 1310                | REACTOR VESSEL<br>VESSEL INTERIOR  |  |   |               |                        |                       |                        |                 |  |
|                     | 1- Reactor Vessel  | Examine the areas above<br>and below the reactor core<br>that are made accessible<br>for examination by removal<br>of components during<br>normal refueling outages. |   | VT-3          | Accessible<br>Areas    | 33%<br>33%<br>34%     | *One<br>*Two<br>*Three | 33<br>66<br>100 | *EXAMINE AT 1st<br>REFUELING OUTAGE,<br>AND SUBSEQUENTLY<br>AT 3-YEAR IN-<br>TERVALS |
| 1320                | REACTOR VESSEL (BWR)<br>INTERIOR ATTACHMENTS   | N/A  |   |               |                        |                       |                        |                 |  |
| 1321                | CORE SUPPORT STRUCTURE   | N/A  |   |               |                        |                       |                        |                 |  |
| 1322                |  |  |   |               |                        |                       |                        |                 |  |
| 1330                | REACTOR VESSEL (PWR)<br>INTERIOR ATTACHMENTS<br>WITHIN BELTLINE REGION   | None   |   |               |                        |                       |                        |                 |  |
| 1331                | INTERIOR ATTACHMENTS<br>BEYOND BELTLINE REGION   | Examine the accessible<br>welds and the surrounding<br>area.   |   | VT-3          | Accessible<br>Welds    | 100%                  | **                     | 100             | ** BY THE END OF<br>THE INTERVAL   |
| 1332                | CORE SUPPORT STRUCTURE   | Examine the accessible<br>core support structure   |   | VT-3          | Accessible<br>Surfaces | 100%                  | **                     | 100             |  |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION             | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS            |
|---------------------|--|----------------------------|---|---------------|----------------|-----------------------|----------------------|--------------|---|
| B 1400              | EXAM CATEGORY B-O;<br>PRESSURE RETAINING<br>WELDS IN CONTROL<br>ROD HOUSINGS |                            |   |               |                |                       |                      |              |   |
| 1410                | REACTOR VESSEL<br>WELDS IN CRD HOUSING                                       |                            |   |               |                |                       |                      |              |   |
|                     | 2- Closure Head<br>Reactor Vessel<br>CEDM Housings                           | Lower Housing<br>Welds     | Housings<br>#66, #97                      | Vel           | 97 *           | 0<br>0<br>0           | One<br>Two<br>Three  | -<br>-<br>-  | ITEM B14.10<br>COMBINED FOR<br>PERCENTAGE |
|                     | 2- Closure Head<br>Reactor Vessel<br>CEDM Housings                           | Upper Housing<br>Welds     | Housings<br>#66, #97                      | Vel           | 97 *           | 2<br>2<br>3           | One<br>Two<br>Three  | -<br>-<br>-  | *12 PERIPHERAL<br>(126 TOTAL WELDS)       |
|                     | 2- Closure Head<br>Reactor Vessel<br>CEDM Housings                           | Tube Housing<br>Lower Weld | Housings **<br>#66, #97                   | Vel           | 97 *           | 2<br>2<br>3           | One<br>Two<br>Three  | 3<br>6<br>11 | ** INCLUDES 2 RVI MS<br>TRANSITION HUBS   |
|                     | 2- Closure Head<br>Reactor Vessel<br>CEDM Housings                           | Tube Housing<br>Upper Weld | Housings<br>#66, #97                      | Vel           | 97 *           | 0<br>0<br>0           | One<br>Two<br>Three  | -<br>-<br>-  |   |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                    | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT   | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|---|-----------------------------------|---|---------------|----------------|---|----------------------|--------------|--|
| B1500               | EXAMINATION CATEGORY<br>B.P. ALL PRESSURE<br>RETAINING COMPONENTS |                                   |   |               |                |   |                      |              |  |
| 1510                | SYSTEM LEAKAGE TEST   |                                   |   |               |                |   |                      |              |  |
| 1520                | Reactor Vessel  | Pressure<br>Retaining<br>Boundary |   | VT-2          |                | Entire Pressure<br>Retaining Boundary<br>TWA: 5000<br>TWB: 5000 | *                    | 100          | * EACH REFUELING<br>OUTAGE   |
| 1530                | Pressurizer   |                                   |   |               |                |   | ***                  |              |  |
| 1540                | Steam Generators  |                                   |   |               |                |   |                      |              |  |
| 1550                | Heat Exchangers   |                                   |   |               |                |   |                      |              |  |
| 1560                | Piping  |                                   |   |               |                |   |                      |              |  |
| 1570                | Pumps<br>Valves   |                                   |   |               |                |   |                      |              |  |
| 1511                | SYSTEM HYDRO TEST   |                                   |   |               |                |   |                      |              |  |
| 1521                | Reactor Vessel  | Pressure<br>Retaining<br>Boundary |   | VT-2          |                | Entire Pressure<br>Retaining Boundary<br>TWA: 5000<br>TWB: 5000 | **                   | 100          | ** BY THE END OF<br>THE INTERVAL   |
| 1531                | Pressurizer   |                                   |   |               |                |   |                      |              | *** PERFORM<br>WALKDOWN AT THE<br>BEGINNING OF EACH<br>REFUELING OUTAGE<br>FOR GENERIC LETTER<br>88-05. IN ADDITION,<br>WALKDOWNS<br>SHOULD ALSO BE<br>PERFORMED FOR<br>SHUTDOWNS<br>FOLLOWING<br>OPERATION LONGER<br>THAN<br>APPROXIMATELY 6<br>MONTHS IN MODE 1<br>OR 2. |
| 1541                | Steam Generators  |                                   |   |               |                |   |                      |              |  |
| 1551                | Heat Exchangers   |                                   |   |               |                |   |                      |              |  |
| 1561                | Piping  |                                   |   |               |                |   |                      |              |  |
| 1571                | Pumps<br>Valves   |                                   |   |               |                |   |                      |              |  |







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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS I

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| ASME<br>ITEM<br>NO.  | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION                   | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%      | REMARKS AND<br>RELIEF REQUESTS  |
|--|--|----------------------------------|---|---------------|----------------|-----------------------|----------------------|-------------------|---|
| *<br>F 110<br>F 120<br>F 130<br>F 140<br>F 210<br>F 220<br>F 230<br>F 240<br>F 310<br>F 320<br>F 330<br>F 340<br>F 350 | EXAM CATEGORY E-A:<br>PLATE AND SHELL<br>TYPE SUPPORTS<br>and<br>EXAM CATEGORY E-B:<br>LINEAR TYPE SUPPORTS<br>and<br>EXAM CATEGORY E-C:<br>COMPONENT STANDARD<br>SUPPORTS |                                  |   |               |                |                       |                      |                   | REQUEST FOR RELIEF<br>#1 & #3<br><br>* INCLUDES EXAM<br>ITEMS IDENTIFIED<br>AS APPLICABLE.<br><br>** NDE METHOD<br>INCLUDES VT-4<br>EXAMS, WHERE<br>APPLICABLE. |
|  | 1- Reactor Vessel  | Support<br>Columns               | SN 79173                                  | **<br>VT-3    | 4              | 0 ***<br>0<br>0       | One<br>Two<br>Three  | 0<br>0<br>0       | *** REQUEST FOR<br>RELIEF #6.   |
|  | 3- Steam Generator 1   | Support Skirt                    | SN 79273-1                                | VT-3          | 1              | 1<br>0<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |   |
|  | 4- Steam Generator 2   | Support Skirt                    | SN 79273-2                                | VT-3          | 1              | 0<br>1<br>0           | One<br>Two<br>Three  | -<br>100<br>100   |   |
|  | 5- Pressurizer   | Support Skirt                    | SN 79373                                  | VT-3          | 1              | 0<br>0<br>1           | One<br>Two<br>Three  | -<br>-<br>100     |   |
|  | 16- Reactor Coolant Pump 1A  | Vertical and<br>Lateral Supports | SN 1110-1A                                | VT-3          | 10             | 2<br>4<br>4           | One<br>Two<br>Three  | 20<br>60<br>100   |   |
|  | 17- Reactor Coolant Pump 1B  | Vertical and<br>Lateral Supports | SN 1110-1B                                | VT-3          | 10             | 2<br>4<br>4           | One<br>Two<br>Three  | 20<br>60<br>100   |   |
|  | 18- Reactor Coolant Pump 2A  | Vertical and<br>Lateral Supports | SN 1110-2A                                | VT-3          | 10             | 4<br>2<br>4           | One<br>Two<br>Three  | 40<br>60<br>100   |   |
|  | 19- Reactor Coolant Pump 2B  | Vertical and<br>Lateral Supports | SN 1110-2B                                | VT-3          | 10<br>1        | 4<br>2<br>4           | One<br>Two<br>Three  | 40<br>60<br>100   |   |

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### ASME CLASS 1

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| ASME<br>ITEM<br>NO.   | ZONE-COMPONENT OR SYSTEM                                  | IDENTIFICATION         | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%     | REMARKS AND<br>RELIEF REQUESTS |
|---|---|------------------------|---|---------------|----------------|-----------------------|----------------------|------------------|--------------------------------|
| F 110<br>F 120<br>F 130<br>F 140<br>F 210<br>F 220<br>F 230<br>F 240<br>F 310<br>F 320<br>F 330<br>F 340<br>F 350 | CONTINUED   |                        |   |               |                |                       |                      |                  |                                |
|   | 20-Pressurizer Surge                                      | Supports               | RC-28-12"                                 | VT-3          | 7              | 2<br>2<br>3           | One<br>Two<br>Three  | 29<br>58<br>100  |                                |
|   | 21-Shutdown Cooling Loop 1                                | Supports               | RC-51-16"<br>SI-240-16"                   | VT-3          | 22             | 7<br>7<br>8           | One<br>Two<br>Three  | 32<br>64<br>100  |                                |
|   | 22-Shutdown Cooling Loop 2                                | Supports<br>(1-B10.10) | RC-68-16"<br>SI-193-16"                   | VT-3          | 13             | 4<br>5<br>4           | One<br>Two<br>Three  | 31<br>69<br>100  |                                |
|   | 23-Safety Injection 1A                                    | Supports               | SI-207-14"<br>SI-203-12"                  | VT-3          | 6              | 2<br>2<br>2           | One<br>Two<br>Three  | 33<br>66<br>100  |                                |
|   | 24-Safety Injection 1B                                    | Supports<br>(1-B10.10) | SI-223-14"<br>SI-221-12"                  | VT-3          | 8              | 2<br>2<br>4           | One<br>Two<br>Three  | 25<br>50<br>100  |                                |
|   | 25-Safety Injection 2A                                    | Supports<br>(1-B10.10) | SI-160-14"<br>SI-156-12"                  | VT-3          | 7              | 2<br>3<br>2           | One<br>Two<br>Three  | 29<br>71<br>100  |                                |
|   | 26-Safety Injection 2B                                    | Supports<br>(1-B10.10) | SI-179-14"<br>SI-175-12"                  | VT-3          | 9              | 3<br>3<br>3           | One<br>Two<br>Three  | 33<br>67<br>100  |                                |
|   | 27-Pressurizer Spray 1A                                   | Supports               | RC-62-3"<br>RC-16-3"                      | VT-3          | 26             | 9<br>9<br>8           | One<br>Two<br>Three  | 35<br>69<br>100  |                                |
|   | 28-Pressurizer Spray 1B                                   | Supports               | RC-17-3"<br>RC-18-3"<br>RC-18-4"          | VT-3          | 27             | 8<br>8<br>11          | One<br>Two<br>Three  | 29<br>60<br>100  |                                |
|   | 28-Pressurizer Spray 1B, 29-Combined<br>Pressurizer Spray | Supports               | RC-18-4"                                  | VT-3          | 3              | 2<br>1<br>0           | One<br>Two<br>Three  | 67<br>100<br>100 |                                |
|   | 30-Aux Pressurizer Spray                                  | Supports               | CH-521-2"                                 | VT-3          | 2              | 0<br>0<br>2           | One<br>Two<br>Three  | -<br>-<br>100    |                                |

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### ASME CLASS 1

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| ASME<br>ITEM<br>NO.   | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION   | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.  | NDE<br>METHOD  | TOTAL<br>ITEMS   | EXAMINATION<br>AMOUNT   | INSTECTION<br>PERIOD   | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS  |
|---|--|--|--|--|--|---|--|--|---|
| F 110<br>F 120<br>F 130<br>F 140<br>F 210<br>F 220<br>F 230<br>F 240<br>F 310<br>F 320<br>F 330<br>F 340<br>F 350 | CONTINUED<br><br>32-Drain Line 1A<br><br>33-Drain Line 1B<br><br>34-Drain Line 2A<br><br>35-Drain Line 2B<br><br>36-Letdown Line<br><br>37-Charging Line<br><br>38-Drain Line Loop 1<br><br>39-HPSI Long Term Recirc 1<br><br>40-HPSI Long Term Recirc 2 | Supports<br><br>Supports<br><br>Supports<br><br>Supports<br><br>Supports<br>(2-B10.10)<br><br>Supports<br><br>Supports<br><br>Supports<br><br>Supports | RC-60.2"<br><br>RC-58.2"<br><br>RC-96.2"<br><br>RC-89.2"<br><br>RC-91.2"<br>CH-001.2"<br><br>CH-5.3"<br><br>RC-70.2"<br><br>SI-248.3"<br><br>SI-199.3" | VT-3<br><br>VT-3<br><br>VT-3<br><br>VT-3<br><br>VT-3<br><br>VT-3<br><br>VT-3<br><br>VT-3<br><br>VT-3 | 2<br><br>2<br><br>2<br><br>2<br><br>30<br><br>43<br><br>2<br><br>14<br><br>9 | 2<br>0<br>0<br><br>0<br>2<br>0<br><br>0<br>9<br>10<br>11<br><br>14<br>14<br>15<br><br>0<br>0<br>2<br><br>4<br>5<br>5<br><br>3<br>4<br>2 | One<br>Two<br>Three<br><br>One<br>Two<br>Three<br><br>One<br>Two<br>Three<br><br>One<br>Two<br>Three<br><br>One<br>Two<br>Three<br><br>One<br>Two<br>Three | 100<br>100<br>100<br><br>-<br>100<br>100<br><br>-<br>100<br>100<br>100<br><br>33<br>65<br>100<br><br>0<br>0<br>100<br><br>29<br>62<br>100<br><br>33<br>78<br>100 | 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REV 1  
12-23-91

# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 1

TABLE LRCP  
PAGE 1 OF 1

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD                   | TOTAL<br>ITEMS    | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD               | RUNNING<br>%                     | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|----------------|---|---------------------------------|-------------------|-----------------------|------------------------------------|----------------------------------|--|
| N/A                 | <p>REACTOR COOLANT PUMP<br/>FLYWHEEL EXAMINATIONS<br/>REG. GUIDE 1.1.2</p> <p>16-Reactor Coolant Pump 1A, 17-Reactor<br/>Coolant Pump 1B, 18-Reactor Coolant<br/>Pump 2A, 19-Reactor Coolant Pump 2B<br/>Flywheels</p> | Flywheels      |   | <p>Vol*</p> <p>5 Vol<br/>**</p> | <p>4</p> <p>4</p> | <p>4</p> <p>4</p>     | <p>One</p> <p>Two</p> <p>Three</p> | <p>100</p> <p>100</p> <p>100</p> | <p>REFERENCE PVNGS<br/>TECHNICAL<br/>SPECIFICATION 4.4.9</p> <p>* AN ULTRASONIC<br/>EXAMINATION WILL<br/>BE PERFORMED OF<br/>OF THE AREAS OF<br/>HIGHER STRESS<br/>CONCENTRATION AT<br/>THE BORE AND<br/>KEYWAYS.</p> <p>** A SURFACE EXAM<br/>OF ALL EXPOSED<br/>SURFACES AND A<br/>COMPLETE<br/>ULTRASONIC EXAM<br/>TO THE EXTENT<br/>PRACTICAL WILL BE<br/>PERFORMED.</p> |

REV 1  
12-23-91

SECTION 5.0  
ASME CLASS 2  
EXAMINATION SUMMARY

# INDEX

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION                        | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|---------------------------------------|---|---------------|----------------|-----------------------|----------------------|----------------|--|
| C100                | EXAM. CATEGORY C.A.<br>PRESSURE RETAINING<br>WELDS IN PRESSURE VESSELS |                                       |   |               |                |                       |                      |                |  |
|                     | STEAM GENERATORS   |                                       |   |               |                |                       |                      |                |  |
| 110                 | SHELL CIRCUMFERENCE<br>TIAL WELDS                                      |                                       |   |               |                |                       |                      |                |  |
|                     | 41-Stream Generator 1  | Shell to<br>Conical Welds             | SN-79273-1                                | Vol           | 2              | 1*<br>0<br>0          | One<br>Two<br>Three  | 50<br>-<br>-   | MULTIPLE<br>VESSELS<br>PERCENTAGE<br>COMBINED<br><br>*50% EACH<br>WELD |
|                     | 42-Stream Generator 2  | Shell to<br>Conical Welds             | SN-79273-2                                | Vol           | 2              | 0<br>0<br>1**         | One<br>Two<br>Three  | -<br>-<br>100  | **50% EACH<br>WELD   |
| 120                 | HEAD CIRCUMFERENCE<br>TIAL WELDS                                       |                                       |   |               |                |                       |                      |                |  |
|                     | 41-Stream Generator 1  | Head to<br>Shell Weld                 | SN-79273-1                                | Vol           | 1              | 50%<br>0<br>0         | One<br>Two<br>Three  | 50<br>-<br>-   |  |
|                     | 42-Stream Generator 2  | Head to<br>Shell Weld                 | SN-79273-2                                | Vol           | 1              | 0<br>0<br>50%         | One<br>Two<br>Three  | -<br>-<br>100  |  |
| 130                 | TUBESHEET TO SHELL<br>WELD   |                                       |   |               |                |                       |                      |                |  |
|                     | 41-Stream Generator 1  | Outside Shell<br>and Stay<br>Cylinder | SN-79273-1                                | Vol           | 2              | 50%*<br>0<br>0        | One<br>Two<br>Three  | 25<br>-<br>-   | *OUTSIDE<br>SHELL<br>WELDS   |
|                     | 42-Stream Generator 2  | Outside Shell<br>and Stay<br>Cylinder | SN-79273-2                                | Vol           | 2              | 0<br>50%*<br>1**      | One<br>Two<br>Three  | -<br>50<br>100 | **STAY<br>CYLINDER<br>EXAM   |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION             | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--------------------------------|
| 110                 | REGENERATIVE HEAT<br>EXCHANGER<br>SHELL CIRCUMFERENCE<br>TIAL WELDS   | Butt Welds                 | SN 79313                                  | Vol           | 3              | 1<br>1<br>1           | One<br>Two<br>Three  | 33<br>66<br>100 | SINGLE<br>VESSEL               |
| 120                 | 68 Regenerative<br>Heat Exchanger<br>HEAD CIRCUMFERENCE<br>TIAL WELDS | Head to Shell              | SN 79313                                  | Vol           | 2              | 1<br>0<br>1           | One<br>Two<br>Three  | 50<br>50<br>100 |                                |
| 130                 | 68 Regenerative<br>Heat Exchanger<br>TUBESHEET TO SHELL<br>WELDS      | Butt Welds                 | SN 79313                                  | Vol           | 4              | 0<br>2<br>2           | One<br>Two<br>Three  | 0<br>50<br>100  |                                |
| 110                 | LETDOWN HEAT<br>EXCHANGER<br>SHELL CIRCUMFERENCE<br>TIAL WELDS        | Shell to<br>Flange<br>None | SN N2373                                  | Vol           | 1              | 50%<br>0<br>50%       | One<br>Two<br>Three  | 50<br>50<br>100 |                                |
| 120                 | 69 Letdown Heat<br>Exchanger<br>HEAD CIRCUMFERENCE<br>TIAL WELDS      |                            |   |               |                |                       |                      |                 |                                |
| 130                 | 69 Letdown Heat<br>Exchanger<br>TUBESHEET TO SHELL<br>WELD            | Butt Weld                  | SN N2373                                  | Vol           | 1              | 50%<br>0<br>50%       | One<br>Two<br>Three  | 50<br>50<br>100 |                                |



# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

TABLE 2-1  
PAGE 1 OF 1

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                     | IDENTIFICATION     | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%  | REMARKS AND<br>RELIEF REQUESTS                 |
|---------------------|--|--------------------|---|---------------|----------------|-----------------------|----------------------|---------------|--|
|                     | SHUTDOWN COOLING<br>HEAT EXCHANGERS          |                    |   |               |                |                       |                      |               | MULTIPLE<br>VESSELS:<br>PERCENTAGE<br>COMBINED |
| 110                 | SHELL CIRCUMFERENCE<br>TIAL WELDS            |                    |   |               |                |                       |                      |               |  |
|                     | 84-Shutdown Cooling Heat<br>Exchanger Room A | Shell to<br>Flange | SN-18343                                  | Vol           | 1              | 0<br>50%<br>0         | One<br>Two<br>Three  | -<br>50<br>50 |  |
|                     | 87-SD Cooling Heat<br>Exchanger B            | Shell to<br>Flange | SN-18344                                  | Vol           | 1              | 0<br>0<br>50%         | One<br>Two<br>Three  | -<br>-<br>100 |  |
| 120                 | HEAD CIRCUMFERENCE<br>TIAL WELDS             | None               |   |               |                |                       |                      |               |  |
| 130                 | TUBESHEET TO SHELL<br>WELD                   |                    |   |               |                |                       |                      |               |  |
|                     | 84-SD Cooling Heat<br>Exchanger Room A       | Butt Weld          | SN-18343                                  | Vol           | 1              | 0<br>50%<br>0         | One<br>Two<br>Three  | -<br>50<br>50 |  |
|                     | 87-SD Cooling Heat<br>Exchanger B            | Butt Weld          | SN-18344                                  | Vol           | 1              | 0<br>0<br>50%         | One<br>Two<br>Three  | -<br>-<br>100 |  |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION            | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|---------------------------|---|---------------|----------------|-----------------------|----------------------|----------------|--|
| C200                | EXAM CATEGORY C-B<br>PRESSURE RETAINING<br>NOZZLE WELDS IN<br>VESSELS            |                           |   |               |                |                       |                      |                |  |
| 210                 | NOZZLE IN VESSELS<br>5/12 IN NOMINAL<br>THICKNESS                                | None                      |   |               |                |                       |                      |                |  |
| 220                 | NOZZLES WITHOUT<br>REINFORCING PLATE<br>IN VESSELS > 1/2 IN<br>NOMINAL THICKNESS |                           |   |               |                |                       |                      |                |  |
| 221<br>&<br>222     | NOZZLE-TO-SHELL<br>(OR HEAD) WELDS<br>AND NOZZLE INSIDE<br>RADIUS SECTION        |                           |   |               |                |                       |                      |                |  |
|                     | 41 Steam Generator 1   | Nozzle to<br>Vessel Welds | SN 79273-1                                | S, Vol        | 7              | 1<br>0<br>2           | One<br>Two<br>Three  | 29<br>-<br>100 | INSIDE R.A.<br>DIUS ON PIP-<br>ING ONLY<br>GREATER<br>THAN 12"<br>DIAMETER<br>MULTIPLE VESSELS<br>PERCENTAGE COM-<br>BINED |
|                     | 42 Steam Generator 2   | Nozzle to<br>Vessel Welds | SN 79273-2                                | S, Vol        | 7              | 1<br>2<br>1           | One<br>Two<br>Three  | 57             |  |
|                     | 84 SD Cooling Heat<br>Exchanger Room A   | Nozzle to<br>Shell Welds  | SN 18343                                  | S, Vol        | 2              | 0<br>1<br>0           | One<br>Two<br>Three  | -<br>50<br>-   | MULTIPLE<br>VESSELS<br>PERCENTAGE<br>COMBINED  |
|                     | 87 SD Cooling Heat<br>Exchanger B  | Nozzle to<br>Shell Welds  | SN 18344                                  | S, Vol        | 2              | 0<br>0<br>1           | One<br>Two<br>Three  | -<br>-<br>100  |  |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| 230                 | NOZZLES WITH REINFORCING PLATE IN VESSELS > 1/2 IN. NOMINAL THICKNESS |                |   |               |                |                       |                      |              |                                |
| 231<br>&<br>232     | REINFORCING PLATE WELDS TO NOZZLE AND VESSEL                          | None           | -   | -             | -              | -                     | -                    | -            |                                |
|                     | NOZZLE TO SHELL (OR HEAD) WELDS                                       |                |   |               |                |                       |                      |              |                                |
|                     | INSIDE OF VESSEL ACCESSIBLE   | None           | -   | -             | -              | -                     | -                    | -            |                                |
|                     | INSIDE OF VESSEL INACCESSIBLE   | None           | -   | -             | -              | -                     | -                    | -            |                                |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION     | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS                 |
|---------------------|---|--------------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--|
| C300                | EXAM CATEGORY C-C;<br>INTEGRAL ATTACHMENTS<br>FOR VESSELS, PIPING<br>PUMPS AND VALVES |                    |   |               |                |                       |                      |                 |  |
| 310                 | PRESSURE VESSELS<br>INTEGRALLY WELDED<br>ATTACHMENTS                                  |                    |   |               |                |                       |                      |                 |  |
|                     | 41-Stream Generator 1   | 2-Shoulder<br>Lugs | SN-79273-1                                | S             | 2              | 1<br>0<br>0           | One<br>Two<br>Three  | 50<br>-<br>-    | MULTIPLE<br>VESSELS;<br>PERCENTAGE<br>COMBINED |
|                     | 42-Stream Generator 2   | 2-Shoulder<br>Lugs | SN-79273-2                                | S             | 2              | 0<br>1<br>0           | One<br>Two<br>Three  | -<br>100<br>-   |  |
|                     | 68-Regenerative Heat<br>Exchanger   | 2-Supports         | SN-79313                                  | S             | 2              | 0<br>1<br>1           | One<br>Two<br>Three  | -<br>50<br>100  |  |
| 320                 | PIPING<br>INTEGRALLY WELDED<br>ATTACHMENTS  |                    |   |               |                |                       |                      |                 |  |
|                     | 43-Main Steam SG 1 East<br>90° Inside Containment                                     | Attachments        | SG-36                                     | S             | 6              | 1<br>1<br>4           | One<br>Two<br>Three  | 17<br>33<br>100 |  |
|                     | 44-Main Steam SG 1 West<br>270° Inside Containment                                    | Attachments        | SG-33                                     | S             | 5              | 0<br>3<br>2           | One<br>Two<br>Three  | -<br>60<br>100  |  |
|                     | 45-Main Steam SG 2 East<br>270° Inside Containment                                    | Attachments        | SG-42                                     | S             | 5              | 3<br>1<br>1           | One<br>Two<br>Three  | 60<br>80<br>100 |  |
|                     | 46-Main Steam SG 2 West<br>90° Inside Containment                                     | Attachments        | SG-45                                     | S             | 5              | 0<br>2<br>3           | One<br>Two<br>Three  | -<br>40<br>100  |  |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                      | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--------------------------------|
| 320                 | <u>CONTINUED</u>                              |                |   |               |                |                       |                      |                 |                                |
|                     | 54 Feedwater SG No. 1<br>Inside Containment   | Attachments    | SG-002                                    | S             | 1              | 0                     | One<br>Two<br>Three  | 100             |                                |
|                     | 55 Feedwater SG No. 2<br>Inside Containment   | Attachments    | SG-005                                    | S             | 2              | 1                     | One<br>Two<br>Three  | 50<br>50<br>100 |                                |
|                     | 62 Auxiliary Feedwater SG 1                   | Attachments    | AF-01E                                    | S             | 1              | 0                     | One<br>Two<br>Three  | 100<br>100      |                                |
|                     | 64 Blowdown SG 1<br>Inside Containment        | Attachments    | SG-39<br>SG-53                            | S             | 3              | 3                     | One<br>Two<br>Three  | 60<br>80<br>100 |                                |
|                     | 65 Blowdown SG 2<br>Inside Containment        | Attachments    | SG-48                                     | S             | 7              | 2                     | One<br>Two<br>Three  | 29<br>71<br>100 |                                |
|                     | 71 LP51 Pump Re-in A Discharge                | Attachments    | SI-87                                     | S             | 1              | 1                     | One                  |                 | SI SYSTEM<br>& S COMBINED      |
|                     | 76 Containment Spray Pump Room<br>A Suction   | Attachments    | SI-9<br>SI-78                             | S             | 2              | 1                     | One<br>Three         |                 |                                |
|                     | 77 Containment Spray Pump Room<br>A Discharge | Attachments    | SI-79                                     | S             | 1              | 1                     | Three                |                 |                                |
|                     | 80 Containment Spray Pump Room<br>B Discharge | Attachments    | SI-119                                    | S             | 1              | 1                     | Three                |                 |                                |
|                     | 83 Shutdown Cooling Heat Exchanger<br>Room A  | Attachments    | SI-70<br>SI-87<br>SI-90                   | S             | 4              | 2                     | Two<br>Three         |                 |                                |
|                     | 86 Shutdown Cooling Heat Exchanger<br>Room B  | Attachments    | SI-72                                     | S             | 2              | 2                     | Three                |                 |                                |
|                     | 88 East Wap                                   | Attachments    | SI-72                                     | S             | 1              | 1                     | One                  |                 |                                |
|                     | 89 East Wap                                   | Attachments    | SI-194                                    | S             | 1              | 1                     | One                  |                 |                                |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                           | IDENTIFICATION     | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%     | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|--|--------------------|---|---------------|----------------|-----------------------|----------------------|------------------|--------------------------------|
| 380                 | CONTINUED  |                    |   |               |                |                       |                      |                  |                                |
|                     | 91. West Wrap                                      | Attachments        | SI 70                                     | S             | 4              | 4                     | One                  | -                |                                |
|                     | 92. West Wrap                                      | Attachments        | SI 239<br>SI 241                          | S             | 3              | 1<br>2                | One<br>Two           | -                |                                |
|                     | 93. West Wrap                                      | Attachments        | SI 89                                     | S             | 1              | 1                     | Two                  | -                |                                |
|                     | 94. A Train Misc. Pipe Chases & 88"<br>Pipe Tunnel | Attachments        | SI 70                                     | S             | 2              | 2                     | Two                  | -                |                                |
|                     | 95. B Train Misc. Pipe Chases & 88"<br>Pipe Tunnel | Attachments        | SI 194                                    | S             | 1              | 1                     | Three                | -                |                                |
|                     | 96. Containment LPSI Header to Loop 1A             | Attachments        | SI 302                                    | S             | 1              | 1                     | Three                | -                |                                |
|                     | 99. Containment LPSI Header to Loop 2B             | Attachments        | SI 174                                    | S             | 1              | 1                     | Two                  | -                |                                |
|                     | 100. Containment LPSI Train A Section              | Attachments        | SI 7<br>SI 369                            | S             | 2              | 1<br>1                | One<br>Two           | -                |                                |
|                     | 101. Containment LPSI Train B Section              | Attachments        | SI 30                                     | S             | 1              | 1                     | Three                | -                |                                |
|                     | Total Safety Inspection                            |                    |   | S             | 29             | 10<br>9<br>10         | One<br>Two<br>Three  | 34<br>66<br>100  |                                |
| 380                 | PUMPS<br>INITIALLY WELDED<br>ATTACHMENTS           |                    |   |               |                |                       |                      |                  |                                |
|                     | 72 LPSI Pump A                                     | Attachment<br>Lugs | SN 0876.40                                | S             | 3              | 2<br>1                | One<br>Two<br>Three  | 66<br>100<br>100 |                                |
|                     | 75 LPSI Pump B                                     | Attachment<br>Lugs | SN 0876.41                                | S             | 3              | 0<br>1<br>2           | One<br>Two<br>Three  | -<br>33<br>100   |                                |
|                     | 78. Containment Spray Pump A                       | Attachment<br>Lugs | SN 0876.42                                | S             | 3              | 2<br>1<br>0           | One<br>Two<br>Three  | 66<br>100<br>100 |                                |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                   | IDENTIFICATION     | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|--|--------------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| 330                 | CONTINUED                                  |                    |   |               |                |                       |                      |              |                                |
|                     | #1 Containment Spray Pump B                | Attachment<br>Logs | SN 087643                                 | 5             | 3              | 0<br>1<br>2           | One<br>Two<br>Three  | 33<br>100    |                                |
| 340                 | VALVES<br>INTERIALLY WELDED<br>ATTACHMENTS | None               |   |               |                |                       |                      |              |                                |

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### ASME CLASS 2

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| ASME<br>ITEM<br>NO. | ZONE COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS          |
|---------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|----------------|---|
| C400                | EXAM CATEGORY C.D.<br>PRESSURE RETAINING<br>BOLTING EXCEEDING<br>2 IN. IN DIAMETER |                |   |               |                |                       |                      |                |   |
| 410                 | PRESSURE VESSELS<br>BOLTS AND STUDS  | None           | -   | -             | -              | -                     | -                    | -              |   |
| 420                 | PIPING<br>BOLTS AND STUDS  | None           | -   | -             | -              | -                     | -                    | -              |   |
| 430                 | PUMPS<br>BOLTS AND STUDS   | None           | -   | -             | -              | -                     | -                    | -              |   |
| 440                 | VALVES<br>BOLTS AND STUDS  |                |   |               |                |                       |                      |                |   |
|                     | 47 Main Steam SG 1 West<br>270" MSSS   | Bonnet Bolts   | UV-170                                    | Vol           | 20             | 20                    | One                  | (25)           | ITEM C440<br>COMBINED FOR<br>PERCENTAGE |
|                     | 48 Main Steam SG 1 East<br>90" MSSS  | Bonnet Bolts   | UV-180                                    | Vol           | 20             | 20                    | One                  | (25)           |   |
|                     | 49 Main Steam SG 2 East<br>270" MSSS   | Bonnet Bolts   | UV-171                                    | Vol           | 20             | 20                    | Three                | (100)          |   |
|                     | 50 Main Steam SG 2 West<br>90" MSSS  | Bonnet Bolts   | UV-181                                    | Vol           | 20             | 20                    | Three                | (100)          |   |
|                     | 56 Feedwater SG No. 1<br>MSSS  | Bonnet Bolts   | UV-132<br>UV-174                          | Vol<br>Vol    | 20<br>20       | 20<br>20              | Two<br>Two           | (50)<br>(50)   |   |
|                     | 57 Feedwater SG No. 2<br>MSSS  | Bonnet Bolts   | UV-137<br>UV-177                          | Vol<br>Vol    | 20<br>20       | 20<br>20              | Three<br>Three       | (100)<br>(100) |   |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT   | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|--|----------------|---|---------------|----------------|-------------------------|----------------------|----------------|--|
| C900                | EXAMINATION CATEGORY<br>C.F. PRESSURE RE-<br>TRAINING WELDS IN<br>PIPING                                 |                |   |               |                |                         |                      |                | PHR, CIR. &<br>ECCS SYSTEMS<br>ARE SCHED-<br>ULED PER<br>10 CFR 50<br>REQUIREMENTS<br>AND ARE<br>IDENTIFIED<br>IN TABLE<br>2-CR  |
| 510                 | PIPING WELDS 5/12<br>IN. OR LESS NOMINAL<br>WALL THICKNESS<br>CIRCUMFERENTIAL AND<br>"LONGITUDINAL WELDS |                |   |               |                |                         |                      |                | *2.5T MIN.<br>FROM EACH<br>SCHEDULED<br>CIRC. WELD<br>INTERSECTION<br>WILL BE<br>EXAMINED  |
| 511<br>&<br>512     | 53 Steam to Aux Feedwater System   | Butt Welds     | SG-81.6"<br>SG-81.6"                      | S<br>S        | 14<br>15       | **<br>**                | -<br>-               | -<br>-         |  |
|                     | 58 Aux & Downcomer Feedwater SG 1<br>Inside Containment  | Butt Welds     | SG-8.6"<br>CG-8.8"                        | S***<br>S     | 3<br>23        | 1<br>2 (5)<br>0 (5)     | One<br>Two<br>Three  | 4<br>12<br>12  | **REQUIRE-<br>MENTS IDENTI-<br>FIED IN<br>TABLE 2-AHE<br>***AN<br>AUGMENTED (40)<br>VOL EXAMIN-<br>ATION WILL<br>BE PERFORMED<br>EACH PERIOD<br>(SEE DBR 79-<br>13 AND SER<br>81-07) |
|                     | 59 Aux & Downcomer Feedwater SG-2<br>Inside Containment  | Butt Welds     | SG-11.6"<br>SG-11.8"                      | S***<br>S     | 3<br>24        | 1 (1)<br>3 (3)<br>3 (3) | One<br>Two<br>Three  | 4<br>15<br>26  |  |
| 520                 | PIPING WELDS ><br>1/2 IN. NOMINAL<br>WALL THICKNESS<br>CIRCUMFERENTIAL AND<br>"LONGITUDINAL WELDS        |                |   |               |                |                         |                      |                |  |
| 521<br>522          | 43 Main Steam SG 1 East  | Butt Welds     | SG-36.28"                                 | S, VOL        | 18             | 3<br>0<br>2             | One<br>Two<br>Three  | 17<br>17<br>28 | +2.5T MIN.<br>FROM EACH<br>SCHEDULED<br>CIRC. WELD<br>INTERSECTION<br>WILL BE<br>EXAMINED  |
|                     | 44 Main Steam SG 1 West  | Butt Welds     | SG-33.28"                                 | S, VOL        | 20             | 3<br>1<br>2             | One<br>Two<br>Three  | 15<br>20<br>30 |  |

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## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                           | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.                  | NDE<br>METHOD                             | TOTAL<br>ITEMS           | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS                           |
|---------------------|--|----------------|--|---|--------------------------|-----------------------|----------------------|----------------|--|
| 521<br>522          | CONTINUED  |                |  |   |                          |                       |                      |                |  |
|                     | 45 Main Steam SG 2 East<br>270° Inside Containment | Butt Welds     | SG-42-28"  | S.Vol                                     | 18                       | 0<br>2<br>3           | One<br>Two<br>Three  | -<br>11<br>28  |  |
|                     | 46 Main Steam SG 2 West<br>90° Inside Containment  | Butt Welds     | SG-45-28"  | S.Vol                                     | 20                       | 2<br>2<br>1           | One<br>Two<br>Three  | 10<br>20<br>25 |  |
|                     | 47 Main Steam SG 1 West<br>270° MSSS               | Butt Welds     | SG-206-28"<br>SG-206-12"<br>SG-206-6"                      | S.Vol<br>S.Vol<br>S.Vol                   | 5<br>2<br>5              | *<br>*<br>*           | -                    | -              |  |
|                     | 48 Main Steam SG 1 East<br>90° MSSS                | Butt Welds     | SG-207-28"<br>SG-207-12"<br>SG-207-6"                      | S.Vol<br>S.Vol<br>S.Vol                   | 5<br>2<br>5              | *<br>*<br>*           | -                    | -              |  |
|                     | 49 Main Steam SG 2 East<br>270° MSSS               | Butt Welds     | SG-208-28"<br>SG-208-12"<br>SG-208-6"                      | S.Vol<br>S.Vol<br>S.Vol                   | 5<br>2<br>5              | *<br>*<br>*           | -                    | -              | *REQUIRE-<br>MENTS IDENT-<br>IFIED IN TA-<br>BLE 2.4 ARE |
|                     | 50 Main Steam SG 2 West<br>90° MSSS                | Butt Welds     | SG-209-28"<br>SG-209-12"<br>SG-209-6"                      | S.Vol<br>S.Vol<br>S.Vol                   | 5<br>2<br>5              | *<br>*<br>*           | -                    | -              |  |
|                     | 51 Atmospheric Dump No. 1                          | Butt Welds     | SG-59-12"<br>SG-70-12"                                     | S.Vol<br>S.Vol                            | 13<br>15                 | *<br>*                | -                    | -              |  |
|                     | 52 Atmospheric Dump No. 2                          | Butt Welds     | SG-84-12"<br>SG-103-12"                                    | S.Vol<br>S.Vol                            | 15<br>12                 | *<br>*                | -                    | -              |  |
|                     | 54 Feedwater SG No. 1<br>Inside Containment        | Butt Welds     | SG-2-24"<br>SG-2-16"<br>SG-2-14"<br>SG-13-16"<br>SG-13-14" | S.Vol<br>S.Vol<br>S.Vol<br>S.Vol<br>S.Vol | 30<br>4<br>10<br>4<br>11 | 5<br>5<br>6           | One<br>Two<br>Three  | 8<br>17<br>27  |  |
|                     | 55 Feedwater SG No. 2<br>Inside Containment        | Butt Welds     | SG-5-24"<br>SG-5-16"<br>SG-5-14"<br>SG-14-16"<br>SG-14-14" | S.Vol<br>S.Vol<br>S.Vol<br>S.Vol<br>S.Vol | 30<br>3<br>10<br>3<br>10 | 5<br>5<br>5           | One<br>Two<br>Three  | 9<br>18<br>27  |  |

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### ASME CLASS 2

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                                | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD    | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%   | REMARKS AND<br>RELIEF REQUESTS                         |
|---------------------|---|----------------|---|------------------|----------------|-----------------------|----------------------|----------------|--|
| 521<br>522          | CONTINUED   |                |   |                  |                |                       |                      |                |  |
|                     | 56 Feedwater SG No. 1<br>MSSS                           | Butt Welds     | SG-201-24"<br>SG-202-24"                  | S, Vol<br>S, Vol | 2<br>2         | *<br>*                | -                    | -              |  |
|                     | 57 Feedwater SG No. 2<br>MSSS                           | Butt Welds     | SG-204-24"<br>SG-205-24"                  | S, Vol<br>S, Vol | 2<br>2         | *<br>*                | -                    | -              | *REQUIRE-<br>MENTS IDENT-<br>IFIED IN TA-<br>BLE 2-AHE |
|                     | 58 Aux & Downcomer Feedwater SG 1<br>Inside Containment | Butt Welds     | SG-8-6"<br>AF-4-6"                        | S, Vol<br>S, Vol | 1<br>14**      | 3<br>0<br>2           | One<br>Two<br>Three  | 20<br>20<br>33 | **INCLUDES 1<br>DISSIMILAR<br>WELD                     |
|                     | 59 Aux & Downcomer Feedwater SG 2<br>Inside Containment | Butt Welds     | SG-11-6"<br>AF-6-6"                       | S, Vol<br>S, Vol | 1<br>12**      | 2<br>2<br>1           | One<br>Two<br>Three  | 15<br>31<br>38 |  |
|                     | 60 Downcomer Feedwater SG 1<br>MSSS                     | Butt Welds     | SG-200-8"<br>SG-008-8"                    | S, Vol           | 2<br>4         | *<br>*                | -                    | -              |  |
|                     | 61 Downcomer Feedwater SG 2<br>MSSS                     | Butt Welds     | SG-203-8"<br>SG-11-8"                     | S, Vol           | 2<br>4         | *<br>*                | -                    | -              |  |
|                     | 62 Auxiliary Feedwater SG 1<br>MSSS                     | Butt Welds     | AF-4-6"<br>AF-18-6"                       | S, Vol<br>S, Vol | 7<br>13        | 1<br>2<br>3           | One<br>Two<br>Three  | 5<br>15<br>30  |  |
|                     | 63 Auxiliary Feedwater SG 2<br>MSSS                     | Butt Welds     | AF-6-6"<br>AF-16-6"                       | S, Vol<br>S, Vol | 13<br>3        | 1<br>2<br>2           | One<br>Two<br>Three  | 6<br>19<br>31  |  |
|                     | 64 Blowdown SG 1<br>Inside Containment                  | Butt Welds     | SG-39-6"<br>SG-53-6"                      | S, Vol<br>S, Vol | 37<br>14       | 2<br>4<br>4           | One<br>Two<br>Three  | 4<br>12<br>20  |  |
|                     | 65 Blowdown SG 2<br>Inside Containment                  | Butt Welds     | SG-48-6"<br>SG-52-6"                      | S, Vol<br>S, Vol | 34<br>14       | 4<br>3<br>4           | One<br>Two<br>Three  | 8<br>15<br>23  |  |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|---|
| 521<br>522          | CONTINUED<br>66-Blowdown SG 1<br>MSSS  | Butt Welds     | SG-39-6"                                  | S, Vol        | 2              | *                     |                      |              | *REQUIRE-<br>MENTS IDENT-<br>IFIED IN<br>TABLE 2-AHE                                      |
| 530                 | 67-Blowdown SG 2<br>PIPE BRANCH CONNEC-<br>TIONS > 4 IN.<br>NOMINAL PIPE SIZE<br>CIRCUMFERENTIAL AND<br>**LONGITUDINAL WELDS | Butt Welds     | SG-48-6"                                  | S, Vol        | 2              | *                     |                      |              | *REQUIRE-<br>MENTS IDENT-<br>IFIED IN<br>TABLE 2-AHE                                      |
| 531<br>532          | 47 Main Steam SG 1 West<br>270° MSSS   | Sweepoints     | SG-206-28                                 | S             | 7              | *                     |                      |              | *2.5T MIN<br>FROM EACH<br>SCHEDULED<br>BRANCH WELD<br>INTERSECTION<br>WILL BE<br>EXAMINED |
|                     | 48 Main Steam SG 1 East<br>90° MSSS  | Sweepoints     | SG-207-28                                 | S             | 8              | *                     |                      |              |   |
|                     | 49 Main Steam SG 2 East<br>270° MSSS   | Sweepoints     | SG-208-28                                 | S             | 8              | *                     |                      |              | *REQUIRE-<br>MENTS IDENT-<br>IFIED IN<br>TABLE 2-AHE                                      |
|                     | 50 Main Steam SG 2 West<br>90° MSSS  | Sweepoints     | SG-209-28                                 | S             | 7              | *                     |                      |              |   |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT             | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS    |
|---------------------|--|----------------|---|---------------|----------------|-----------------------------------|----------------------|--------------|-----------------------------------|
| C600                | EXAM CATEGORY C.G.<br>PRESSURE RETAINING<br>WELDS IN PUMPS AND<br>VALVES |                |   |               |                |                                   |                      |              |                                   |
| 610                 | PUMPS  | None           |   |               |                |                                   |                      |              |                                   |
| 620                 | PUMP CASING WELDS  |                |   |               |                |                                   |                      |              |                                   |
|                     | VALVES   |                |   |               |                |                                   |                      |              |                                   |
|                     | VALVE BODY WELDS   |                |   |               |                |                                   |                      |              |                                   |
|                     | Dessars, 6" x 10"  | Zone 47        | SG-206-28"                                | S             | 5              | Examine<br>the weld in<br>1 valve | *                    | 100          | *BY THE END<br>OF THE<br>INTERVAL |
|                     | Pressure Safety  | Zone 48        | SG-207-28"                                | S             | 5              |                                   |                      |              |                                   |
|                     | Main Steam Valves  | Zone 49        | SG-208-28"                                | S             | 5              |                                   |                      |              |                                   |
|                     |  | Zone 50        | SG-209-28"                                | S             | 5              |                                   |                      |              |                                   |
|                     | Borg Warner, 16"   | Zone 92        | SI-241-16"                                | S             | 1              | Examine<br>the weld in<br>1 valve | *                    | 100          |                                   |
|                     | Gate Valves LPST   | Zone 89        | SI-194-16"                                | S             | 1              |                                   |                      |              |                                   |
|                     | Pump Suction   |                |   |               |                |                                   |                      |              |                                   |
|                     | Borg Warner, 6"  | Zone 83        | SI-131-6"                                 | S             | 1              | Examine<br>the weld in<br>1 valve | *                    | 100          |                                   |
|                     | Gate Valves SUCTX  | Zone 86        | SI-131-6"                                 | S             | 1              |                                   |                      |              |                                   |
|                     | Outlet   |                |   |               |                |                                   |                      |              |                                   |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                    | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT  | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|---|-----------------------------------|---|---------------|----------------|--|----------------------|--------------|----------------------------------|
| C700                | EXAM CATEGORY C.H.<br>ALL PRESSURE<br>RETAINING COMPO-<br>NENTS |                                   |   |               |                |  |                      |              |                                  |
| 710                 | SYSTEM FUNCTIONAL<br>TESTS                                      |                                   |   |               |                |  |                      |              |                                  |
| 730                 | Pressure Vessels  | Pressure<br>Retaining<br>Boundary |   | VT-2          |                | Entire Pres-<br>sure retain-<br>ing boundary<br>TWA: 5000<br>TWC: 5000 | *                    | 100          | *EACH<br>INSPECTION<br>PERIOD    |
| 750                 | Piping  |                                   |   |               |                |  |                      |              |                                  |
| 770                 | Pumps   |                                   |   |               |                |  |                      |              |                                  |
| 770                 | Valves  |                                   |   |               |                |  |                      |              |                                  |
| 720                 | SYSTEM HYDRO-TESTS  |                                   |   |               |                |  |                      |              |                                  |
| 730                 | Pressure Vessels  | Pressure<br>Retaining<br>Boundary |   | VT-2          |                | Entire Pres-<br>sure retain-<br>ing boundary<br>TWA: 5000<br>TWC: 5000 | **                   | 100          | **EACH<br>INSPECTION<br>INTERVAL |
| 750                 | Piping  |                                   |   |               |                |  |                      |              |                                  |
| 760                 | Pumps   |                                   |   |               |                |  |                      |              |                                  |
| 780                 | Valves  |                                   |   |               |                |  |                      |              |                                  |

| ASME<br>ITEM<br>NO.   | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%      | REMARKS AND<br>RELIEF REQUESTS  |
|---|--|----------------|---|---------------|----------------|-----------------------|----------------------|-------------------|---|
| *<br>F110<br>F120<br>F130<br>F140<br>F210<br>F220<br>F240<br>F310<br>F320<br>F340<br>F350 | EXAM CATEGORY E.A.<br>PLATE AND SHELL<br>TYPE SUPPORTS<br>and<br>EXAM CATEGORY E.B.<br>LINEAR TYPE SUPPORTS<br>and<br>EXAM CATEGORY E.C.<br>COMPONENT STANDARD<br>SUPPORTS |                |   | **            |                |                       |                      |                   | REQUEST FOR<br>RELIEF #1A3<br><br>*INCLUDES<br>EXAM ITEMS<br>IDENTIFIED,<br>AS APPL.<br>CABLE<br>**NDE METHOD<br>INCLUDES<br>VT 4 EXAMS,<br>WHERE<br>APPLICABLE |
|   | 41 Steam Generator 1   | 2-Soulders     | SN-79273-1                                | VT-3          | 2              | 2<br>0<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |   |
|   | 42 Steam Generator 2   | 2-Soulders     | SN-79273-2                                | VT-3          | 2              | 0<br>2<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |   |
|   | 43 Main Steam SG 1 East<br>90° Inside Containment  | Supports       | SG-36                                     | VT-3          | 9              | 3<br>2<br>4           | One<br>Two<br>Three  | 33<br>56<br>100   |   |
|   | 44 Main Steam SG 1 West<br>270° Inside Containment   | Supports       | SG-33                                     | VT-3          | 10             | 2<br>5<br>3           | One<br>Two<br>Three  | 20<br>70<br>100   |   |
|   | 45 Main Steam SG 2 East<br>270° Inside Containment   | Supports       | SG-42                                     | VT-3          | 9              | 3<br>3<br>3           | One<br>Two<br>Three  | 33<br>67<br>100   |   |
|   | 46 Main Steam SG 2 West<br>90° Inside Containment  | Supports       | SG-43                                     | VT-3          | 10             | 2<br>5<br>3           | One<br>Two<br>Three  | 20<br>70<br>100   |   |
|   | 47 Main Steam SG 1 West<br>270° MSSS   | Supports       | SG-206                                    | VT-3          | 1              | 1<br>0<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |   |
|   | 48 Main Steam SG 1 East<br>90° MSSS  | Supports       | SG-207                                    | VT-3          | 1              | 0<br>1<br>0           | One<br>Two<br>Three  | 100<br>100<br>100 |   |
|   | 49 Main Steam SG 1 East<br>270° MSSS   | Supports       | SG-208                                    | VT-3          | 1              | 0<br>0<br>1           | One<br>Two<br>Three  | 100<br>100<br>100 |   |

**APS****PALO VERDE NUCLEAR GENERATING STATION  
10 YEAR INTERVAL - EXAMINATION SUMMARY****ASME CLASS 2**TABLE 2-IWF  
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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                                | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| F110                | CONTINUED   |                |   |               |                |                       |                      |              |                                |
| F120                | 50 Main Steam SG 2 West                                 | Supports       | SG-209                                    | VT-3          | 1              | 0                     | One                  | -            |                                |
| F130                | 90° MSSS  |                |   |               |                | 0                     | Two                  | -            |                                |
| F140                |   |                |   |               |                | 1                     | Three                | 100          |                                |
| F210                | 51 Atmospheric Dump No. 1                               | Supports       | SG-59                                     | VT-3          | 2              | 1                     | One                  | 50           |                                |
| F220                |   |                | SG-70                                     |               |                | 1                     | Two                  | 100          |                                |
| F230                |   |                |   |               |                | 0                     | Three                | 100          |                                |
| F240                | 52 Atmospheric Dump No. 2                               | Supports       | SG-84                                     | VT-3          | 2              | 0                     | One                  | -            |                                |
| F310                | SG-2  |                | SG-103                                    |               |                | 0                     | Two                  | -            |                                |
| F320                |   |                |   |               |                | 2                     | Three                | 100          |                                |
| F330                | 53 Steam to Aux<br>Feedwater System                     | Supports       | SG-81                                     | VT-3          | 8              | 4                     | One                  | 50           |                                |
|                     |   |                | SG-83                                     |               |                | 2                     | Two                  | 75           |                                |
|                     |   |                |   |               |                | 2                     | Three                | 100          |                                |
|                     | 54 Feedwater SG No. 1<br>Inside Containment             | Supports       | SG-2                                      | VT-3          | 20             | 7                     | One                  | 35           |                                |
|                     |   |                | SG-13                                     |               |                | 7                     | Two                  | 70           |                                |
|                     |   |                |   |               |                | 6                     | Three                | 100          |                                |
|                     | 55 Feedwater SG No. 2<br>Inside Containment             | Supports       | SG-5                                      | VT-3          | 20             | 9                     | One                  | 45           |                                |
|                     |   |                | SG-14                                     |               |                | 7                     | Two                  | 80           |                                |
|                     |   |                |   |               |                | 4                     | Three                | 100          |                                |
|                     | 56 Feedwater SG No. 1<br>MSSS                           | Supports       | SG-202                                    | VT-3          | 1              | 0                     | One                  | -            |                                |
|                     |   |                |   |               |                | 1                     | Two                  | 100          |                                |
|                     |   |                |   |               |                | 0                     | Three                | 100          |                                |
|                     | 57 Feedwater SG No. 2<br>MSSS                           | Supports       | SG-205                                    | VT-3          | 1              | 0                     | One                  | -            |                                |
|                     |   |                |   |               |                | 0                     | Two                  | -            |                                |
|                     |   |                |   |               |                | 1                     | Three                | 100          |                                |
|                     | 58 Aux & Downcomer Feedwater SG 1<br>Inside Containment | Supports       | SG-8                                      | VT-3          | 22             | 7                     | One                  | 32           |                                |
|                     |   |                | AF-4                                      |               |                | 7                     | Two                  | 64           |                                |
|                     |   |                |   |               |                | 8                     | Three                | 100          |                                |
|                     | 59 Aux & Downcomer Feedwater SG 2<br>Inside Containment | Supports       | SG-11                                     | VT-3          | 22             | 6                     | One                  | 27           |                                |
|                     |   |                | AF-6                                      |               |                | 6                     | Two                  | 55           |                                |
|                     |   |                |   |               |                | 10                    | Three                | 100          |                                |
|                     | 60 Downcomer Feedwater SG 1<br>MSSS                     | Supports       | SG-200                                    | VT-3          | 3              | 1                     | One                  | 33           |                                |
|                     |   |                |   |               |                | 0                     | Two                  | 33           |                                |
|                     |   |                |   |               |                | 2                     | Three                | 100          |                                |
|                     | 61 Downcomer Feedwater SG 2<br>MSSS                     | Supports       | SG-203                                    | VT-3          | 3              | 0                     | One                  | -            |                                |
|                     |   |                |   |               |                | 2                     | Two                  | 66           |                                |
|                     |   |                |   |               |                | 1                     | Three                | 100          |                                |

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# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

TABLE 2 IWF  
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| ASME<br>ITEM<br>NO.          | ZONE-COMPONENT OR SYSTEM               | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS                                   |
|------------------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--|
| F110<br>F120<br>F130         | CONTINUED                              |                |   |               |                |                       |                      |                 |  |
| F140<br>F210<br>F220<br>F230 | 62 Auxiliary Feedwater SG 1<br>MSSS    | Supports       | AF-4<br>AF-18                             | VT-3          | 4              | 1<br>1<br>2           | One<br>Two<br>Three  | 25<br>50<br>100 |  |
| F240<br>F310<br>F320<br>F330 | 63 Auxiliary Feedwater SG 2<br>MSSS    | Supports       | AF-6<br>AF-16                             | VT-3          | 5              | 2<br>2<br>1           | One<br>Two<br>Three  | 40<br>80<br>100 |  |
| F340<br>F350                 | 64 Blowdown SG 1<br>Inside Containment | Supports       | SG-39<br>SG-53                            | VT-3          | 37             | 12<br>13<br>12        | One<br>Two<br>Three  | 32<br>68<br>100 |  |
|                              | 65 Blowdown SG 2<br>Inside Containment | Supports       | SG-48<br>SG-52                            | VT-3          | 36             | 12<br>11<br>13        | One<br>Two<br>Three  | 33<br>64<br>100 |  |
|                              | 68 Regenerative<br>Heat Exchanger      | Supports       | SN-79313                                  | VT-3          | 2              | 0<br>1<br>1           | One<br>Two<br>Three  | -<br>50<br>100  |  |
|                              | 70 LPSI Pump Room A<br>Suction         | Supports       | SI-67<br>SI-241<br>SI-307                 | VT-3          | 5              | 1<br>4                | One<br>Three         | -<br>-          | All SI (ZONES 70<br>THRU 101) COM-<br>BINED FOR PER-<br>CENTAGE. |
|                              | 71 LPSI Pump Room A<br>Discharge       | Supports       | SI-78<br>SI-87                            | VT-3          | 6              | 1<br>5                | One<br>Two           | -<br>-          |  |
|                              | 72 LPSI Pump A                         | Supports       | SN-0876-40                                | VT-3          | 3**            | 2<br>1                | One<br>Two           | -<br>-          |  |
|                              | 73 LPSI Pump Room B<br>Suction         | Supports       | SI-34<br>SI-194<br>SI-308                 | VT-3          | 5              | 1<br>4                | Two<br>Three         | -<br>-          | **3 PUMP<br>SUPPORTS   |
|                              | 74 LPSI Pump Room B<br>Discharge       | Supports       | SI-129                                    | VT-3          | 6              | 6                     | Three                | -               |  |

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10 YEAR INTERVAL - EXAMINATION SUMMARY

## ASME CLASS 2

| ASME<br>ITEM<br>NO. | ZONE-C COMPONENT OR SYSTEM               | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.     | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|--|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| F110                | CONTINUED                                |                |   |               |                |                       |                      |              |                                |
| F120                |  |                |   |               |                |                       |                      |              |                                |
| F130                |  |                |   |               |                |                       |                      |              |                                |
| F140                |  |                |   |               |                |                       |                      |              |                                |
| F210                |  |                |   |               |                |                       |                      |              |                                |
| F220                |  |                |   |               |                |                       |                      |              |                                |
| F230                |  |                |   |               |                |                       |                      |              |                                |
| F240                |  |                |   |               |                |                       |                      |              |                                |
| F310                |  |                |   |               |                |                       |                      |              |                                |
| F320                |  |                |   |               |                |                       |                      |              |                                |
| F330                |  |                |   |               |                |                       |                      |              |                                |
| F340                |  |                |   |               |                |                       |                      |              |                                |
| F350                |  |                |   |               |                |                       |                      |              |                                |
|                     |  |                |   |               |                |                       |                      |              | **3 PUMP SUPPORTS              |
|                     | 75 L PSI Pump B                          | Supports       | SN 0876.41                                    | VT-3          | 3**            | 1<br>2                | Two<br>Three         | -<br>-       |                                |
|                     | 76 Containment Spray<br>Pump A Section   | Supports       | SI 9<br>SI 67<br>SI 78                        | VT-3          | 5              | 1<br>4                | One<br>Three         | -<br>-       |                                |
|                     | 77 Containment Spray<br>Pump A Discharge | Supports       | SI 79<br>SI 82                                | VT-3          | 10             | 4<br>3<br>3           | One<br>Two<br>Three  | -<br>-<br>-  |                                |
|                     | 78 Containment Spray<br>Pump A           | Supports       | SN 0876.42                                    | VT-3          | 3**            | 2<br>1                | One<br>Two           | -<br>-       |                                |
|                     | 79 Containment Spray<br>Pump B Suction   | Supports       | SI 33<br>SI 34<br>SI 123                      | VT-3          | 8              | 3<br>2<br>3           | One<br>Two<br>Three  | -<br>-<br>-  |                                |
|                     | 80 Containment Spray<br>Pump B Discharge | Supports       | SI 119<br>SI 147                              | VT-3          | 10             | 3<br>4<br>3           | One<br>Two<br>Three  | -<br>-<br>-  |                                |
|                     | 81 Containment Spray<br>Pump B           | Supports       | SN 0876.43                                    | VT-3          | 3**            | 1<br>2                | Two<br>Three         | -<br>-       |                                |
|                     | 82 Shutdown Cooling A                    | Supports       | SI 79<br>SI 78                                | VT-3          | 3              | 3                     | One                  | -            |                                |
|                     | 83 Shutdown Cooling A                    | Supports       | SI 70<br>SI 87<br>SI 90<br>SI 89<br>SI 82     | VT-3          | 19             | 4<br>3<br>12          | One<br>Two<br>Three  | -<br>-<br>-  |                                |
|                     | 85 Shutdown Cooling B                    | Supports       | SI 119<br>SI 123                              | VT-3          | 9              | 3<br>6                | One<br>Two           | -<br>-       |                                |
|                     | 86 Shutdown Cooling B                    | Supports       | SI 72<br>SI 134<br>SI 147<br>SI 135<br>SI 129 | VT-3          | 26             | 3<br>7<br>16          | One<br>Two<br>Three  | -<br>-<br>-  |                                |

PALO VERDE NUCLEAR GENERATING STATION  
10 YEAR INTERVAL - EXAMINATION SUMMARY

## ASME CLASS 2

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                          | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------|---|---------------|----------------|-----------------------|----------------------|--------------|--------------------------------|
| F110                | CONTINUED   |                |   |               |                |                       |                      |              |                                |
| F120                | 88 East Wrap                                      | Supports       | SI 172<br>SI 173                          | VT-3          | 14             | 8<br>6                | One<br>Three         | -            |                                |
| F130                |   |                |   |               |                |                       |                      |              |                                |
| F140                | 89 East Wrap                                      | Supports       | SI 173<br>SI 194                          | VT-3          | 5              | 4<br>1                | One<br>Three         | -            |                                |
| F210                |   |                |   |               |                |                       |                      |              |                                |
| F220                |   |                |   |               |                |                       |                      |              |                                |
| F230                | 90 East Wrap                                      | Supports       | SI 134                                    | VT-3          | 2              | 2                     | Two                  | -            |                                |
| F240                | 91 West Wrap                                      | Supports       | SI 170<br>SI 171                          | VT-3          | 10             | 7<br>2<br>1           | One<br>Two<br>Three  | -            |                                |
| F250                |   |                |   |               |                |                       |                      |              |                                |
| F260                | 92 West Wrap                                      | Supports       | SI 2<br>SI 239<br>SI 241                  | VT-3          | 12             | 5<br>5<br>2           | One<br>Two<br>Three  | -            |                                |
| F310                |   |                |   |               |                |                       |                      |              |                                |
| F320                | 93 West Wrap                                      | Supports       | SI 89                                     | VT-3          | 4              | 2<br>2                | Two<br>Three         | -            |                                |
| F330                |   |                |   |               |                |                       |                      |              |                                |
| F340                | 94 A Train Misc. Pipe Chases & 88'<br>Pipe Tunnel | Supports       | SI 170<br>SI 189<br>SI 241                | VT-3          | 15             | 3<br>7<br>5           | One<br>Two<br>Three  | -            |                                |
| F350                | 95 B Train Misc. Pipe Chases & 88'<br>Pipe Tunnel | Supports       | SI 172<br>SI 134<br>SI 194                | VT-3          | 18             | 6<br>10<br>2          | One<br>Two<br>Three  | -            |                                |
|                     | 96 C Containment LPSI Header to Loop 1A           | Supports       | SI 202                                    | VT-3          | 18             | 3<br>8<br>7           | One<br>Two<br>Three  | -            |                                |
|                     | 97 Containment LPSI Header to Loop 1B             | Supports       | SI 220                                    | VT-3          | 27             | 10<br>7<br>10         | One<br>Two<br>Three  | -            |                                |
|                     | 98 Containment LPSI Header to Loop 2A             | Supports       | SI 155                                    | VT-3          | 7              | 2<br>5                | One<br>Two           | -            |                                |
|                     | 99 Containment LPSI Header to Loop 2B             | Supports       | SI 174                                    | VT-3          | 10             | 5<br>5                | Two<br>Three         | -            |                                |

REV. 1  
 12-23-91

# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 2

TABLE 2.1WF  
PAGE 6 OF 6

| ASME<br>ITEM<br>NO.  | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION           | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.                 | NDE<br>METHOD    | TOTAL<br>ITEMS        | EXAMINATION<br>AMOUNT                  | INSPECTION<br>PERIOD                               | RUNNING<br>%                                | REMARKS AND<br>RELIEF REQUESTS |
|--|--|--------------------------|---|------------------|-----------------------|--|--|---|--------------------------------|
| F110<br>F120<br>F130<br>F140<br>F210<br>F220<br>F230<br>F240<br>F310<br>F320<br>F330<br>F340<br>F350 | <u>CONTINUED</u><br>100-Containment LPST Train A Section<br><br>101-Containment LPST Train B Section<br><br>SI SYSTEMS<br>ZONES (70-101)<br>TOTALS | Supports<br><br>Supports | SI 7<br>SI 241<br>SI 360<br><br>SI 30<br>SI 194<br>SI 368 | VT-3<br><br>VT-3 | 3<br><br>8<br><br>277 | 2<br>1<br><br>8<br><br>80<br>89<br>108 | One<br>Two<br><br>Three<br><br>One<br>Two<br>Three | <br><br><br><br><br><br><br>29<br>61<br>100 |                                |

REV 1  
12-23-91

SECTION 6.0  
ASME CLASS 3  
EXAMINATION SUMMARY

# INDEX

| TABLE |                      | EXAM CATEGORY   |
|-------|----------------------|---|
| 3-1   | D-A,<br>D-B,         | Systems in Support of Reactor Shutdown Function<br>Systems in Support of Emergency Core Cooling,<br>Containment Heat Removal, Atmosphere Cleanup,<br>and Reactor Heat Removal |
|       | D-C,                 | Systems in Support of Residual Heat Removal<br>from Spent Fuel Storage Pool   |
| 3-IWF | F-A,<br>F-B,<br>F-C, | Plate and Shell Type Supports<br>Linear Type Supports<br>Component Standard Supports  |

| ASME<br>ITEM<br>NO.  | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                      | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.            | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT   | INSPECTION<br>PERIOD             | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS |
|----------------------|---|-------------------------------------|--|---------------|----------------|---|----------------------------------|--------------|--------------------------------|
| D120<br>thru<br>D160 | EXAMINATION CATEGORY<br>D-A, SYSTEMS IN SUP-<br>PORT OF REACTOR<br>SHUTDOWN FUNCTION<br>AND   |                                     |  |               |                | ASME CLASS 3 SYSTEMS ARE IDENTIFIED ON THE<br>ISI BOUNDARY DRAWINGS CONTAINED IN SECTION<br>10.0. |                                  |              |                                |
| D220<br>thru<br>D260 | EXAMINATION CATEGORY<br>D-B, SYSTEMS IN SUP-<br>PORT OF EMERGENCY<br>CORE COOLING, CON-<br>TAINMENT HEAT RE-<br>MOVAL, ATMOSPHERE<br>CLEANUP, AND REAC-<br>TOR RESIDUAL HEAT<br>REMOVAL |                                     |  |               |                |   |                                  |              |                                |
| D320<br>thru<br>D360 | AND<br>EXAMINATION CATEGORY<br>D-C, SYSTEMS IN SUP-<br>PORT OF RESIDUAL<br>HEAT REMOVAL FROM<br>STEAM FUEL STORAGE<br>POOL  |                                     |  |               |                |   |                                  |              |                                |
|                      | All Class 3 Systems<br>(Except Auxiliary<br>Feedwater)  | Integrally<br>Welded<br>Attachments | All lines<br>greater than<br>4" nominal<br>pipe size | VT-3          | All            | 100%  | Each In-<br>spection<br>Interval | 100%         | REQUEST FOR<br>RELIEF #1883    |
|                      | Auxiliary Feedwater<br>System   | Integrally<br>Welded<br>Attachments | All lines  | VT-3          | All            | 100%  | Each In-<br>spection<br>Interval | 100%         |                                |

| ASME<br>ITEM<br>NO.  | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                    | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT  | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS   |
|----------------------|---|-----------------------------------|---|---------------|----------------|--|----------------------|--------------|----------------------------------|
|                      | EXAMINATION CATEGORY<br>D.A. SYSTEMS IN SUT<br>PORT OF REACTOR<br>SHUTDOWN FUNCTION<br>AND<br>EXAMINATION CATEGORY<br>D.B. SYSTEMS IN SUT<br>PORT OF EMERGENCY<br>CORE COOLING, CON-<br>TAINMENT HEAT RE-<br>MOVAL, ATMOSPHERE<br>CLEANUP, AND REAC-<br>TOR RESIDUAL HEAT<br>REMOVAL<br>AND<br>EXAMINATION CATEGORY<br>D.C. SYSTEMS IN SUT<br>PORT OF RESIDUAL<br>HEAT REMOVAL FROM<br>SPENT FUEL STORAGE<br>POOL |                                   |   |               |                |  |                      |              |                                  |
| D110<br>D210<br>D310 | SYSTEM INSERVICE<br>TESTS OR FUNCTIONAL TESTS***<br>Pressure<br>Retaining<br>Components   | Pressure<br>Retaining<br>Boundary |   | VT 2          |                | Entire Pres-<br>sure Retain-<br>ing Boundary<br>TWA: 5000<br>TWD: 5000 | *                    | 100          | *EACH<br>INSPECTION<br>PERIOD    |
| D110<br>D210<br>D310 | SYSTEM HYDRO-TESTS<br>Pressure<br>Retaining<br>Components   | Pressure<br>Retaining<br>Boundary |   | VT 2          |                | Entire Pres-<br>sure Retain-<br>ing Boundary<br>TWA: 5000<br>TWD: 5000 | **                   | 100          | **EACH<br>INSPECTION<br>INTERVAL |
|                      |   |                                   |   |               |                |  |                      |              | ***REQUEST FOR<br>RELIEF #6      |



# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY

### ASME CLASS 3

TABLE 3-IWF  
PAGE 1 OF 1

| ASME<br>ITEM<br>NO.  | ZONE-COMPONENT OR SYSTEM   | IDENTIFICATION        | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.            | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD             | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS   |
|--|--|-----------------------|--|---------------|----------------|-----------------------|----------------------------------|--------------|--|
| P110<br>F120<br>F130<br>F140<br>F210<br>F220<br>F230<br>F240<br>F310<br>F320<br>F330<br>F340<br>F350 | EXAM CATEGORY E-A:<br>FLATE AND SHELL<br>TYPE SUPPORTS<br>AND<br>EXAM CATEGORY E-B:<br>LINEAR TYPE SUPPORTS<br>AND<br>EXAM CATEGORY E-C:<br>COMPONENT STANDARD<br>SUPPORTS |                       |  | **            |                |                       |                                  |              | *INCLUDES<br>EXAM ITEMS<br>IDENTIFIED,<br>AS APPLI-<br>CABLE.<br><br>**NDE METHOD<br>INCLUDES<br>VT-4 EXAMS,<br>WHERE AP-<br>PLICABLE. |
|  | All Class 3 Systems<br>(Except Auxiliary<br>Feedwater)   | Support<br>Components | All lines<br>greater than<br>4" nominal<br>pipe size | VT-3          | All            | 100%                  | Each In-<br>spection<br>Interval | 100%         | REQUEST FOR<br>RELIEF #3   |
|  | Auxiliary Feedwater<br>Systems   | Support<br>Components | All lines  | VT-3          | All            | 100%                  | Each In-<br>spection<br>Interval | 100%         |  |

SECTION 7.0  
AUGMENTED HIGH  
ENERGY PIPING

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION           | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD              | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%      | REMARKS AND<br>RELIEF REQUESTS  |
|---------------------|---|--------------------------|---|----------------------------|----------------|-----------------------|----------------------|-------------------|---|
| 510                 | AUGMENTED EXAMINATION OF HIGH ENERGY PIPING   |                          |   |                            | (*)            |                       |                      |                   | (*) EVENT FILES THE NUMBER OF WELDS THAT ARE NOT ASME CLASSIFIED          |
| 511                 | PIPING WELDS<br>5 1/2 IN. NOMINAL<br>WALL THICKNESS   | Butt Welds<br>4" x .337" | SG 196.4"                                 | S, Vol                     | (20)           | 0<br>20<br>0          | One<br>Two<br>Three  | 100<br>100        |   |
| 512                 | CIRCUMFERENTIAL AND<br>*LONGITUDINAL<br>WELDS<br>51. Atmospheric Dump No. 1<br>By-pass UV-100 | Butt Welds<br>4" x .337" | SG 100.4"                                 | S, Vol                     | (20)           | 0<br>0<br>20          | One<br>Two<br>Three  | 100               | **NONE  |
| 520                 | 53. Steam to Aux<br>Feedwater   | Butt Welds<br>6" x .432" | SG 81.6"<br>SG 81.6"                      | S, Vol<br>S, Vol           | 14<br>15       | 10<br>9<br>10         | One<br>Two<br>Three  | 35<br>68<br>100   |   |
| 521                 | PIPING WELDS 5<br>1/2 IN. NOMINAL WALL<br>THICKNESS   |                          |   |                            |                |                       |                      |                   |   |
| 522                 | CIRCUMFERENTIAL AND<br>*LONGITUDINAL WELDS<br>47. Main Steam SG 1 West<br>270" MSSS           | Butt Welds               | SG 206.28"<br>SG 206.12"<br>SG 206.6"     | S, Vol<br>S, Vol<br>S, Vol | 4(1)<br>2<br>5 | 12<br>0<br>0          | One<br>Two<br>Three  | 100<br>100<br>100 | *100% OF ALL<br>INTERSECTING<br>LONGITUDINAL<br>WELDS WILL<br>BE EXAMINED |
|                     | 48. Main Steam SG 1 East<br>300" MSSS   | Butt Welds               | SG 207.28"<br>SG 207.12"<br>SG 207.6"     | S, Vol<br>S, Vol<br>S, Vol | 4(1)<br>2<br>5 | 0<br>12<br>0          | One<br>Two<br>Three  | 100<br>100        |   |
|                     | 49. Main Steam SG 2 East<br>270" MSSS   | Butt Welds               | SG 208.28"<br>SG 208.12"<br>SG 208.6"     | S, Vol<br>S, Vol<br>S, Vol | 4(1)<br>2<br>5 | 0<br>0<br>12          | One<br>Two<br>Three  | 100<br>100        |   |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                   | IDENTIFICATION           | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>% | REMARKS AND<br>RELIEF REQUESTS         |
|---------------------|--|--------------------------|---|---------------|----------------|-----------------------|----------------------|--------------|--|
| 521                 | 50 Main Steam SG 2 West<br>MSSS            | Butt Welds               | SG 209-78"                                | S, Vol        | 4(1)           | 0                     | One                  | -            |  |
| 522                 |  |                          | SG 209-12"                                | S, Vol        | 2              | 0                     | Two                  | -            |  |
|                     |  |                          | SG 209-6"                                 | S, Vol        | 5              | 12                    | Three                | 100          |  |
|                     | 51 Atmospheric Dump No. 1                  | Butt Welds<br>12" x 844" | SG 59-12"                                 | S, Vol        | 13             | 13                    | One                  | 46           |  |
|                     |  |                          | SG 70-12"                                 | S, Vol        | 15             | 15                    | Two                  | 100          |  |
|                     |  |                          |   |               |                | 0                     | Three                | 100          |  |
|                     | 52 Atmospheric Dump No. 2                  | Butt Welds<br>12" x 844" | SG 84-12"                                 | S, Vol        | 15             | 0                     | One                  | -            |  |
|                     |  |                          | SG 103-12"                                | S, Vol        | 12             | 0                     | Two                  | -            |  |
|                     |  |                          |   |               |                | 27                    | Three                | 100          |  |
|                     | 56 Feedwater SG No. 1<br>MSSS              | Butt Welds               | SG 201-24"                                | S, Vol        | 2              | 4                     | One                  | 67           |  |
|                     |  |                          | SG 202-24"                                | S, Vol        | 2              | 2                     | Two                  | 100          |  |
|                     |  |                          | SG 224-24"                                | S, Vol        | (2)            | 0                     | Three                | 100          |  |
|                     | 57 Feedwater SG No. 2<br>MSSS              | Butt Welds               | SG 204-24"                                | S, Vol        | 2              | 0                     | One                  | -            |  |
|                     |  |                          | SG 205-24"                                | S, Vol        | 2              | 0                     | Two                  | -            |  |
|                     |  |                          | SG 225-24"                                | S, Vol        | (2)            | 6                     | Three                | 100          |  |
|                     | 60 Downcomer Feedwater SG 1<br>MSSS        | Butt Welds<br>8" x 719"  | SG 200-8"                                 | S, Vol        | 2(8)           | 9                     | One                  | 64           |  |
|                     |  |                          | SG 8-8"                                   | S, Vol        | 4              | 5                     | Two                  | 100          |  |
|                     |  |                          |   |               |                | 0                     | Three                | 100          |  |
|                     | 61 Downcomer Feedwater SG 2<br>MSSS        | Butt Welds<br>8" x 719"  | SG 203-8"                                 | S, Vol        | 2(8)           | 0                     | One                  | -            |  |
|                     |  |                          | SG 11-8"                                  | S, Vol        | 4              | 5                     | Two                  | 36           |  |
|                     |  |                          |   |               |                | 9                     | Three                | 100          |  |
|                     | 66 Blowdown SG 1<br>MSSS                   | Butt Welds               | SG 39-6"                                  | S, Vol        | 2(14)          | 9                     | One                  | 69           |  |
|                     |  |                          |   |               |                | 6                     | Two                  | 100          |  |
|                     |  |                          |   |               |                | 0                     | Three                | 100          |  |
|                     | 67 Blowdown SG 2<br>MSSS                   | Butt Welds               | SG 48-6"                                  | S, Vol        | 2(10)          | 0                     | One                  | -            |  |
|                     |  |                          |   |               |                | 6                     | Two                  | 50           |  |
|                     |  |                          |   |               |                | 6                     | Three                | 100          |  |
| 530                 | Pipe Branch Connect-<br>ions               |                          |   |               |                |                       |                      |              | *SCHEDULED<br>UNDER C5.31<br>AND C5.22 |
| 531                 | Circumferential and<br>*Longitudinal Welds | Sweepstakes              | SG 206-28"                                | S, Vol        | 7              | 7                     | One                  | 100          |  |
| 532                 |  |                          |   |               |                | 0                     | Two                  | 100          |  |
|                     | 47 Main Steam SG 1 West<br>270P MSSS       |                          |   |               | 4              | 0                     | Three                | 100          |  |

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAMINATION<br>AMOUNT | INSPECTION<br>PERIOD | RUNNING<br>%    | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------|---|---------------|----------------|-----------------------|----------------------|-----------------|--------------------------------|
| 531<br>532          | CONTINUED<br>4B Main Steam SG 1 East<br>90" MSSS<br>4D Main Steam SG 2 East<br>270" MSSS<br>5D Main Steam SG 2 West<br>90" MSSS | Sweepolets     | SG-207-28"                                | S, Vol        | 8(1)           | 0<br>9<br>0           | One<br>Two<br>Three  | -<br>100<br>100 |                                |
|                     |   | Sweepolets     | SG-206-28"                                | S, Vol        | 8(1)           | 0<br>0<br>9           | One<br>Two<br>Three  | -<br>-<br>100   |                                |
|                     |   | Sweepolets     | SG-209-28"                                | S, Vol        | 7              | 0<br>0<br>7           | One<br>Two<br>Three  | -<br>-<br>100   |                                |

SECTION 8.0

RHR, ECCS, AND CHR PIPING

### ASME CLASS 2

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD                    | TOTAL<br>ITEMS     | EXAM AMOUNT        |             | INSPECTION<br>PERIOD | (40 YR)<br>10 YR<br>% | REMARKS AND<br>RELIEF REQUESTS                               |
|---------------------|---|----------------|---|----------------------------------|--------------------|--------------------|-------------|----------------------|-----------------------|--|
|                     |   |                |   |                                  |                    | 40 YR              | 10 YR       |                      |                       |  |
| CS0                 | Exam Category C-F<br>Pressure Retaining Welds<br>in Piping                                    | Note 2         |   | Note 1                           |                    |                    |             | Note 3               |                       |  |
| 510                 | Piping Welds S-1/2"<br>nominal wall thickness   |                | SI-307<br>SI-308                          | S-Vol<br>S-Vol                   | (48)<br>6<br>6     | (24)<br>3<br>3     | 3<br>4<br>3 | One<br>Two<br>Three  | ***                   | ***Category C5.10<br>systems are combined<br>for percentages |
| 511                 | Circumferential and<br>** Longitudinal welds  |                | SI-67<br>SI-34                            | S-Vol<br>S-Vol                   | 5<br>5             | 3<br>2             |             |                      |                       |  |
| 512                 | (75 category C-F)   |                | SI-241<br>SI-194                          | S-Vol<br>S-Vol                   | 3<br>3             | 2<br>1             |             |                      |                       |  |
|                     | 70-1 PSI Pump Room A Suction,<br>73-1 PSI Pump Room B Suction                                 |                | SI-307<br>SI-308                          | S-Vol<br>S-Vol                   | 10<br>10           | 5<br>5             |             |                      |                       |  |
|                     | 71-1 PSI Pump Room A Discharge,<br>74-1 PSI Pump Room B Discharge                             |                | SI-87<br>SI-129                           | S-Vol<br>S-Vol                   | (56)<br>2<br>2     | (28)<br>1<br>1     | 3<br>3<br>2 | One<br>Two<br>Three  |                       |  |
|                     |   |                | SI-78<br>SI-123<br>SI-87<br>SI-129        | S-Vol<br>S-Vol<br>S-Vol<br>S-Vol | 3<br>3<br>24<br>22 | 1<br>2<br>12<br>11 |             |                      |                       |  |
|                     | 76- Containment Spray Pump Room A<br>Suction,<br>79- Containment Spray Pump Room B<br>Suction |                | SI-78<br>SI-123                           | S-Vol<br>S-Vol                   | (47)<br>2<br>2     | (24)<br>1<br>1     | 2<br>2<br>2 | One<br>Two<br>Three  |                       |  |
|                     |   |                | SI-009<br>SI-33                           | S-Vol<br>S-Vol                   | 4<br>4             | 2<br>2             |             |                      |                       |  |
|                     |   |                | SI-67<br>SI-34                            | S-Vol<br>S-Vol                   | 7<br>7             | 4<br>3             |             |                      |                       |  |
|                     |   |                | SI-67<br>SI-34                            | S-Vol<br>S-Vol                   | 2<br>2             | 1<br>1             |             |                      |                       |  |
|                     |   |                | SI-9<br>SI-33                             | S-Vol<br>S-Vol                   | 9<br>8             | 5<br>4             |             |                      |                       |  |

# APS

## PALO VERDE NUCLEAR GENERATING STATION 10 YEAR INTERVAL - EXAMINATION SUMMARY (RHR, ECCS, and CHR SYSTEMS)

### ASME CLASS 2

TABLE 2-CTR  
PAGE 2 OF 6

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM                      | IDENTIFICATION             | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAM AMOUNT |       | INSPECTION<br>PERIOD | (40 YR)<br>10 YR<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|----------------------------|---|---------------|----------------|-------------|-------|----------------------|-----------------------|--------------------------------|
|                     |   |                            |   |               |                | 40 YR       | 10 YR |                      |                       |                                |
| 511<br>512          | CONTINUED                                     |                            |   |               |                |             |       |                      |                       |                                |
|                     | 77-Containment Spray Pump Room A<br>Discharge | Butt Welds<br>8" x 0.312"  | SI-79                                     | S, Vol        | (65)<br>1      | (34)<br>1   |       | One                  |                       |                                |
|                     | 80-Containment Spray Pump Room B<br>Discharge |                            | SI-119                                    | S, Vol        | 1              | 0           | 4     | Two                  |                       |                                |
|                     |   |                            |   |               |                |             | 4     | Three                |                       |                                |
|                     |   | 10" x 0.365"               | SI-79                                     | S, Vol        | 27             | 14          |       |                      |                       |                                |
|                     |   |                            | SI-119                                    | S, Vol        | 26             | 14          |       |                      |                       |                                |
|                     |   | 10" x 0.365"               | SI-82                                     | S, Vol        | 5              | 3           |       |                      |                       |                                |
|                     |   |                            | SI-147                                    | S, Vol        | 5              | 2           |       |                      |                       |                                |
|                     | 82-Shutdown Cooling Heat Exchanger<br>Room A  | Butt Welds<br>10" x 0.365" | SI-078                                    | S, Vol        | (45)<br>9      | (24)<br>5   |       | One                  |                       |                                |
|                     | 85-Shutdown Cooling Heat Exchanger<br>Room B  |                            | SI-123                                    | S, Vol        | 10             | 5           | 2     | Two                  |                       |                                |
|                     |   |                            |   |               |                |             | 1     | Three                |                       |                                |
|                     |   | 10" X 0.365"               | SI-79                                     | S, Vol        | 9              | 4           |       |                      |                       |                                |
|                     |   |                            | SI-119                                    | S, Vol        | 9              | 5           |       |                      |                       |                                |
|                     |   | 20" x 0.500"               | SI-078                                    | S, Vol        | 3              | 2           |       |                      |                       |                                |
|                     |   |                            | SI-123                                    | S, Vol        | 5              | 3           |       |                      |                       |                                |
|                     | 83-Shutdown Cooling Heat Exchanger<br>Room A  | Butt Welds<br>6" x 0.280"  | SI-131                                    | S, Vol        | (117)<br>4     | (60)<br>2   |       | One                  |                       |                                |
|                     | 86-Shutdown Cooling Heat Exchanger<br>Room B  |                            | SI-131                                    | S, Vol        | 4              | 2           | 6     | Two                  |                       |                                |
|                     |   |                            |   |               |                |             | 9     | Three                |                       |                                |
|                     |   | 10" X 0.365"               | SI-82                                     | S, Vol        | 5              | 3           |       |                      |                       |                                |
|                     |   |                            | SI-147                                    | S, Vol        | 3              | 1           |       |                      |                       |                                |
|                     |   | 10" X 0.365"               | SI-87                                     | S, Vol        | 12             | 6           |       |                      |                       |                                |
|                     |   |                            | SI-129                                    | S, Vol        | 7              | 4           |       |                      |                       |                                |
|                     |   | 10" X 0.365"               | SI-89                                     | S, Vol        | 12             | 6           |       |                      |                       |                                |
|                     |   |                            | SI-134                                    | S, Vol        | 14             | 7           |       |                      |                       |                                |
|                     |   | 14" x 0.375"               | SI-90                                     | S, Vol        | 10             | 5           |       |                      |                       |                                |
|                     |   |                            | SI-135                                    | S, Vol        | 11             | 6           |       |                      |                       |                                |
|                     |   | 16" x 0.375"               | SI-70                                     | S, Vol        | 4              | 2           |       |                      |                       |                                |
|                     |   |                            | SI-72                                     | S, Vol        | 4              | 2           |       |                      |                       |                                |

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### ASME CLASS 2

| ASME<br>ITEM<br>NO. | ZONE/COMPONENT OR SYSTEM                               | IDENTIFICATION                              | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAM AMOUNT |       | INSPECTION<br>PERIOD | (40 YR)<br>10 YR<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|--|---|---|---------------|----------------|-------------|-------|----------------------|-----------------------|--------------------------------|
|                     |  |   |   |               |                | 40 YR       | 10 YR |                      |                       |                                |
| 511                 | CONTINUED  | 20" x 0.500"                                | SI 70                                     | S, Vol        | 15             | 8           |       |                      |                       |                                |
| 512                 |  |   | SI 72                                     | S, Vol        | 12             | 6           |       |                      |                       |                                |
|                     |  |   | SI 172                                    | S, Vol        | (52)           | (16)        |       |                      |                       |                                |
|                     | 88 East Wrap, 89 East Wrap<br>SI                       | Butt Wkls<br>10" x 0.365"                   | SI 71                                     | S, Vol        | 4              | 2           | 3     | One                  |                       |                                |
|                     |  |   | SI 71                                     | S, Vol        | 2              | 1           | 2     | Two                  |                       |                                |
|                     |  |   |   |               |                |             | 0     | Three                |                       |                                |
|                     |  | 12" x 0.375"                                | SI 72                                     | S, Vol        | 16             | 4           |       |                      |                       |                                |
|                     |  |   | SI 73                                     | S, Vol        | 7              | 2           |       |                      |                       |                                |
|                     |  |   | SI 70                                     | S, Vol        | 9              | 2           |       |                      |                       |                                |
|                     |  | 20" x 0.500"                                | SI 71                                     | S, Vol        | 8              | 2           |       |                      |                       |                                |
|                     |  |   | SI 72                                     | S, Vol        | 3              | 1           |       |                      |                       |                                |
|                     |  |   | SI 70                                     | S, Vol        | 3              | 2           |       |                      |                       |                                |
|                     | 89 East Wrap, 92 West Wrap<br>Shutdown Cooling Section | Butt Wkls<br>10" x 0.250"<br>**10" x 0.365" | SI 173                                    | S, Vol        | (67)           | (35)        |       |                      |                       |                                |
|                     |  |   | SI 239                                    | S, Vol        | 11             | 6           | 5     | One                  |                       |                                |
|                     |  |   |   |               | 10             | 5           | 2     | Two                  |                       |                                |
|                     |  | 12" x 0.250"                                | SI 18                                     | S, Vol        | 4              | 2           |       |                      |                       |                                |
|                     |  |   | SI 2                                      | S, Vol        | 10             | 5           |       |                      |                       |                                |
|                     |  |   | SI 194                                    | S, Vol        | 9              | 5           |       |                      |                       |                                |
|                     |  | 16" x 0.312"                                | SI 241                                    | S, Vol        | 12             | 6           |       |                      |                       |                                |
|                     |  |   | SI 173                                    | S, Vol        | 2              | 1           |       |                      |                       |                                |
|                     |  |   | SI 194                                    | S, Vol        | 4              | 2           |       |                      |                       |                                |
|                     |  | 18" x 0.312"                                | SI 241                                    | S, Vol        | 5              | 3           |       |                      |                       |                                |

\*\*One Weld per  
line

**APS**
**PALO VERDE NUCLEAR GENERATING STATION**  
**10 YEAR INTERVAL - EXAMINATION SUMMARY**  
 (RHR, ECCS, and CHR SYSTEMS)
**ASME CLASS 2**
 TABLE 2-CH  
 PAGE 4 OF 6

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                              | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD    | TOTAL<br>ITEMS  | EXAM AMOUNT    |                | INSPECTION<br>PERIOD | (40 YR)<br>10 YR<br>%   | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|---|---|---|------------------|-----------------|----------------|----------------|----------------------|-------------------------|--------------------------------|
|                     |   |   |   |                  |                 | 40 YR          | 10 YR          |                      |                         |                                |
| 911<br>912          | CONTINUED   |   |   |                  |                 |                |                |                      |                         |                                |
|                     | 90-East Wreap, 93-West Wreap<br>SI  | Butt Welds<br>8" x 0.322"                   | SI-134<br>SI-7                            | S, Vol<br>S, Vol | (24)<br>2<br>2  | (12)<br>1<br>1 | 0<br>4<br>0    | One<br>Two<br>Three  |                         |                                |
|                     |   | 10" x 0.365"                                | SI-134<br>SI-89                           | S, Vol<br>S, Vol | 5<br>11         | 3<br>5         |                |                      |                         |                                |
|                     |   | 24" x 0.375"                                | SI-30<br>SI-89                            | S, Vol<br>S, Vol | 2<br>2          | 1<br>1         |                |                      |                         |                                |
|                     | 94-A Train Misc. Pipe Chases &<br>88" Pipe Tunnel,<br>95-B Train Misc. Pipe Chases &<br>88" Pipe Tunnel<br>SI | Butt Welds<br>10" x 0.365"                  | SI-89<br>SI-134                           | S, Vol<br>S, Vol | (67)<br>10<br>9 | (34)<br>5<br>5 | 2<br>0<br>2    | One<br>Two<br>Three  |                         |                                |
|                     |   | 18" x 0.312"                                | SI-194<br>SI-241                          | S, Vol<br>S, Vol | 18<br>15        | 9<br>8         |                |                      |                         |                                |
|                     |   | 20" x 0.500"                                | SI-70<br>SI-72                            | S, Vol<br>S, Vol | 10<br>5         | 5<br>2         |                |                      |                         |                                |
|                     | 100-Containment LPSI Train A Suction,<br>101-Containment LPSI Train B Suction<br>Inside Containment           | Butt Welds<br>10" x 0.250"<br>**6" x 0.280" | SI-369<br>SI-368                          | S, Vol<br>S, Vol | (40)<br>9<br>17 | (20)<br>5<br>8 | 1<br>2<br>4    | One<br>Two<br>Three  |                         | **One Weld per line.           |
|                     |   | 16" x 0.312"                                | SI-241<br>SI-194                          | S, Vol<br>S, Vol | 3<br>7          | 2<br>3         |                |                      |                         |                                |
|                     |   | 24" x 0.375"                                | SI-7<br>SI-30                             | S, Vol<br>S, Vol | 2<br>2          | 1<br>1         |                |                      |                         |                                |
|                     | Category C310 Systems<br>Total  |   |   |                  | (628)           | (311)          | 30<br>29<br>29 | One<br>Two<br>Three  | (100)<br>10<br>16<br>28 |                                |

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| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM  | IDENTIFICATION                             | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO.                                    | NDE<br>METHOD  | TOTAL<br>ITEMS                                    | EXAM AMOUNT                                  |                                 | INSPECTION<br>PERIOD | (40 YR)<br>10 YR<br>%  | REMARKS AND<br>RELIEF REQUESTS   |
|---------------------|---|--|--|--|---|--|---------------------------------|----------------------|------------------------|--|
|                     |   |  |  |  |   | 40 YR  | 10 YR                           |                      |                        |  |
| 520                 | Piping Welds Over<br>1/2" Nominal Wall<br>Thickness   |  |  |  |   |  |                                 |                      |                        |  |
| 521                 | Circumferential and   |  |  |  |   |  |                                 |                      |                        |  |
| 522                 | **Longitudinal Welds<br>(*75 category C-F)  |  |  |  |   |  |                                 |                      |                        | **2.5T min. from<br>each scheduled circ.<br>weld intersection<br>will be examined. |
|                     | 88-East Wrap, 91-West Wrap<br>LPSI Header To Loop-West Wrap   | 12" x 1.125"                               | SI-72 & 155<br>SI-73 & 174<br>SI-70 & 202<br>SI-71 & 220                     | S, Vol<br>S, Vol<br>S, Vol<br>S, Vol   | (28)<br>7<br>7<br>7<br>7                          | (8)<br>2<br>2<br>2<br>2                      | 1<br>0<br>0<br>0                | One<br>Two<br>Three  | ***                    | ***Category C520<br>systems are combined<br>for percentages.                       |
|                     | 90-East Wrap, 91-West Wrap<br>SI  | Butt Welds<br>24" x 0.562"                 | SI-308<br>SI-307   | S, Vol<br>S, Vol   | (4)<br>2<br>2                                     | (2)<br>1<br>1                                | 0<br>1<br>0                     | One<br>Two<br>Three  |                        |  |
|                     | 96-Containment LPSI Header to Loop 1A,<br>97-Containment LPSI Header to Loop 1B,<br>98-Containment LPSI Header to Loop 2A,<br>99-Containment LPSI Header to Loop 2B | Butt Welds<br>12" x 1.125"<br>12" x 1.312" | SI-202<br>SI-220<br>SI-155<br>SI-174<br>SI-202<br>SI-220<br>SI-155<br>SI-174 | S, Vol<br>S, Vol<br>S, Vol<br>S, Vol<br>S, Vol<br>S, Vol<br>S, Vol<br>S, Vol | (105)<br>4<br>4<br>4<br>2<br>21<br>34<br>21<br>15 | (27)<br>1<br>1<br>1<br>1<br>6<br>8<br>5<br>4 | 2<br>3<br>3<br>0<br>0<br>0<br>0 | One<br>Two<br>Three  |                        |  |
|                     | 100-Containment LPSI Train A Suction,<br>101-Containment LPSI Train B Suction   | Butt Welds<br>16" x 1.594"                 | SI-241<br>SI-194   | S, Vol<br>S, Vol   | (4)<br>2<br>2                                     | (2)<br>1<br>1                                | 0<br>0<br>0                     | One<br>Two<br>Three  |                        |  |
|                     | Category C520<br>Systems Total  |  |  |  | (142)   | (39)   | 3<br>4<br>3                     | One<br>Two<br>Three  | (100)<br>8<br>18<br>25 |  |
| 530                 | Pipe Branch Connections   |  |  |  |   |  |                                 |                      |                        |  |
| 531                 | Circumferential and   |  |  |  |   |  |                                 |                      |                        |  |
| 532                 | *Longitudinal Welded  |  |  |  |   |  |                                 |                      |                        | *2.5T min. from<br>each weld inter-<br>section will be<br>examined.                |
|                     | 82-Shutdown Cooling Heat Exchanger<br>Room A,<br>85-Shutdown Cooling Heat Exchanger<br>Room B<br>Inlets   | Sweepolet<br>20" x 10"                     | SI-78<br>SI-123  | S<br>S   | (4)<br>2<br>2                                     | (2)<br>1<br>1                                | 1<br>0<br>0                     | One<br>Two<br>Three  | **                     | **Category C530<br>systems are combined<br>for percentages.                        |

### ASME CLASS 2

TABLE 2 OF 6  
PAGE 6 OF 6

| ASME<br>ITEM<br>NO. | ZONE-COMPONENT OR SYSTEM           | IDENTIFICATION | DESCRIPTION<br>LINE NO., OR<br>SERIAL NO. | NDE<br>METHOD | TOTAL<br>ITEMS | EXAM AMOUNT |       | INSPECTION<br>PERIOD | (40 YR)<br>10 YR<br>% | REMARKS AND<br>RELIEF REQUESTS |
|---------------------|------------------------------------|----------------|---|---------------|----------------|-------------|-------|----------------------|-----------------------|--------------------------------|
|                     |                                    |                |   |               |                | 40 YR       | 10 YR |                      |                       |                                |
| 530                 | CONTINUED                          |                |   |               |                |             |       |                      |                       |                                |
| 531                 | 83 Shutdown Cooling Heat Exchanger | Sweeplets      | SI 70                                     | S             | (8)            | (4)         | 0     | One                  |                       |                                |
| 532                 | Room A                             | 20" x 6"       | SI 72                                     | S             | 4              | 2           | 0     | Two                  |                       |                                |
|                     | 86 Shutdown Cooling Heat Exchanger | 20" x 10"      |   |               | 4              | 2           | 0     | Three                |                       |                                |
|                     | Room B                             | 20" x 14"      |   |               |                |             | 1     |                      |                       |                                |
|                     | outlet                             |                |   |               |                |             |       |                      |                       |                                |
|                     | 88 East Wrap, 91 West Wrap         | Sweeplets      | SI 70                                     | S             | (2)            | (1)         | 1     | One                  |                       |                                |
|                     | SI                                 | 20" x 12"      | SI 72                                     | S             | 1              | 1           | 0     | Two                  |                       |                                |
|                     |                                    |                |   |               | 1              | 0           | 0     | Three                |                       |                                |
|                     | 89 East Wrap, 92 West Wrap         | Sweeplets      | SI 194                                    | S             | (2)            | (1)         | 0     | One                  |                       |                                |
|                     | SI                                 | 18" x 12"      | SI 241                                    | S             | 1              | 1           | 0     | Two                  |                       |                                |
|                     |                                    |                |   |               | 1              | 0           | 0     | Three                |                       |                                |
|                     | Category C330                      |                |   |               | (16)           | (8)         | 2     | One                  | (100)                 |                                |
|                     | Systems Total                      |                |   |               |                |             | 0     | Two                  | 25                    |                                |
|                     |                                    |                |   |               |                |             | 0     | Three                | 25                    |                                |
|                     |                                    |                |   |               |                |             | 1     |                      | 38                    |                                |

SECTION 9.0  
REQUEST FOR RELIEF

RELIEF REQUEST  
INDEX

| <u>NUMBER</u> | <u>DESCRIPTION</u>  |
|---------------|---|
| 1.            | Hydraulic and Mechanical Snubbers will be tested in accordance with PVNGS Technical Specifications. |
| 2.            | Withdrawn   |
| 3.            | Insulation will not be removed for visual examinations or welded or mechanical attachments.         |
| 4.            | Level III Personnel will be recertified by examination every 5 years.                               |
| 5.            | Withdrawn   |
| 6.            | Reactor Vessel Support Visual Examination.  |
| 7.            | Class 2 and 3 Systems Pressure Test.  |
| 8.            | Class 3 System Pressure Test  |

| RELIEF REQUEST NO. 1              |            |               |           |               |
|-----------------------------------|------------|---------------|-----------|---------------|
| COMPONENT OR ITEM                 | CODE CLASS | PROGRAM TABLE | CODE ITEM | EXAM CATEGORY |
| HYDRAULIC AND MECHANICAL SNUBBERS | 1          | 1-IWF         | N/A       | N/A           |
|                                   | 2          | 2-IWF         | N/A       | N/A           |
|                                   | 3          | 3-IWF         | N/A       | N/A           |

#### CODE REQUIREMENT

Perform inservice functional testing of hydraulic and mechanical snubbers in accordance with IWF-5000

#### BASIS

A detailed and comprehensive testing program for snubbers is contained in the PVNGS Technical Specifications.

#### ALTERNATE EXAMINATION

The requirements for testing snubbers will be in accordance with the PVNGS Technical Specifications, Section 4.7.9.

#### SCHEDULE FOR IMPLEMENTATION

First Ten Year Inspection Interval

#### APPROVAL

NRC letter dated October 21, 1987, from E.A. Licita, NRC, to E.E. Van Brunt, Jr., "Inservice Inspection Programs Palo Verde, Unit 1, 2, & 3".

RELIEF REQUEST NO. 2

| COMPONENT OR ITEM                 | CODE<br>CLASS | PROGRAM<br>TABLE | CODE<br>ITEM | EXAM<br>CATEGORY |
|-----------------------------------|---------------|------------------|--------------|------------------|
| NOZZLE INSIDE RADIUS SECTIONS     |               |                  |              |                  |
| PRESSURIZER                       | 1             | 1-3              | B3.120       | B-D              |
| STEAM GENERATOR                   | 1             | 1-3              | B3.140       | B-D              |
| STEAM GENERATOR                   | 2             | 2-2              | C2.22        | C-B              |
| SHUT DOWN COOLING HEAT EXCHANGERS | 2             | 2-2              | C2.22        | C-B              |

WITHDRAWN



| RELIEF REQUEST NO. 3 |            |               |           |                |
|----------------------|------------|---------------|-----------|----------------|
| COMPONENT OR ITEM    | CODE CLASS | PROGRAM TABLE | CODE ITEM | EXAM CATEGORY  |
| SUPPORT COMPONENTS   | 1          | 1-IWF         | ALL ITEMS | F-A, F-B & F-C |
|                      | 2          | 2-IWF         |           | F-A, F-B & F-C |
|                      | 3          | 3-IWF         |           | F-A, F-B & F-C |
| INTEGRAL ATTACHMENTS | 3          | 3-1           |           | D-A, D-B & D-C |

#### CODE REQUIREMENT

Perform visual examinations (VT-3) of the mechanical or welded attachments to the pressure retaining component on insulated systems.

#### 9.5 BASIS

The visual examinations of the mechanical or welded attachments will be performed to the extent practical. The insulation will not be removed to perform these examinations. It has been our experience that any loss of support capability or adequate restraint can usually be detected through the examination of uninsulated portions of the support, the accessible portions of the attachments through the insulation gaps, and or the surrounding insulation.

#### ALTERNATE EXAMINATION

The mechanical and welded attachments will be visually examined to the extent practical. The insulation will be removed from around the support attachment for further examinations whenever an abnormality is detected.

#### SCHEDULE FOR IMPLEMENTATION

First Ten Year Inspection Interval

#### APPROVAL

NRC letter dated October 21, 1987, from E.A. Licitra, NRC, to E.E. Van Brunt, Jr., "Inservice Inspection Programs Palo Verde, Unit 1, 2, & 3".

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| RELIEF REQUEST NO. 4 |            |               |           |               |
|----------------------|------------|---------------|-----------|---------------|
| COMPONENT OR ITEM    | CODE CLASS | PROGRAM TABLE | CODE ITEM | EXAM CATEGORY |
| N/A                  | N/A        | N/A           | N/A       | N/A           |

#### CODE REQUIREMENT

All Level III personnel shall be recertified by examination on a triennial basis (TWA-2300(a)(1)).

#### BASIS

The 1986 Edition of Section XI and the 1983 Edition thru Summer 1983 Addenda of ASME III (Latest Edition and Addenda referenced in 10 CFR 55.55a) requires Level III personnel to be recertified every 5 years.

#### ALTERNATE EXAMINATION

All Level III personnel shall be recertified by examination every 5 years.

#### SCHEDULE FOR IMPLEMENTATION

First Ten Year Inspection Interval

#### APPROVAL

NRC letter dated October 21, 1987, from E.A. Licitra, NRC, to E.E. Van Brunt, Jr., "Inservice Inspection Programs Palo Verde, Unit 1, 2, & 3".

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|                      |                   |            |               |           |               |
|----------------------|-------------------|------------|---------------|-----------|---------------|
| RELIEF REQUEST NO. 5 |                   |            |               |           |               |
|                      | COMPONENT OR ITEM | CODE CLASS | PROGRAM TABLE | CODE ITEM | EXAM CATEGORY |
|                      | N/A               | N/A        | N/A           | N/A       | N/A           |

WITHDRAWN

## RELIEF REQUEST NO. 6

| COMPONENT OR ITEM       | CODE CLASS | PROGRAM TABLE | CODE ITEM                        | EXAM CATEGORY |
|-------------------------|------------|---------------|----------------------------------|---------------|
| Reactor Vessel Supports | 1          | 1-IWF         | F2.10<br>F2.20<br>F2.30<br>F2.40 | F-B           |

CODE REQUIREMENT

Perform visual examination (VT-3) of the Reactor Vessel Supports

BASIS

The visual examination of the reactor vessel supports will not be performed. The supports are inaccessible from the refueling cavity seal ring area for either direct or remote visual examination. Examination from the ICI chase below the vessel would require extensive scaffolding to be erected in order to get up to the support pedestal and the exam would still be severely limited due to accessibility between the reactor vessel and the cavity. The performance of this visual would require extremely large amounts of time, effort, expense, and radiation exposure (expected to be 3 man rem per support based on surveys taken in Unit 3 during first refueling outage).

ALTERNATE EXAMINATION

No alternate examination is proposed.

SCHEDULE FOR IMPLEMENTATION

First Ten Year Inspection Interval.

APPROVAL

Pending NRC approval.

| RELIEF REQUEST NO. 7          |            |               |           |               |
|-------------------------------|------------|---------------|-----------|---------------|
| COMPONENT OR ITEM             | CODE CLASS | PROGRAM TABLE | CODE ITEM | EXAM CATEGORY |
| PRESSURE RETAINING COMPONENTS | 2          | 2-7           | C710      | C-H           |
|                               | 3          | 3-1           | C730      | D-A           |
|                               |            |               | C750      | D-B           |
|                               |            |               | C770      | D-C           |
|                               |            |               | D110      |               |
|                               |            |               | D210      |               |
|                               |            |               | D310      |               |

#### CODE REQUIREMENT

Perform System Functional (class 2) and System Inservice (class 3) pressure test in accordance with IWA-5000, IWC-5000, IWD-5000.

#### 9.9 BASIS

This relief is applicable only to portions of piping systems that are classified ASME due to penetration of containment building liner plate. For the applicable class 2 systems the piping upstream and downstream of containment is, lation is classified non-ASME. The class 3 system is applicable to the fuel transfer tube (containment to fuel bldg.).

#### ALTERNATE EXAMINATION

The applicable containment piping penetrations and fuel transfer tube are routinely subjected to surveillance testing. This testing consists of integrated leak rate testing and/or local leak rate testing.

#### SCHEDULE FOR IMPLEMENTATION

First Ten Year Inspection Interval.

#### APPROVAL

Pending NRC approval.

| RELIEF REQUEST NO. 8          |            |               |           |               |
|-------------------------------|------------|---------------|-----------|---------------|
| COMPONENT OR ITEM             | CODE CLASS | PROGRAM TABLE | CODE ITEM | EXAM CATEGORY |
| PRESSURE RETAINING COMPONENTS | 3          | 3-1           | D2.10     | D-B           |

#### CODE REQUIREMENT

Perform System Inservice Pressure Test in accordance with IWA-5000 and IWD-5000

#### BASIS

The 1986 Edition of Section XI Code (which is included in the latest Edition referenced in the current 10 CFR 50.55a) requires a Functional Pressure Test be performed on systems in support of Emergency Core Cooling, Containment Heat Removal, Atmospheric Cleanup, and Reactor Residual Heat Removal.

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#### ALTERNATE EXAMINATION

Perform a Functional Pressure Test on Class 3 Pressure Retaining Components within systems not normally operating while the Unit is Inservice.

#### SCHEDULE FOR IMPLEMENTATION

First Ten Year Inspection Interval.

#### APPROVAL

Pending NRC Approval.

SECTION 10.0  
ISI  
BOUNDARY DRAWINGS

NOTE: See ISI Drawings for Unit 1 ISI Program, Letter ANPP-33266-EEVB/KLM, dated August 26, 1985, from E.E. Van Brunt, Jr., ANPP, to George W. Knighton, NRC, "Palo Verde Nuclear Generating Station (PVNGS) Unit 1 Docket Nos. STN 50-528 (License No. NPF-41) Initial Inservice Inspection Program-PVNGS Unit 1".



SECTION 11.0  
ZONE DRAWINGS

# ZONE DRAWING INDEX

| Drawing Number | Revision | Drawing Title              | Code Class |
|----------------|----------|----------------------------|------------|
| Zone 1         | 0        | Reactor Vessel             | 1          |
| Zone 2         | 0        | Closure Head               | 1          |
| Zone 3         | 0        | Steam Generator 1          | 1          |
| Zone 4         | 0        | Steam Generator 2          | 1          |
| Zone 5         | 0        | Pressurizer                | 1          |
| Zone 6         | 0        | RCS Primary Piping         | 1          |
| Zone 7-15      | NOT      | USED                       | 1          |
| Zone 16        | 0        | Reactor Coolant Pump 1A    | 1          |
| Zone 17        | 0        | Reactor Coolant Pump 1B    | 1          |
| Zone 18        | 0        | Reactor Coolant Pump 2A    | 1          |
| Zone 19        | 0        | Reactor Coolant Pump 2B    | 1          |
| Zone 20        | 0        | Pressurizer Surge          | 1          |
| Zone 21        | 0        | Shutdown Cooling Loop 1    | 1          |
| Zone 22        | 0        | Shutdown Cooling Loop 2    | 1          |
| Zone 23        | 0        | Safety Injection 1A        | 1          |
| Zone 24        | 0        | Safety Injection 1B        | 1          |
| Zone 25        | 0        | Safety Injection 2A        | 1          |
| Zone 26        | 0        | Safety Injection 2B        | 1          |
| Zone 27        | 0        | Pressurizer Spray 1A       | 1          |
| Zone 28        | 0        | Pressurizer Spray 1B       | 1          |
| Zone 29        | 0        | Combined Pressurizer Spray | 1          |
| Zone 30        | 0        | Aux. Pressurizer Spray     | 1          |
| Zone 31        | 0        | Pressurizer Safeties       | 1          |
| Zone 32        | 0        | Drain Line 1A              | 1          |
| Zone 33        | 0        | Drain Line 1B              | 1          |
| Zone 34        | 0        | Drain Line 2A              | 1          |
| Zone 35        | 0        | Drain Line 2B              | 1          |
| Zone 36        | 0        | Letdown Line               | 1          |
| Zone 37        | 0        | Charging Line              | 1          |
| Zone 38        | 0        | Drain Line Loop 1          | 1          |
| Zone 39        | 0        | HPSI Long Term Recirc 1    | 1          |
| Zone 40        | 0        | HPSI Long Term Recirc 2    | 1          |
| Zone 41        | 0        | Steam Generator 1          | 2          |
| Zone 42        | 0        | Steam Generator 2          | 2          |
| Zone 43        | 0        | Main Steam SG 1 East       | 2          |
| Zone 44        | 0        | Main Steam SG 1 West       | 2          |
| Zone 45        | 0        | Main Steam SG 2 East       | 2          |
| Zone 46        | 0        | Main Steam SG 2 West       | 2          |
| Zone 47        | 0        | Main Steam SG 1 West       | 2          |
| Zone 48        | 0        | Main Steam SG 1 East       | 2          |
| Zone 49        | 0        | Main Steam SG 2 East       | 2          |
| Zone 50        | 0        | Main Steam SG 2 West       | 2          |
| Zone 51        | 0        | Atmospheric Dump No. 1     | 2          |
| Zone 52        | 0        | Atmospheric Dump No. 2     | 2          |

# ZONE DRAWING INDEX (Cont'd)

| Drawing Number Revision |   | Drawing Title                           | Code Class |
|-------------------------|---|---|------------|
| Zone 53                 | 0 | Steam to Aux Feedwater System           | 2          |
| Zone 54                 | 0 | Feedwater SG No. 1                      | 2          |
| Zone 55                 | 0 | Feedwater SG No. 2                      | 2          |
| Zone 56                 | 0 | Feedwater SG No. 1                      | 2          |
| Zone 57                 | 0 | Feedwater SG No. 2                      | 2          |
| Zone 58                 | 0 | Aux & Downcomer Feedwater SG 1          | 2          |
| Zone 59                 | 0 | Aux & Downcomer Feedwater SG 2          | 2          |
| Zone 60                 | 0 | Downcomer Feedwater SG 1                | 2          |
| Zone 61                 | 0 | Downcomer Feedwater SG 2                | 2          |
| Zone 62                 | 0 | Auxiliary Feedwater SG 1                | 2          |
| Zone 63                 | 0 | Auxiliary Feedwater SG 2                | 2          |
| Zone 64                 | 0 | Blowdown SG 1                           | 2          |
| Zone 65                 | 0 | Blowdown SG 2                           | 2          |
| Zone 66                 | 0 | Blowdown SG 1                           | 2          |
| Zone 67                 | 0 | Blowdown SG 2                           | 2          |
| Zone 68                 | 0 | Regenerative Heat Exchanger             | 2          |
| Zone 69                 | 0 | Letdown Heat Exchanger                  | 2          |
| Zone 70                 | 0 | LPSI Pump Room A Suction                | 2          |
| Zone 71                 | 0 | LPSI Pump Room A Discharge              | 2          |
| Zone 72                 | 0 | LPSI Pump A                             | 2          |
| Zone 73                 | 0 | LPSI Pump Room B Suction                | 2          |
| Zone 74                 | 0 | LPSI Pump Room B Discharge              | 2          |
| Zone 75                 | 0 | LPSI Pump B                             | 2          |
| Zone 76                 | 0 | Containment Spray Pump Room A Suction   | 2          |
| Zone 77                 | 0 | Containment Spray Pump Room A Discharge | 2          |
| Zone 78                 | 0 | Containment Spray Pump A                | 2          |
| Zone 79                 | 0 | Containment Spray Pump Room B Suction   | 2          |
| Zone 80                 | 0 | Containment Spray Pump Room B Discharge | 2          |
| Zone 81                 | 0 | Containment Spray Pump B                | 2          |
| Zone 82                 | 0 | Shutdown Cooling Heat Exchanger Room A  | 2          |
| Zone 83                 | 0 | Shutdown Cooling Heat Exchanger Room A  | 2          |
| Zone 84                 | 0 | Shutdown Cooling Heat Exchanger Room A  | 2          |
| Zone 85                 | 0 | Shutdown Cooling Heat Exchanger Room B  | 2          |
| Zone 86                 | 0 | Shutdown Cooling Heat Exchanger Room B  | 2          |
| Zone 87                 | 0 | Shutdown Cooling Heat Exchanger B       | 2          |

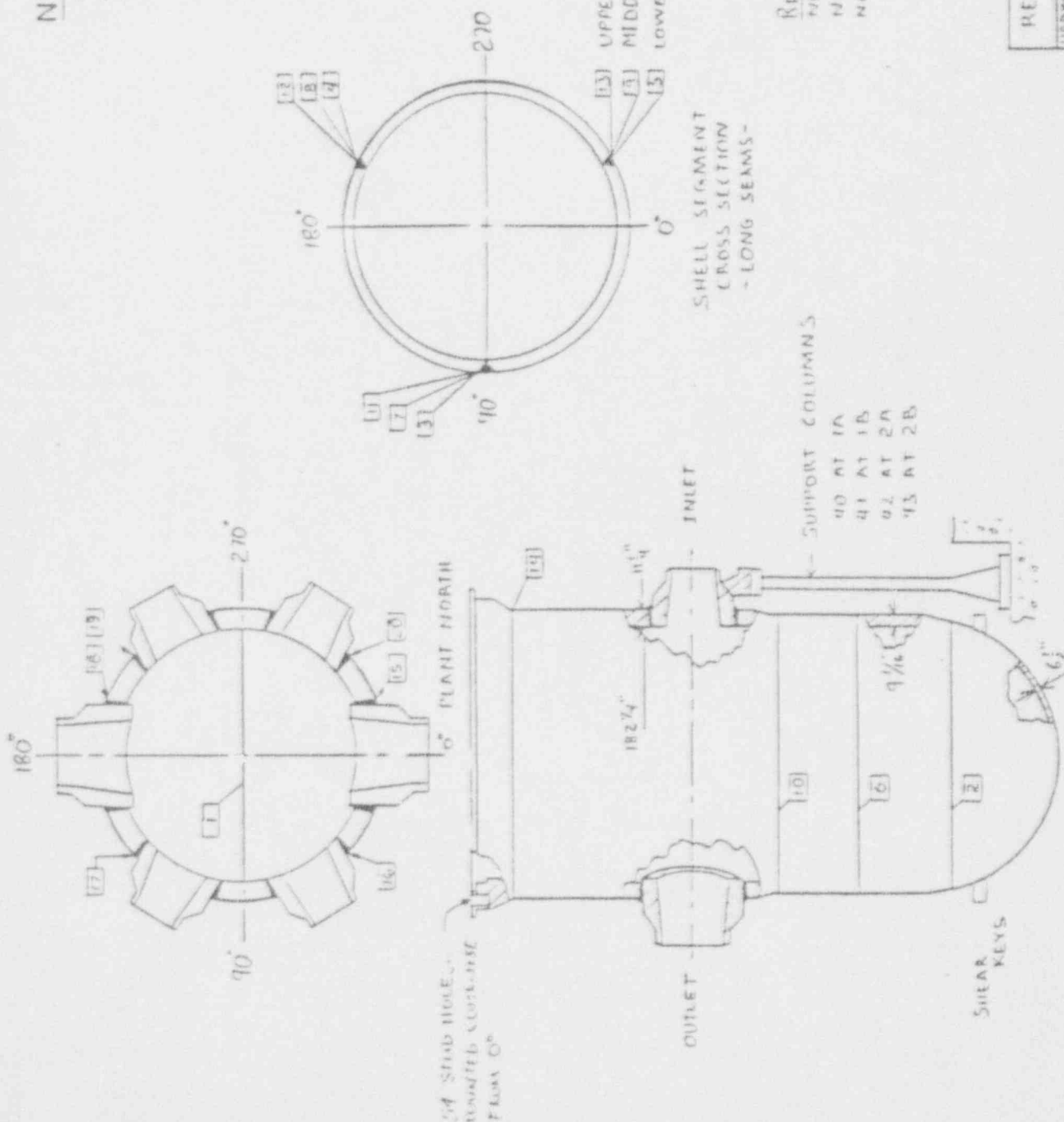
ZONE DRAWING INDEX (Cont'd)

| Drawing Number | Revision | Drawing Title                                  | Code Class |
|----------------|----------|--|------------|
| Zone 88        | 0        | East Wrap                                      | 2          |
| Zone 89        | 0        | East Wrap                                      | 2          |
| Zone 90        | 0        | East Wrap                                      | 2          |
| Zone 91        | 0        | West Wrap                                      | 2          |
| Zone 92        | 0        | West Wrap                                      | 2          |
| Zone 93        | 0        | West Wrap                                      | 2          |
| Zone 94        | 0        | A Train Misc. Pipe Chases &<br>88' Pipe Tunnel | 2          |
| Zone 95        | 0        | B Train Misc. Pipe Chases &<br>88' Pipe Tunnel | 2          |
| Zone 96        | 0        | Containment LPSI Header to<br>Loop 1A          | 2          |
| Zone 97        | 0        | Containment LPSI Header to<br>Loop 1B          | 2          |
| Zone 98        | 0        | Containment LPSI Header to<br>Loop 2A          | 2          |
| Zone 99        | 0        | Containment LPSI Header to<br>Loop 2B          | 2          |
| Zone 100       | 0        | Containment LPSI Train A Suction               | 2          |
| Zone 101       | 0        | Containment LPSI Train B Suction               | 2          |

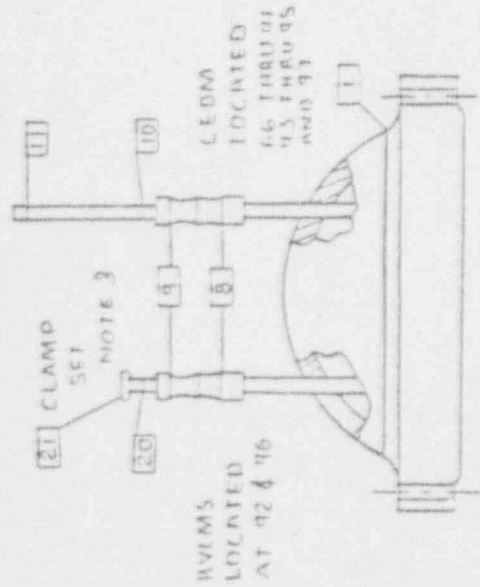
# NOTES:

TAG NO. 2MPCX01  
SERIAL NO. 79173 (CE)  
H. B. NO. 22513

REFERENCE DWG:  
NOD-301-15 AND 17  
NOD-301-41 AND 61  
NOD-301-12



|                            |                          |                |
|----------------------------|--------------------------|----------------|
| REV D                      | DWG                      | UNIT #2 ZONE 1 |
| DRAWN BY<br>D. D. HANSEN   | TITLE:<br>REACTOR VESSEL |                |
| CHECKED BY<br>J. D. HANSEN |                          |                |



## NOTES:

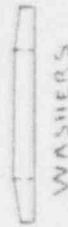
- 1) LEDN SET ITEM NO. - LEDN NO.
- 2) TAG NO. 2MRCERO3
- SERIAL NO. 77173 (F.F.)
- H.D. NO. 22513
- 3) ITEM 21 CONTAINS 9 SINGLE NUTTED STUDS IN A GRAYU CLAMP

## REFERENCE DWGS:

- 11001-3.01-24 AND 25  
11001-3.01-121 AND 215

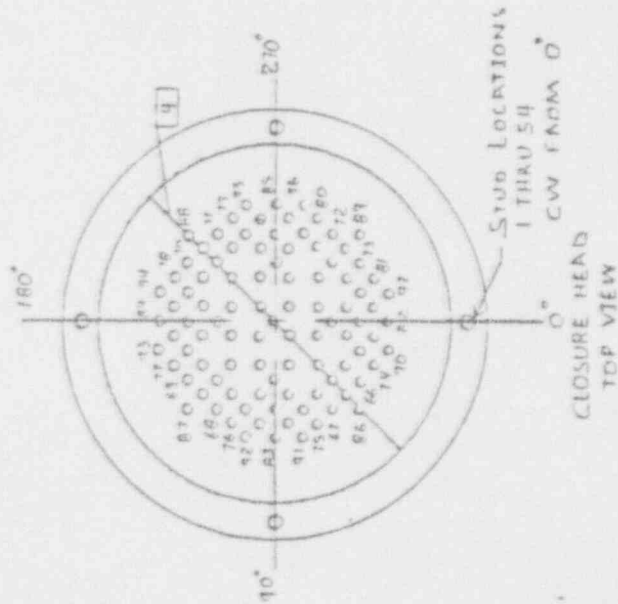
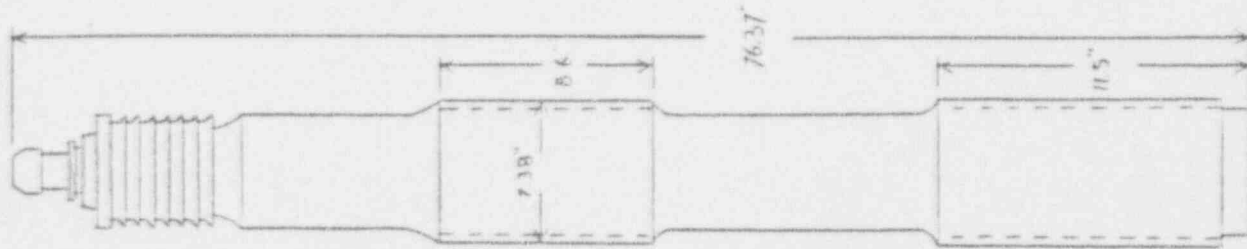


NUTS

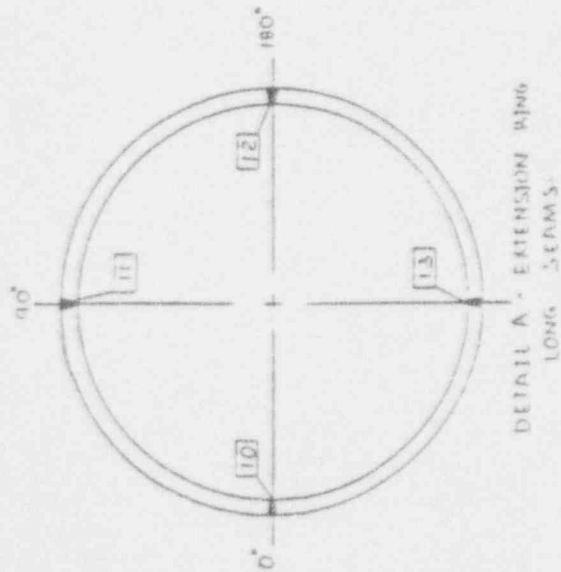
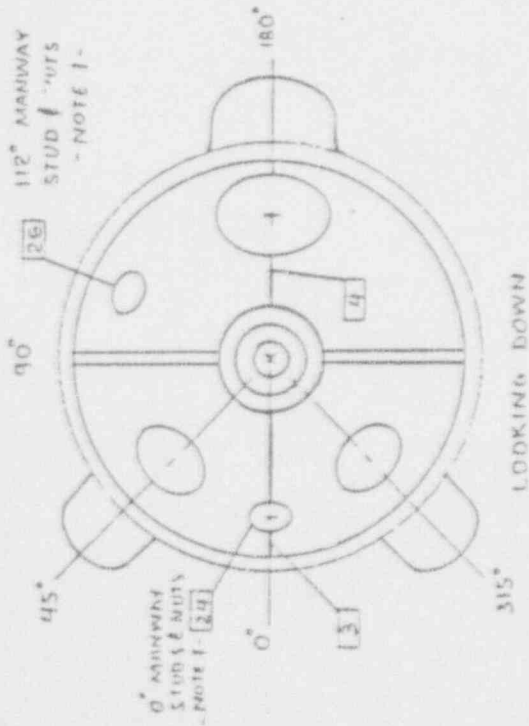


WASHERS

CLOSURE HEAD STUDS  
# 1 THRU # 54



|                              |                        |                |
|------------------------------|------------------------|----------------|
| REV 0                        | DWG                    | UNIT #2 ZONE 2 |
| DRAWN BY<br>D.B. HANSEN      | TITLE:<br>CLOSURE HEAD |                |
| CHECKED BY<br>J.B. STRICKLER |                        |                |

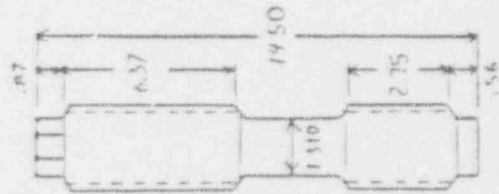
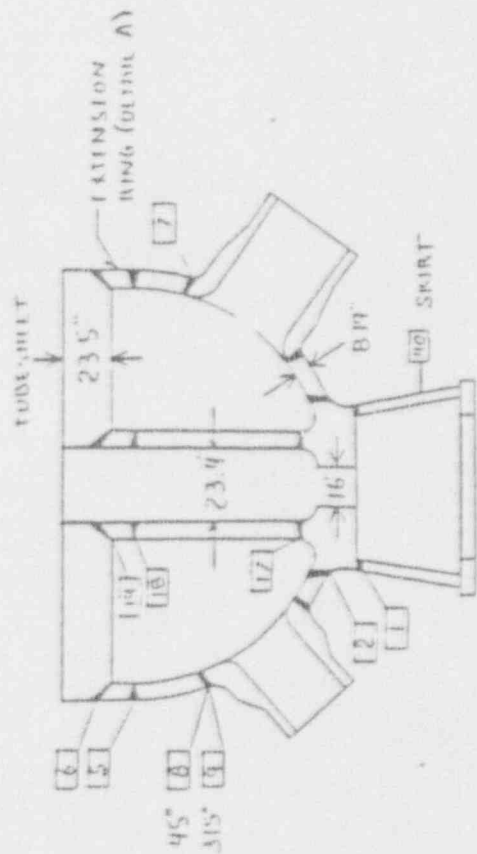


# NOTES:

- 1) STUD LOCATION IS #1 TDC, GOING CW TO #20
- 2) TING NO. 2MRCE01A SERIAL NO. 79273-1(11) H.B. NO. 22478

## REFERENCE DWGS.

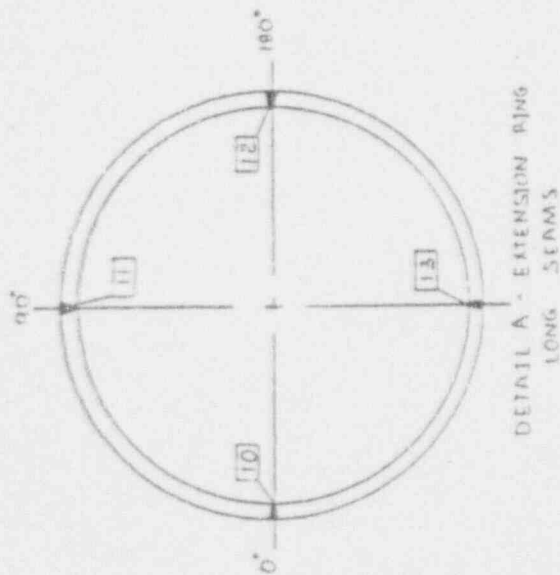
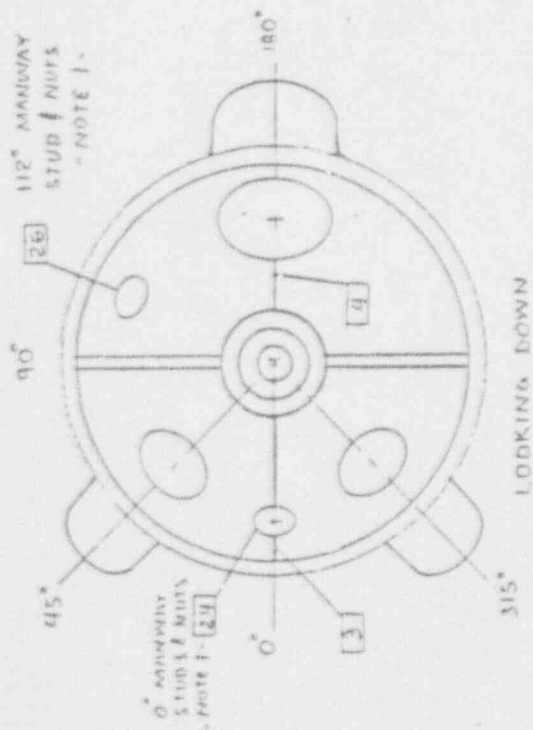
- N001-6.03-9 AND 10
- N001-6.03-53
- N001-6.03-259 AND 313



MANWAY STUDS

CHANNEL HEAD CROSS SECTION

|                             |                              |
|-----------------------------|------------------------------|
| REV D                       | UNITS 2 ZONE 3               |
| DESIGNED BY<br>D. B. HANSEN | TITLE<br>STEAM GENERATOR # 1 |
| CHECKED BY<br>TBS           |                              |

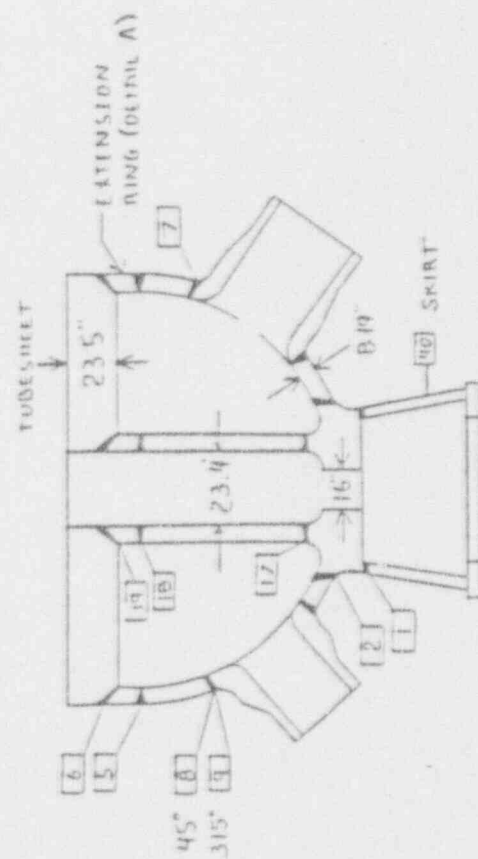
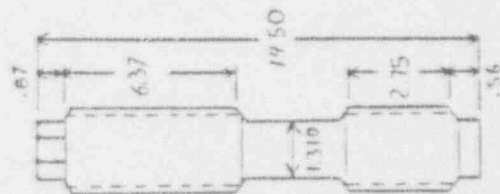


### NOTES:

- 1) STUD LOCATION IS "1" TDC GOING CW TO "20"
- 2) TUG NO. 2MRCCE01B SERIAL NO. 79273.2 (cc) N.B. NO. 22479

### REFERENCE DWGS.

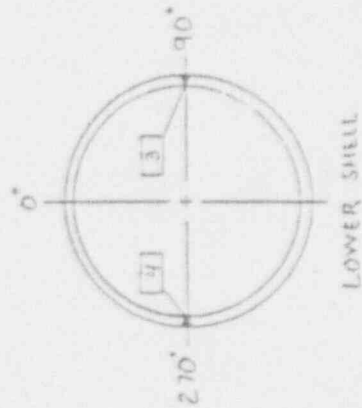
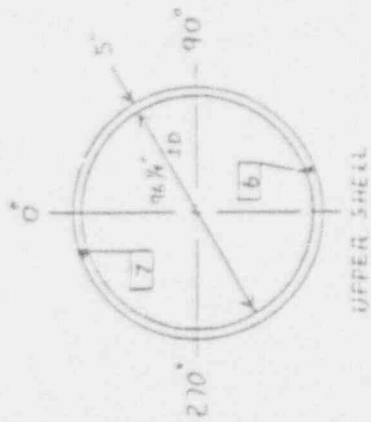
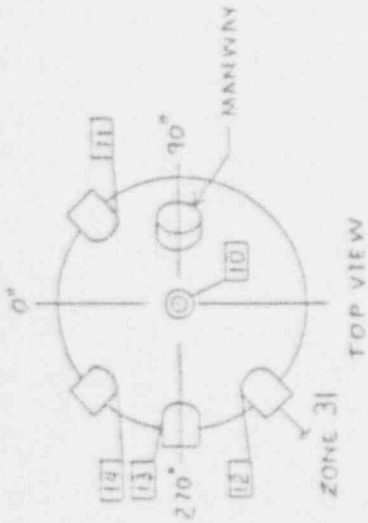
- N001-6.03-9 AND 10  
N001-6.03-53  
N001-6.03-259 AND 313



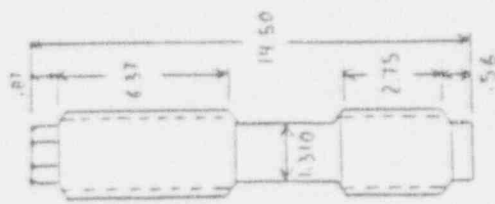
MANWAY STUDS

|                             |                              |               |
|-----------------------------|------------------------------|---------------|
| REV 0                       | DWG                          | UNIT 2 ZONE 4 |
| DESIGNED BY<br>D. B. HANSEN | TITLE<br>STEAM GENERATOR "2" |               |
| CHECKED BY<br>JOS           |                              |               |





MANWAY STUDS & NUTS  
-NOTE 1-



NOTES:

- 1) STUD LOCATION IS 6" TO CENTER GOING CW TO #20
- 2) TAG NO. 2MBR1302 (11)
- SERIAL NO. 72373
- N B NO. 22252

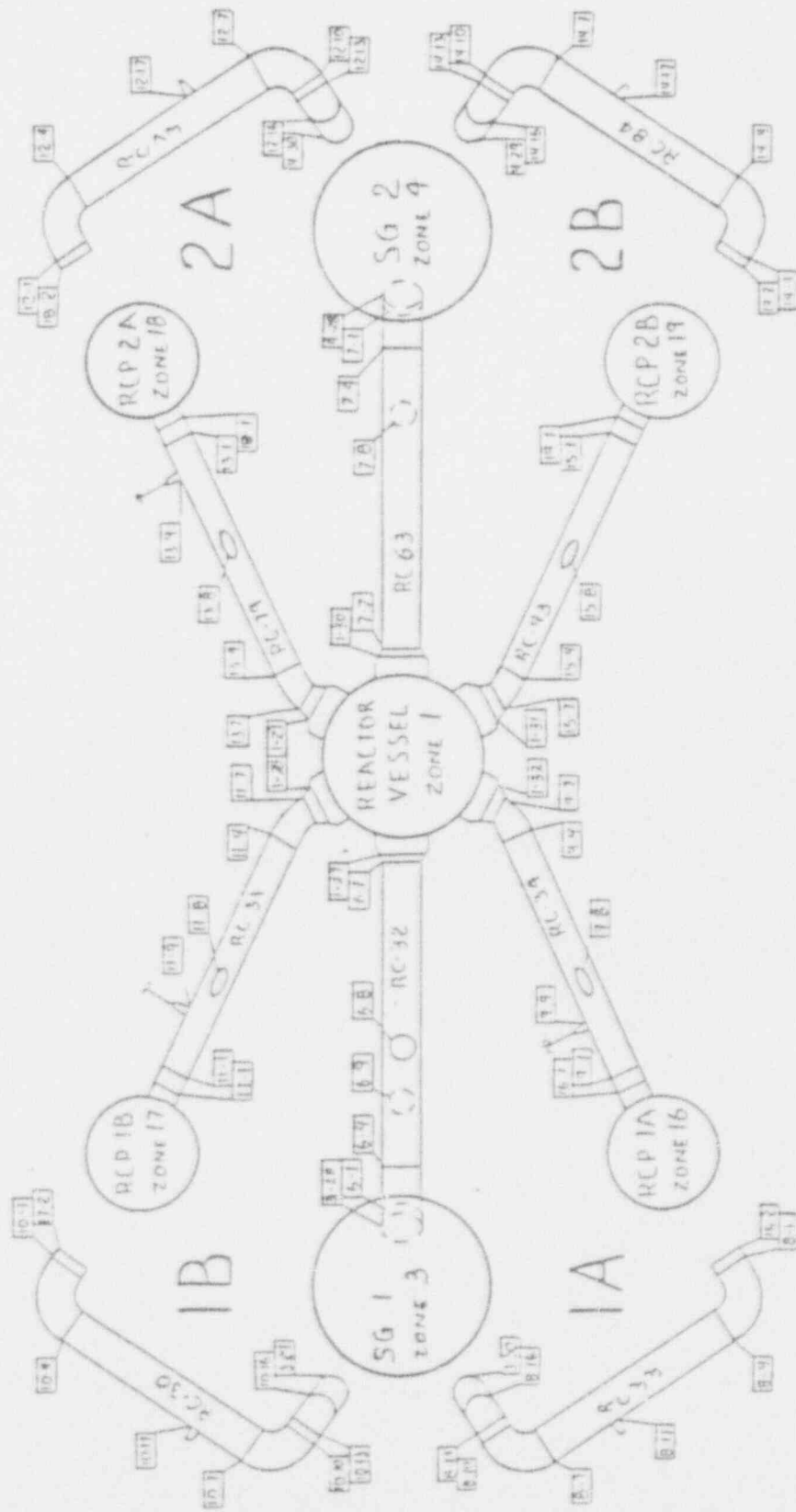
REFERENCE DWGS:

NOOT-600-6, 31 AND 20

|                             |                      |
|-----------------------------|----------------------|
| REV 0                       | UNIT #2 ZONE 5       |
| DESIGNED BY<br>O. B. HANSEN | TITLE<br>PRESSURIZER |
| CHECKED BY<br>JBS           |                      |

# NOTES:

- 1) PIPE LONGSEAMS AT 3:00 AND 9:00 POSITIONS
- 2) ELBOW LONGSEAMS AT LONG AND SHORT RADII.



## REFERENCE DRAWINGS:

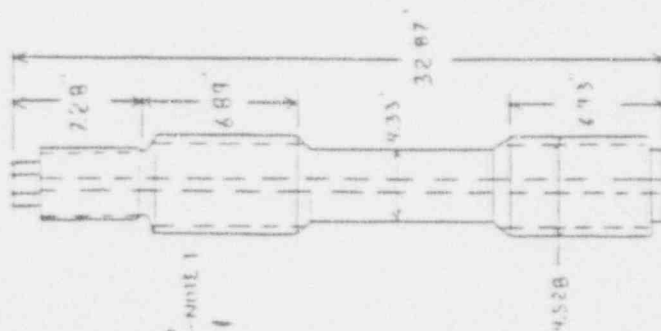
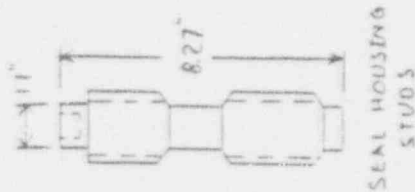
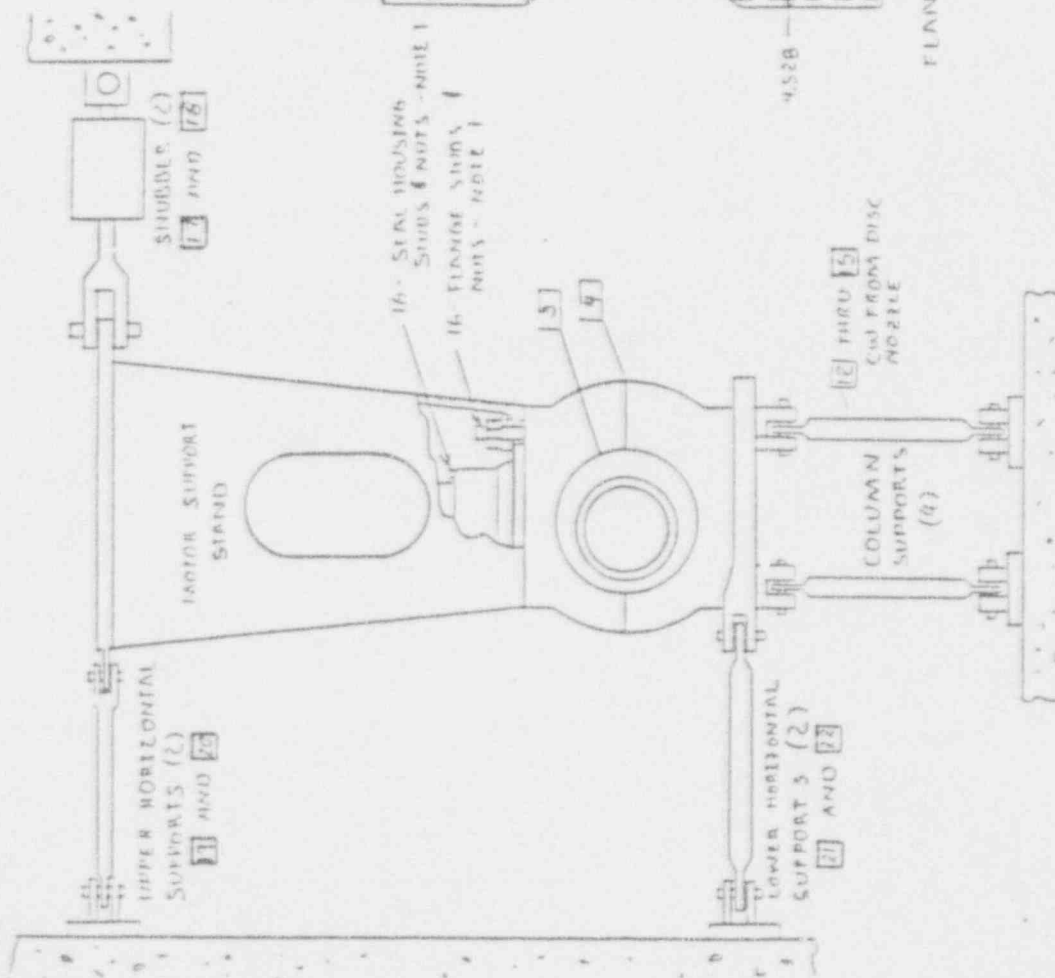
- 13-P-226-103
- NOO1-6-01-B3 AND 112
- NOO1-6-01-70 THRU 94
- NOO1-6-01-96 THRU 100

|                         |                |
|-------------------------|----------------|
| REV 0                   | UNIT '2 ZONE 6 |
| DRAWN BY<br>D.B. HANSEN | TITLE: RCS     |
| CHECKED BY<br>JBS       | PRIMARY PIPING |

# NOTES:

1) STUD LOCATIONS C.W. FROM DISCHARGE &

2) TAG NO. 2MRCEP01A  
SERIAL NO. 1110-1A (C-E)  
N.O. NO. 23457



## REFERENCE DWGS.

N001 - 6.02-01R  
N001 - 6.02-02D THRU 423  
N001 - 6.02-107 & 108

UNIT #2 ZONE 16

TITLE  
REACTOR COOLANT  
PUMP 1A

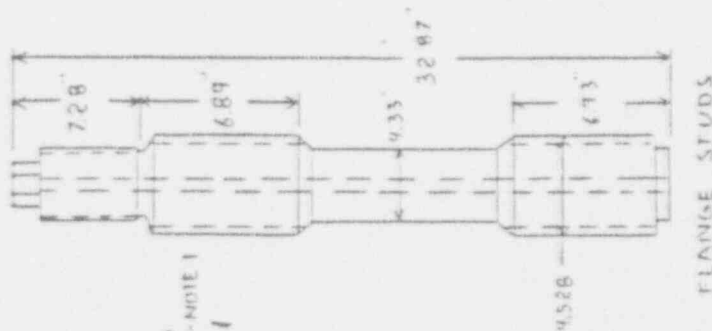
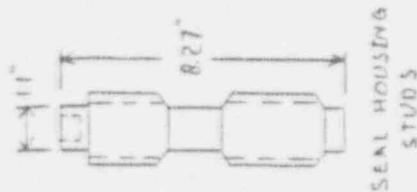
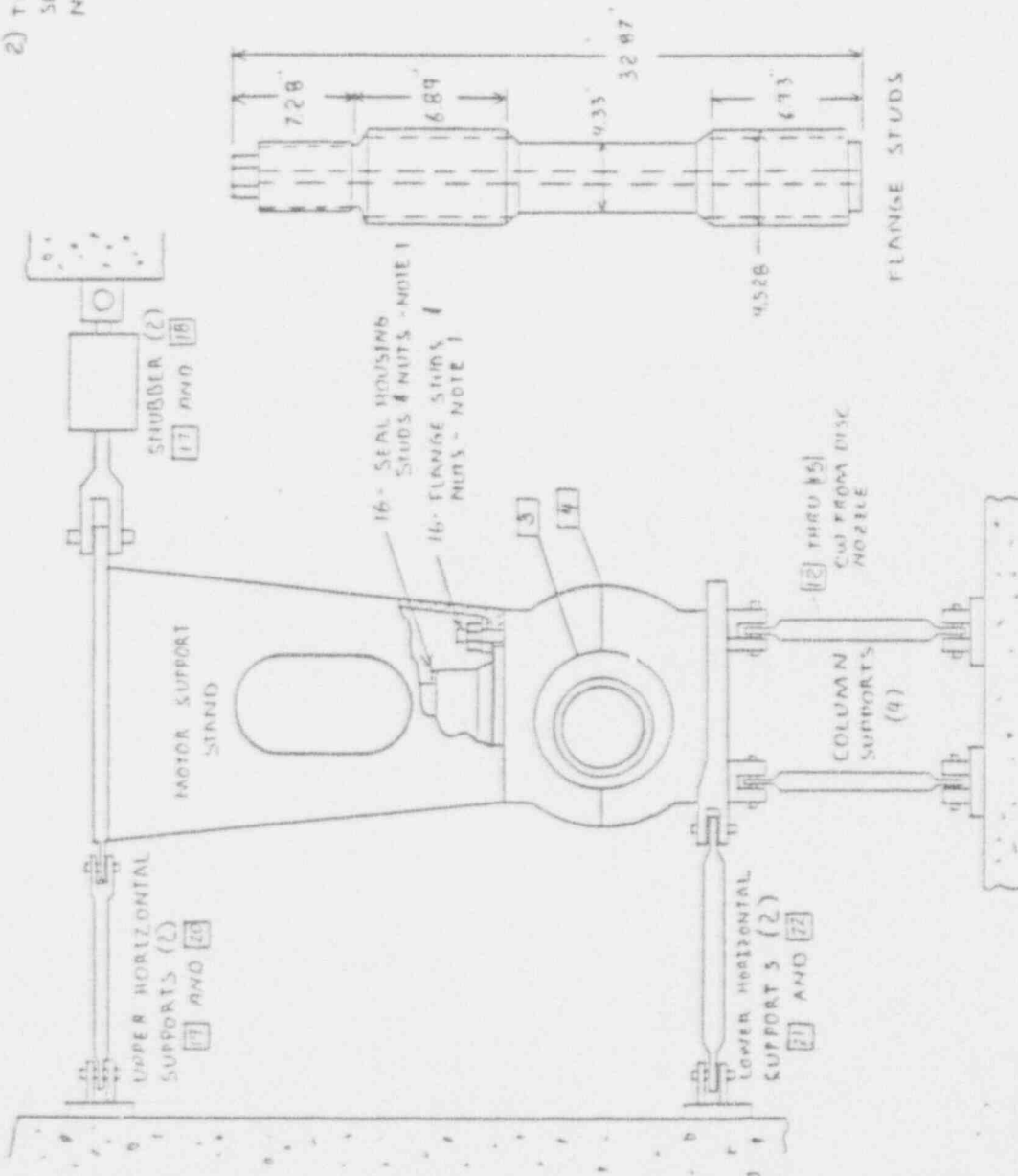
REV 0

DRAWN BY  
D. O. HANSEN  
CHECKED BY  
JBS

# NOTES:

1) STUD LOCATIONS C.W. FROM DISCHARGE 4

2) TAG NO. 2MRCEP00R  
SERIAL NO. 1110-18 (C-E)  
N.B. NO. 23458



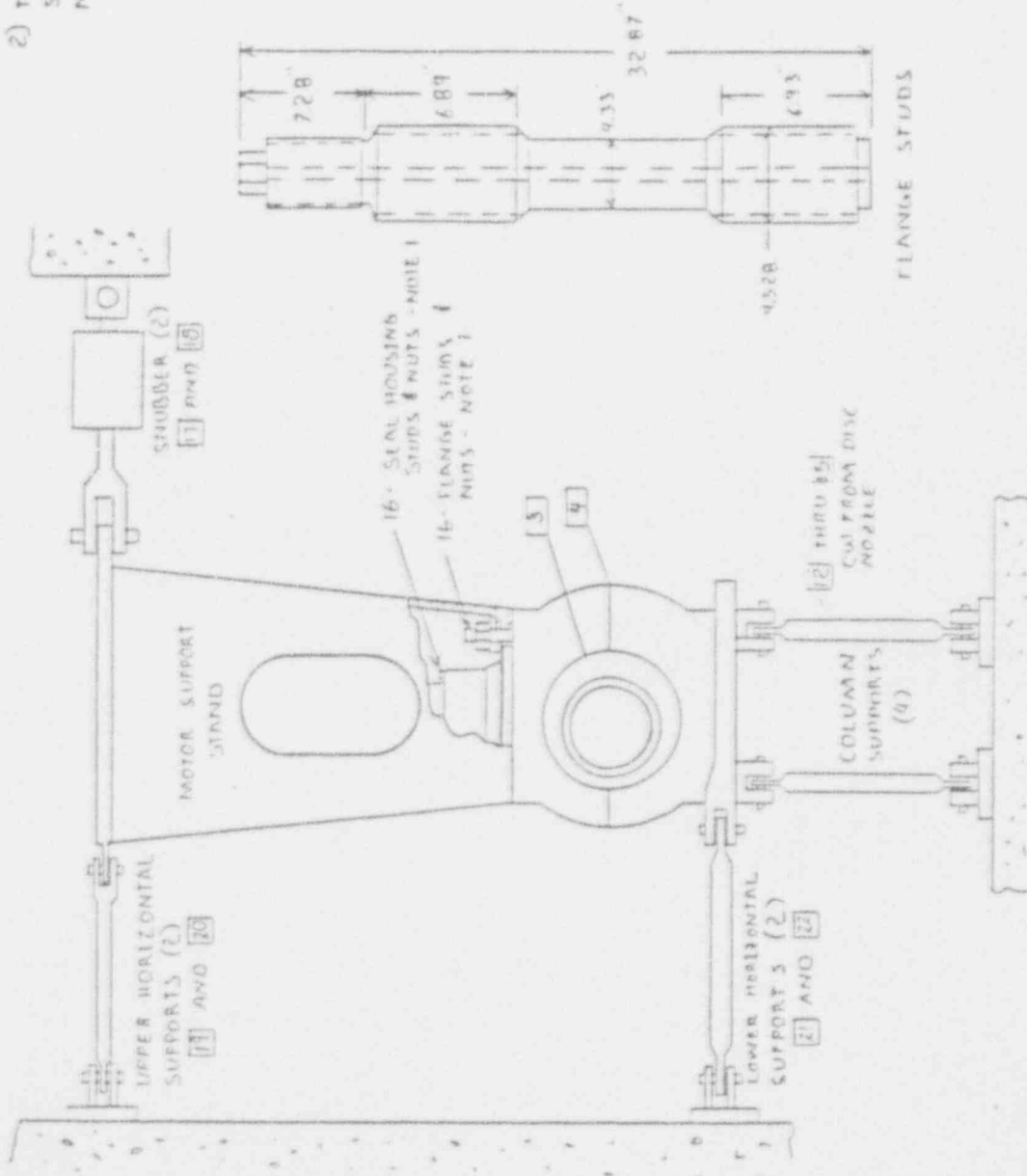
## REFERENCE DWGS

N001 - 6.02 - 41B  
N001 - 6.02 - 42D THRU 423  
N001 - 6.02 - 101 & 10B

|   |     |                                     |
|---|-----|-------------------------------------|
| REV 0   | DWG | UNIT #2 ZONE 17                     |
| DRAWN BY<br>D. S. HANSEN<br>CHECKED BY<br>JBS |     | TITLE<br>REACTOR COOLANT<br>PUMP 1B |

# NOTES:

- 1) STUD LOCATIONS C.W. FROM DISCHARGE  $\phi$
- 2) TAG NO. 2MRCEPDIC  
SERIAL NO. IID-2A (C-E)  
N.B. NO. 23459



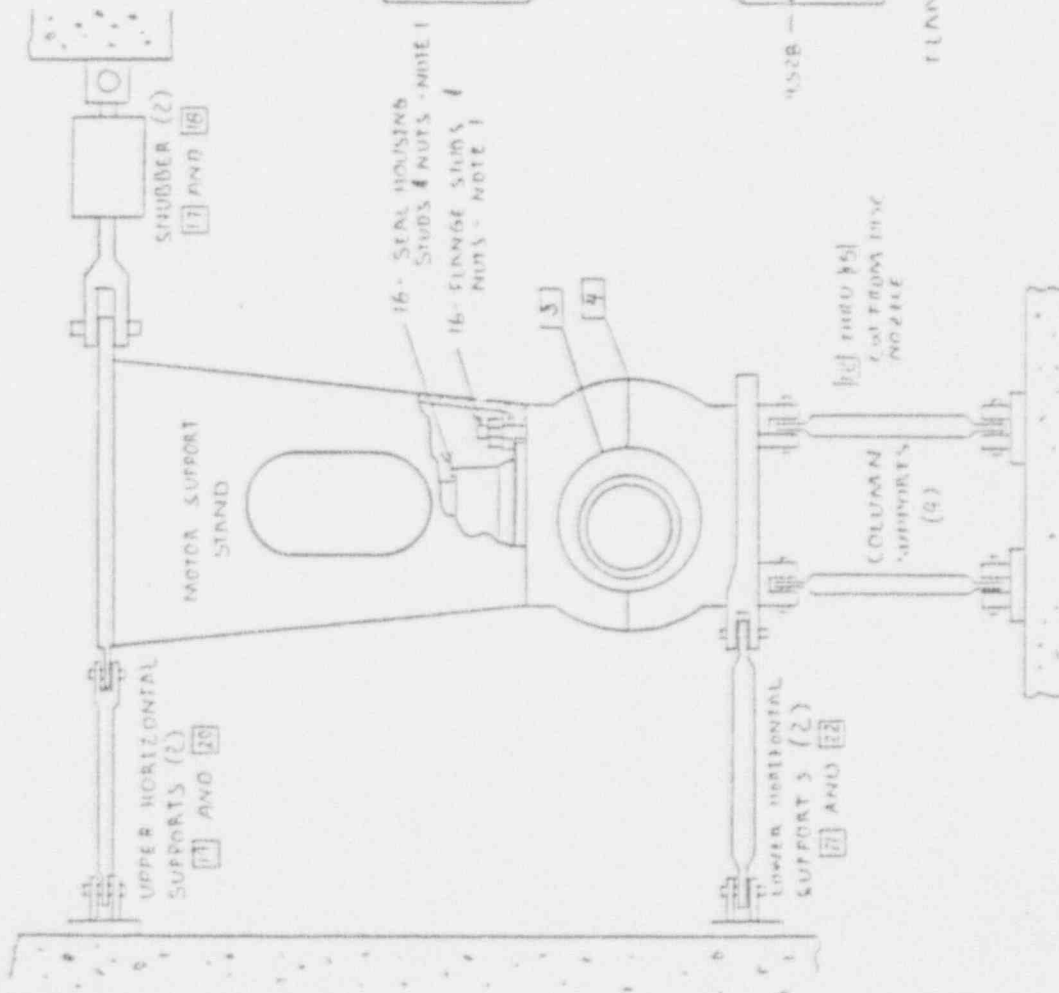
## REFERENCE DWGS

- 11001 - 6.02 - 418
- 11001 - 6.02 - 420 THRU #23
- 11001 - 6.02 - 101 & 105

|   |                                     |
|---|-------------------------------------|
| REV 0   | UNIT #2 ZONE 18                     |
| DRAWN BY<br>D. D. HENSEN<br>CHECKED BY<br>JBS | TITLE<br>REACTOR COOLANT<br>PUMP 2A |

# NOTES:

- 1) STUD LOCATIONS C.W. FROM DISCHARGE  $\phi$
- 2) TAG NO. 2MRCRPOID  
SERIAL NO. 1110-2B (C-E)  
N.O. NO. 23460



## REFERENCE DIMS

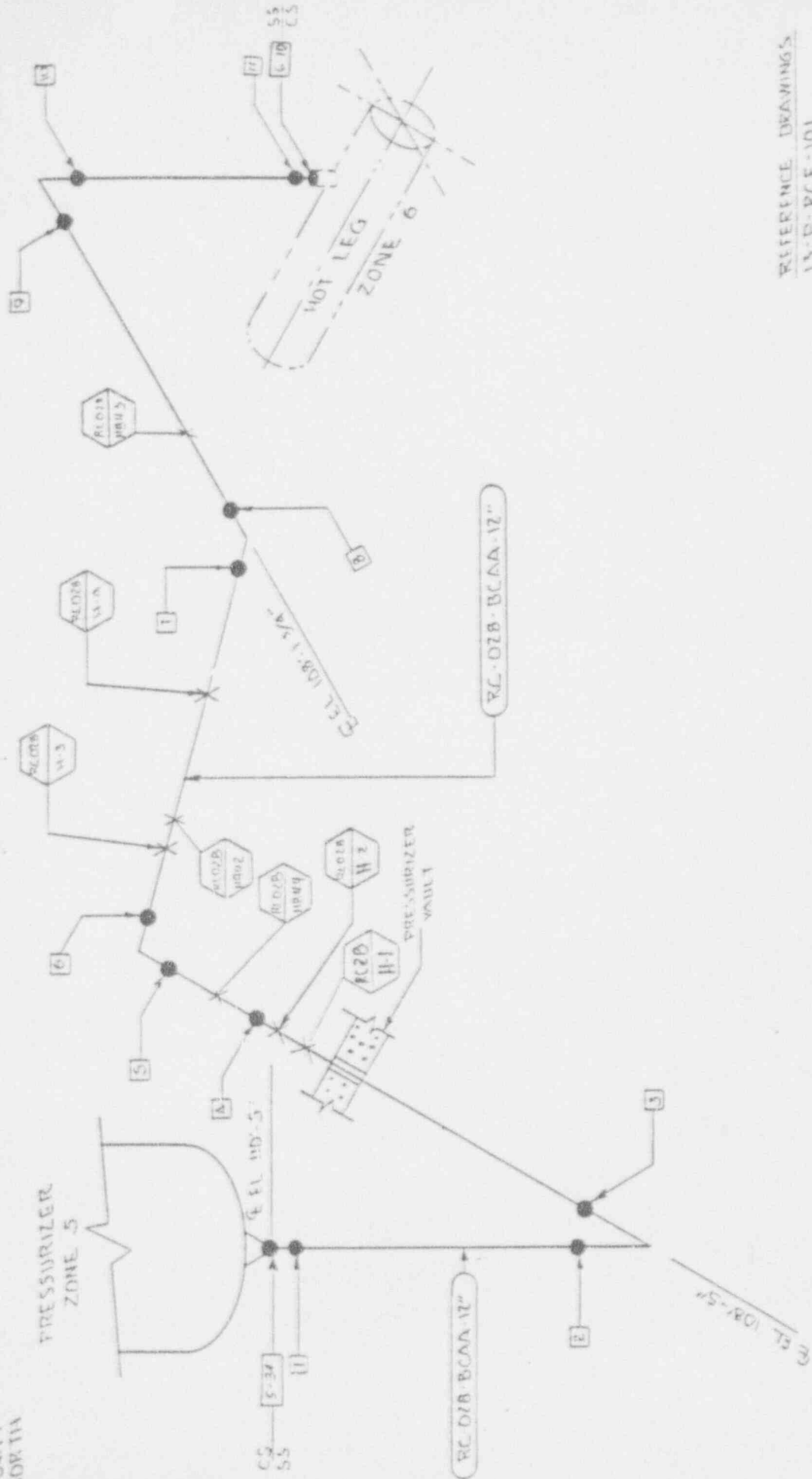
- 11001 - 6.02 - 414  
 11001 - 6.02 - 420 THRU 423  
 11001 - 6.02 - 101 & 105

REV 0

DRAWN BY  
 D. D. HENRIKSEN  
 CHECKED BY  
 JBS

UNIT #2 ZONE 19

TITLE  
 REACTOR COOLANT  
 PUMP 2B

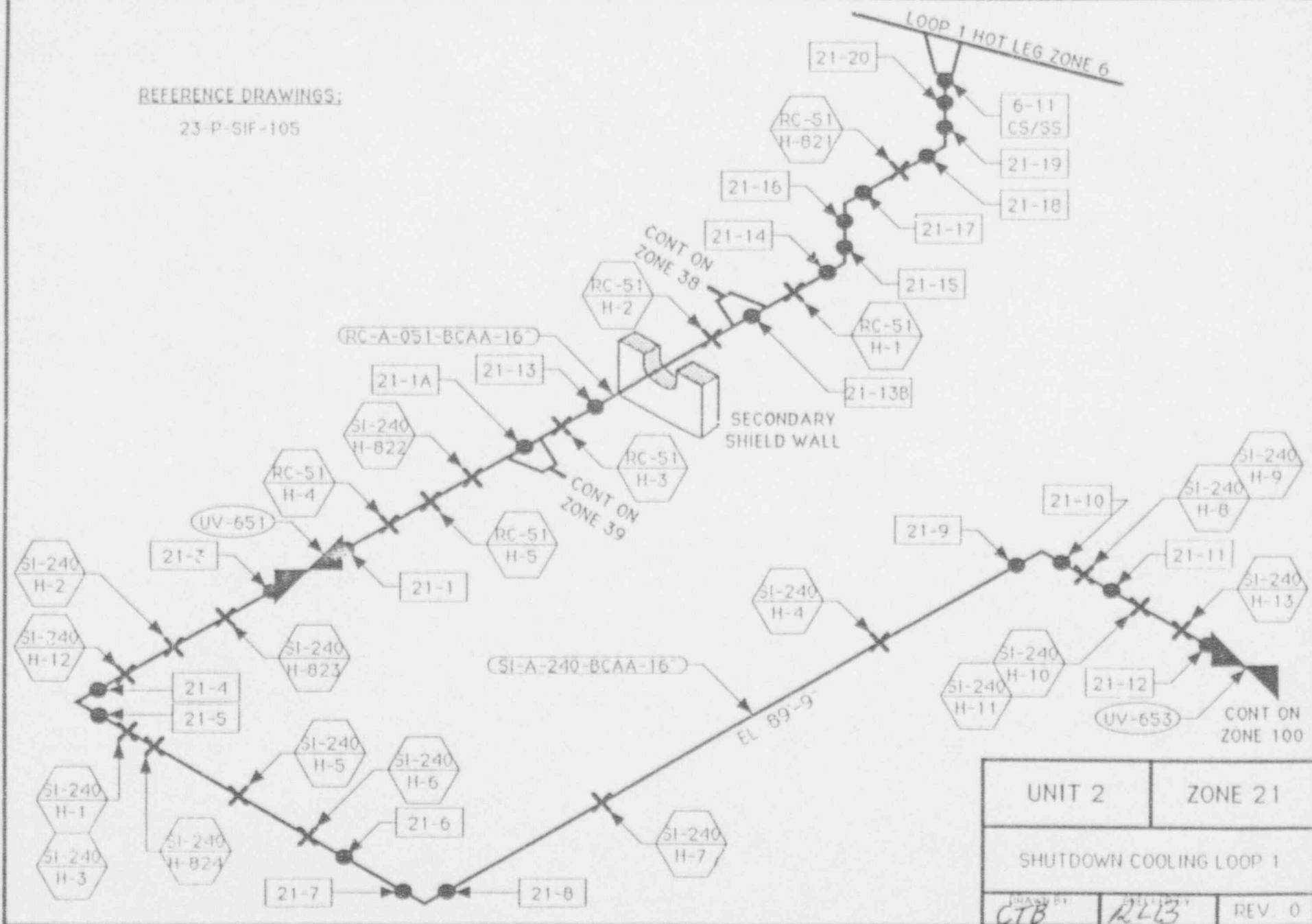


REFERENCE DRAWINGS  
13-P-RCF-101

| REV | DATE    | BY         | CHKD | APP'D | DESCRIPTION       |
|-----|---------|------------|------|-------|-------------------|
| 1   | 11/1/78 | J. L. ZONE | 20   |       | PRESSURIZER SURGE |
| 2   | 11/1/78 | J. L. ZONE | 20   |       | PRESSURIZER SURGE |

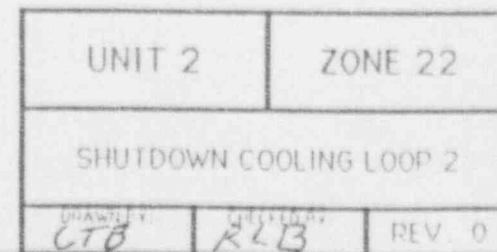
REFERENCE DRAWINGS:

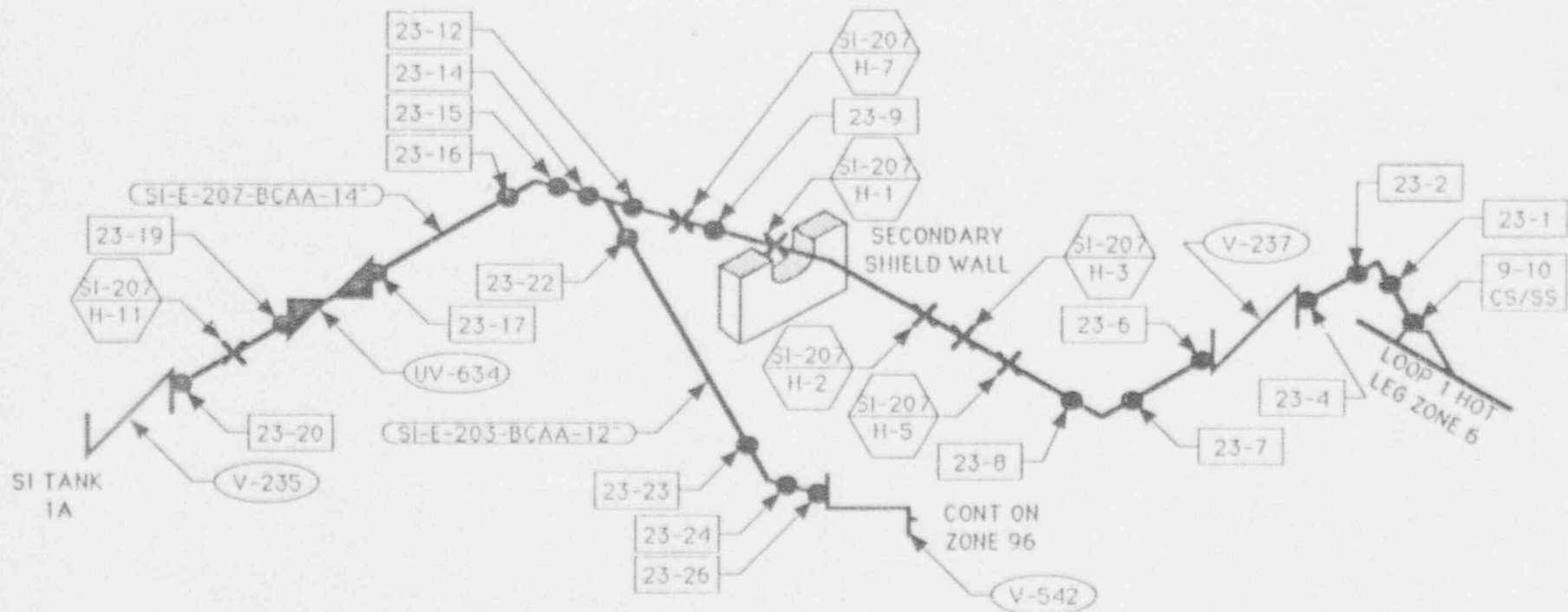
23-P-SIF-105





## 23-P-SH-105

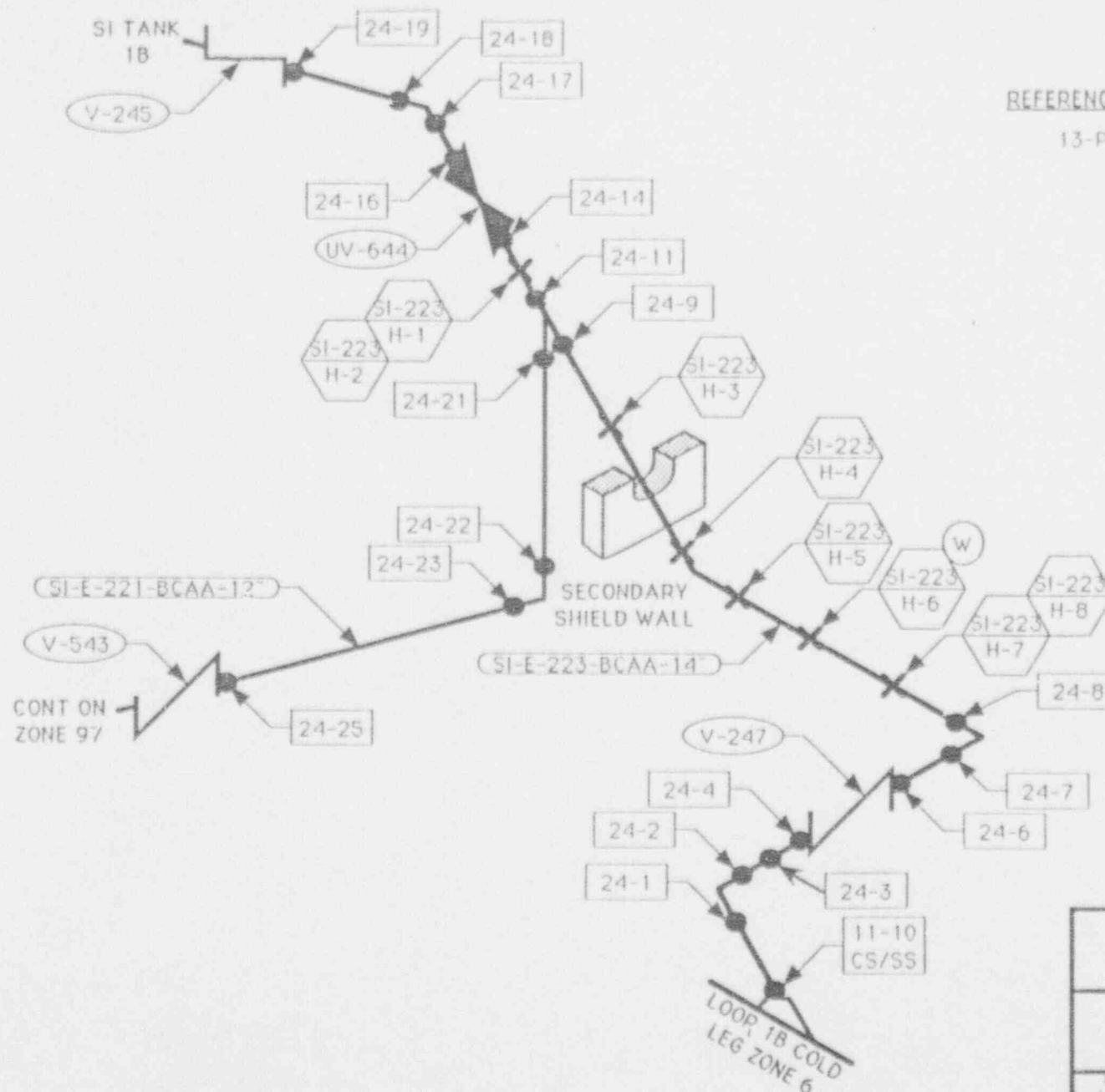




REFERENCE DRAWINGS:

13-P-SIF-103

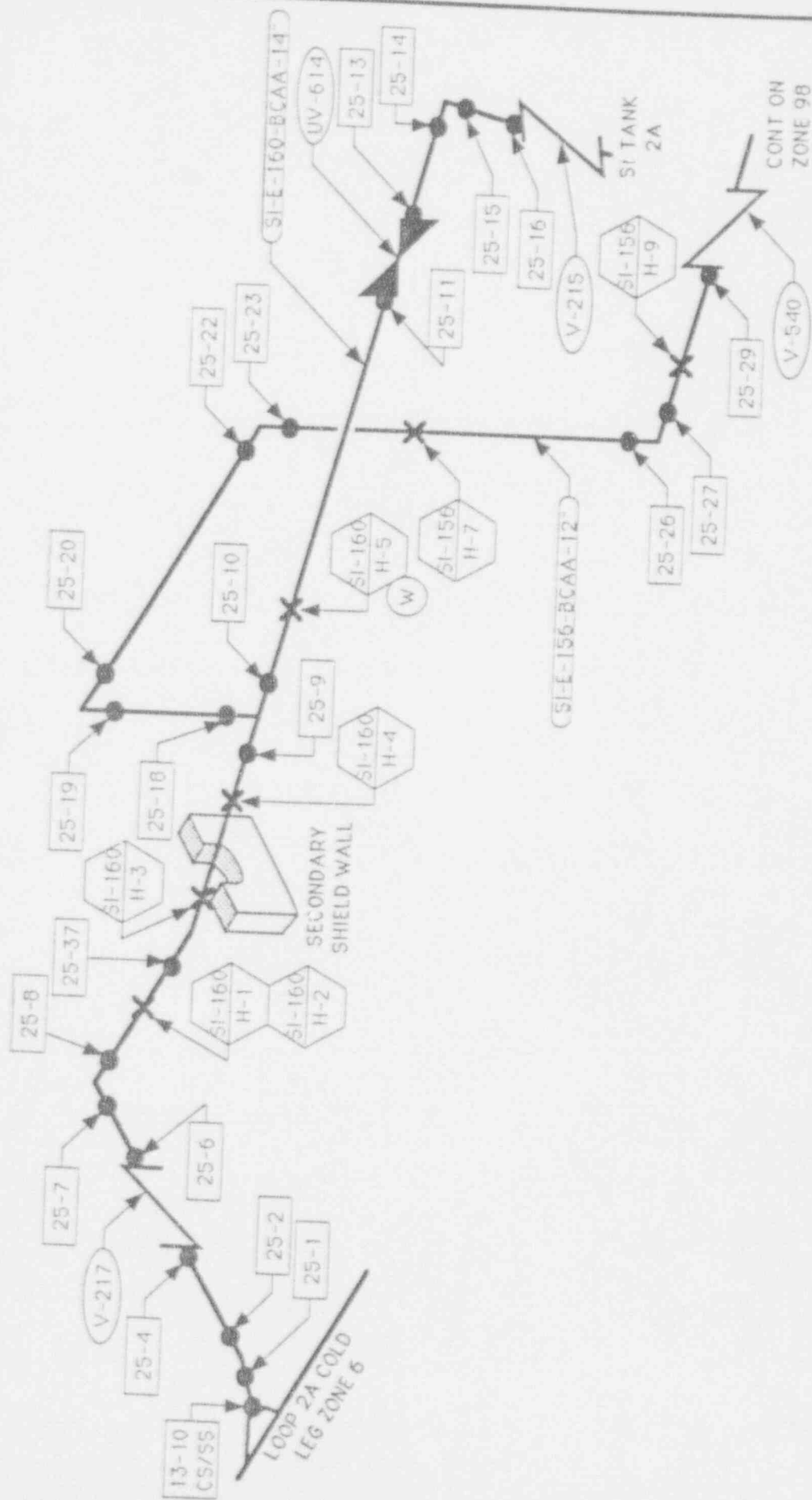
|                     |                   |
|---------------------|-------------------|
| UNIT 2              | ZONE 23           |
| SAFETY INJECTION 1A |                   |
| DRAWN BY<br>CTB     | CHECKED BY<br>RLB |
| REV. 0              |                   |



REFERENCE DRAWINGS:

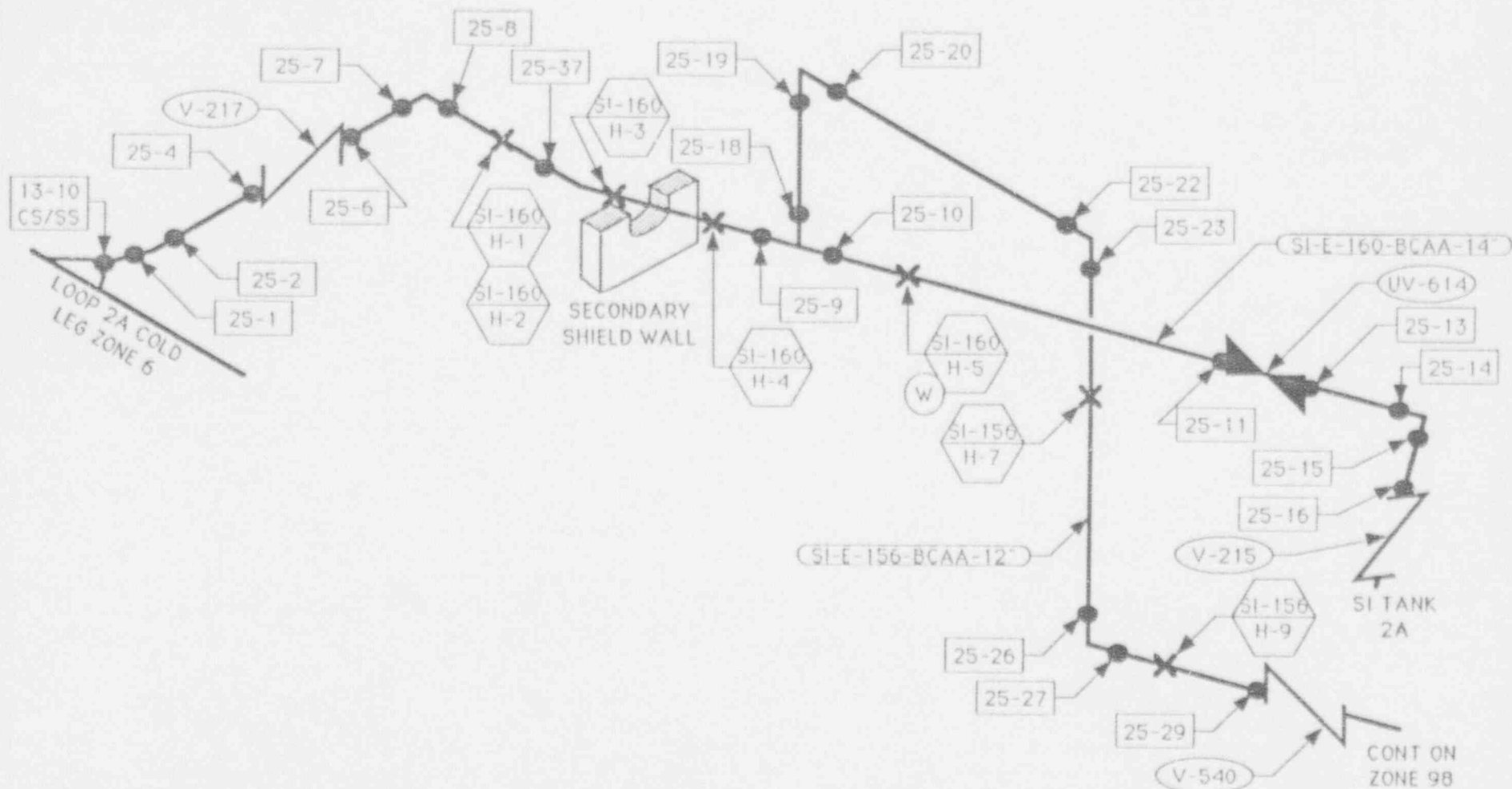
13-P-SIF-103

|                     |                    |
|---------------------|--------------------|
| UNIT 2              | ZONE 24            |
| SAFETY INJECTION 1B |                    |
| DRAWN BY:<br>CTB    | CHECKED BY:<br>RLB |
| REV. 0              |                    |



REFERENCE DRAWINGS:  
13-P-SIF-136

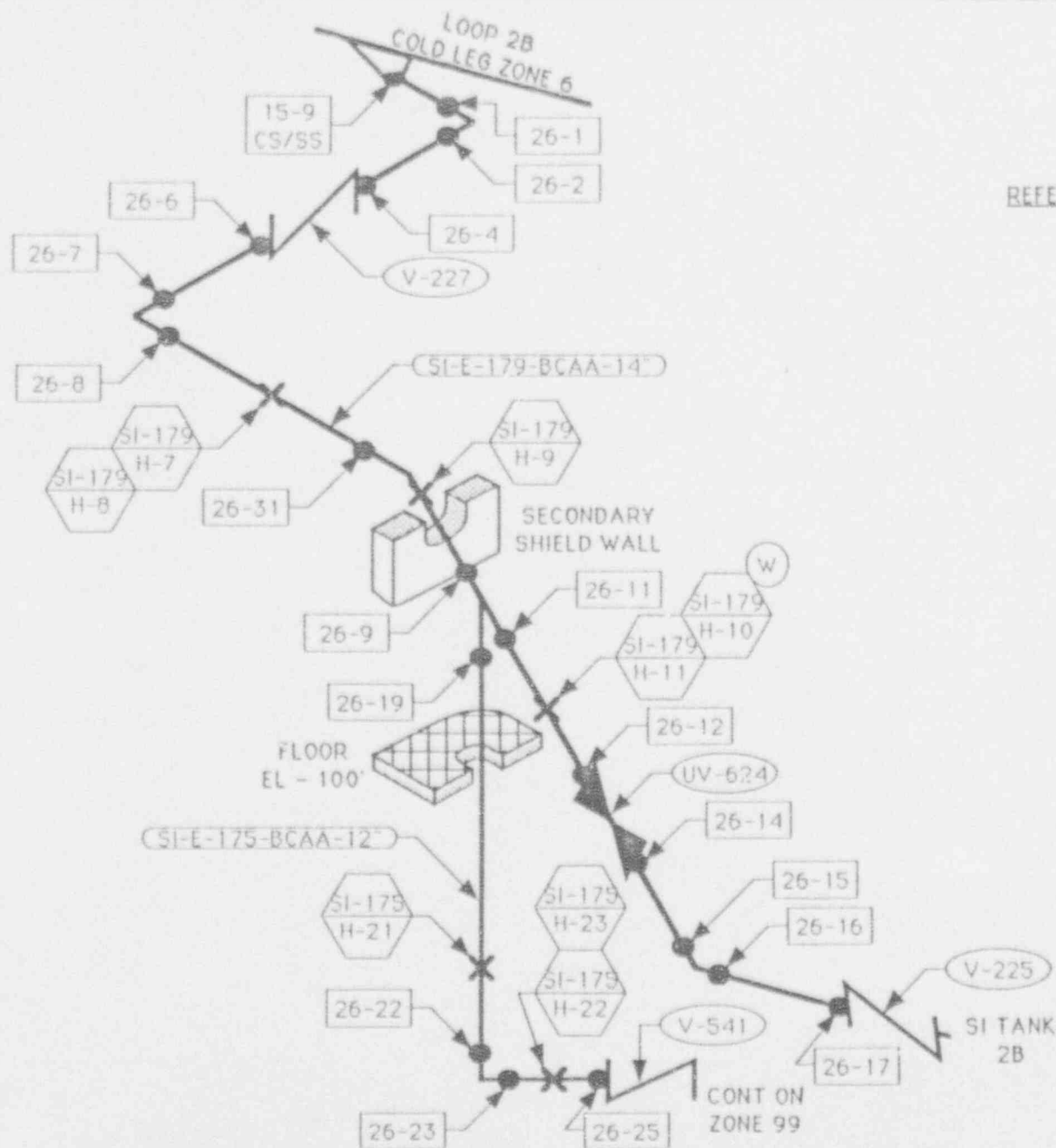
|                     |         |
|---------------------|---------|
| UNIT 2              | ZONE 25 |
| SAFETY INJECTION 2A |         |
| DATE: 12/2/83       | REV: 0  |



REFERENCE DRAWINGS:

13-P-SIF-136

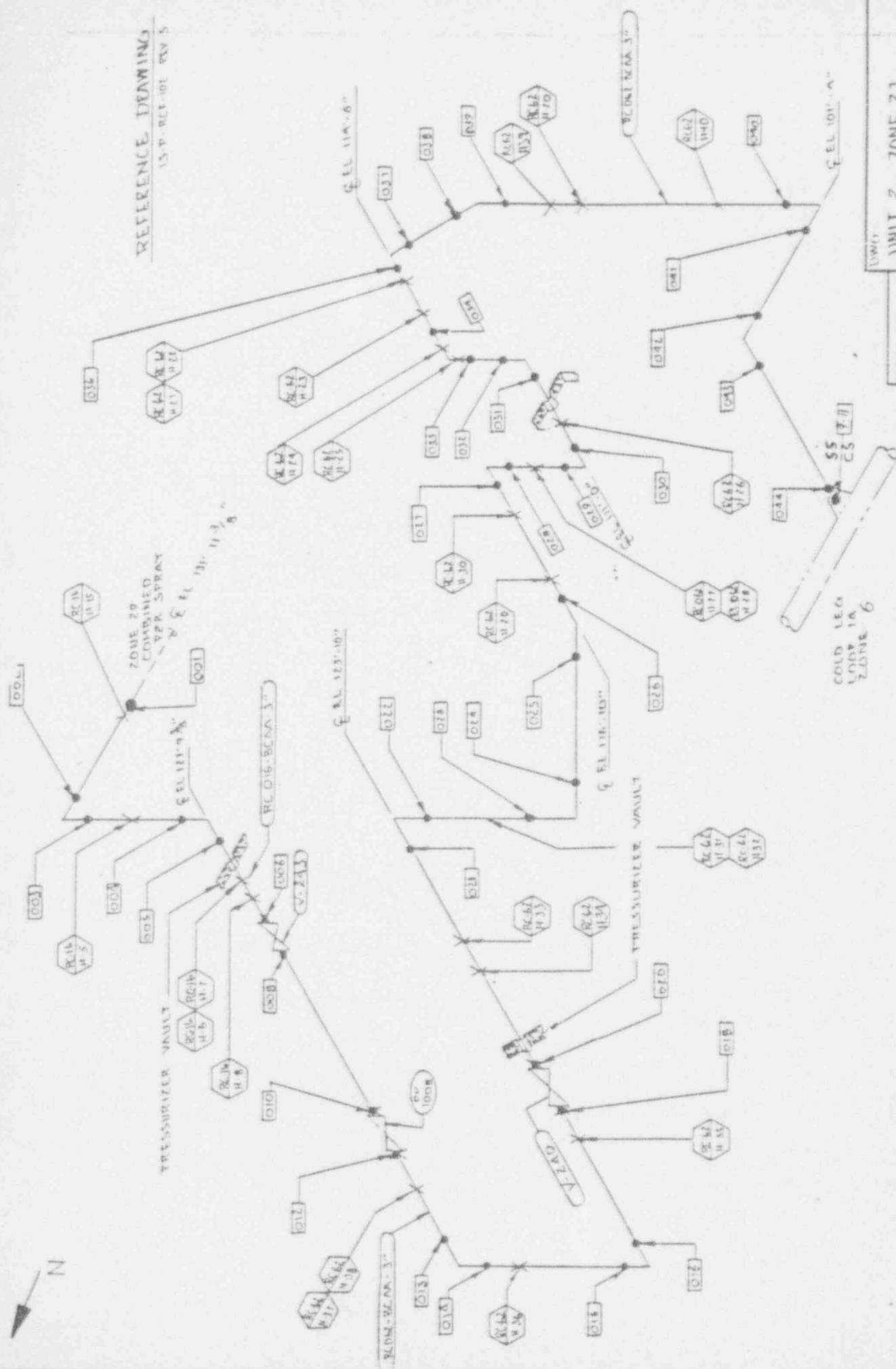
|                     |                 |
|---------------------|-----------------|
| UNIT 2              | ZONE 25         |
| SAFETY INJECTION 2A |                 |
| Drawn by<br>CTB     | Rev. by<br>JCLB |
| REV. 0              |                 |



REFERENCE DRAWINGS:

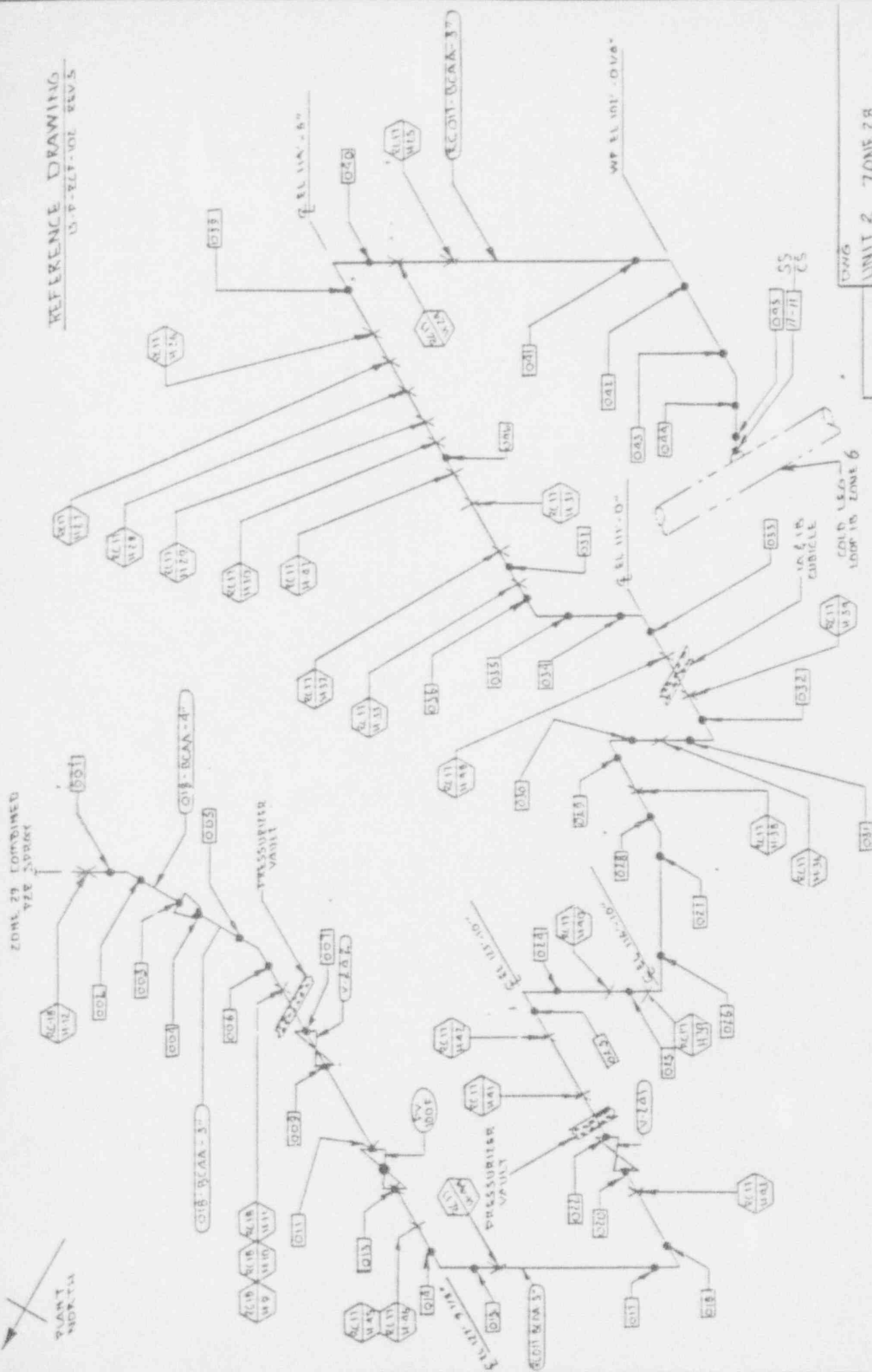
13-P-SIF-136

|                     |                   |
|---------------------|-------------------|
| UNIT 2              | ZONE 26           |
| SAFETY INJECTION 2B |                   |
| DRAWN BY<br>CTB     | CHECKED BY<br>RLB |
| REV 0               |                   |



|                       |                      |       |
|-----------------------|----------------------|-------|
| REV. 0                | UNIT 2 ZONE 21       | UNITS |
| QUAN. FY.<br>3 MOILED | TITLE                |       |
| CHECKED BY:<br>JRS    | PRESSURIZER SPRAY 1A |       |



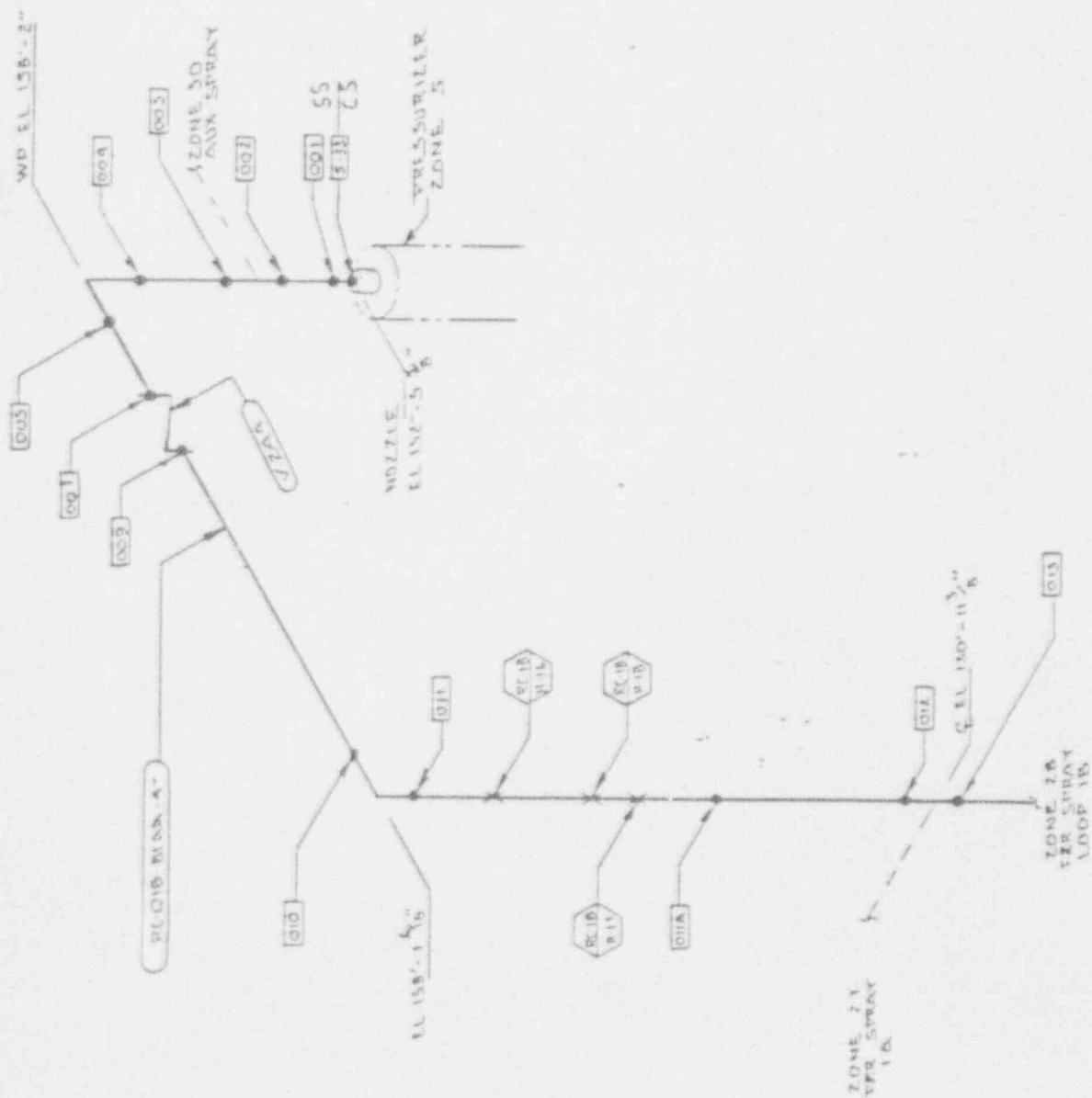
$$5 \wedge 9 \# \quad 70 \wedge - 47 \# - 4 \cdot 5 \wedge$$


UNIT 2 ZONE 28

02/04/2019

785





# REFERENCE DRAWING

15-P-RCE-101-REV 5

DWG

UNIT 2 ZONE 29

TITLE

COMBINED PRESSURIZER  
SPRAY

REV: 0

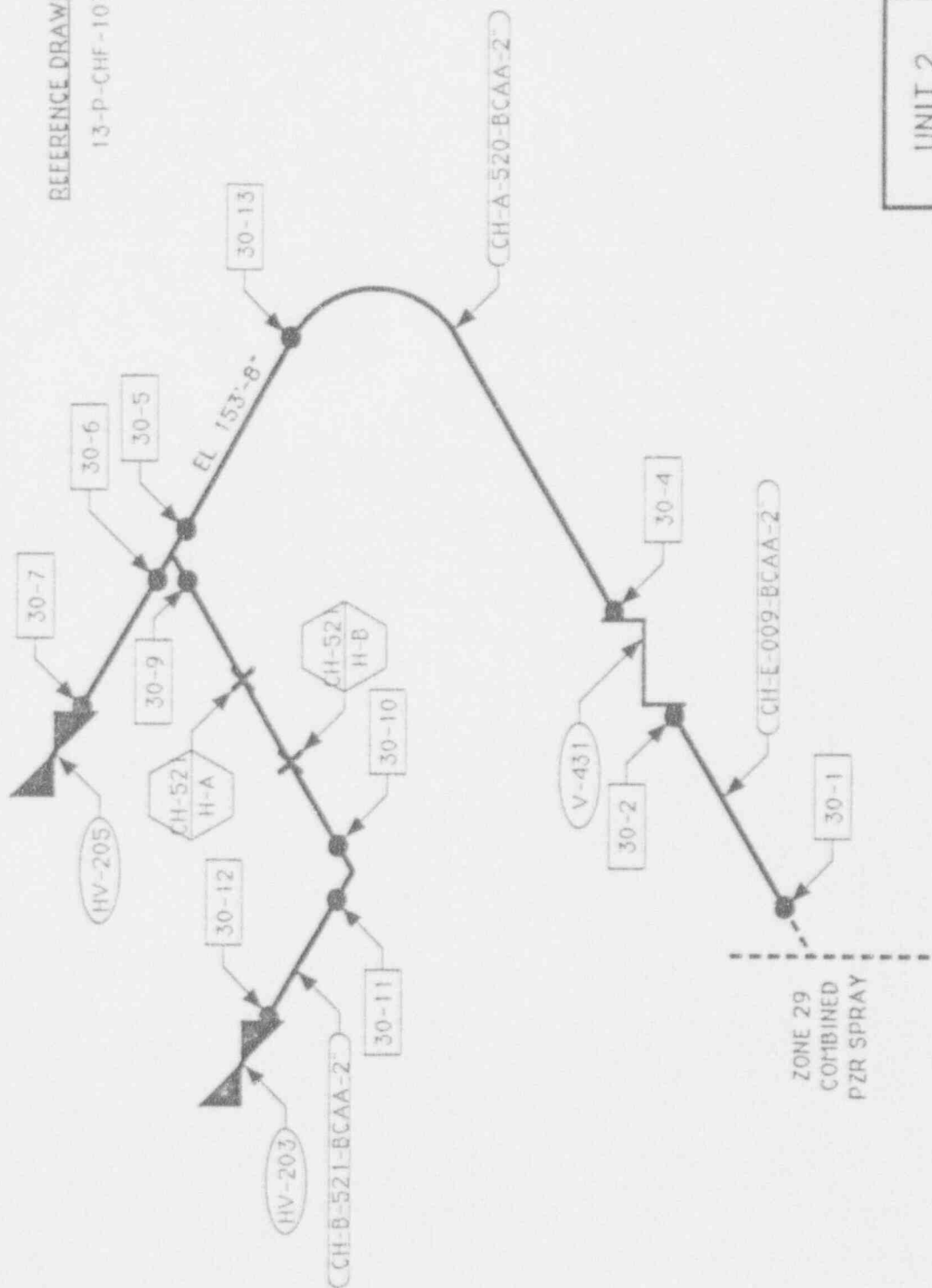
DRAWN BY:

J. ADLER

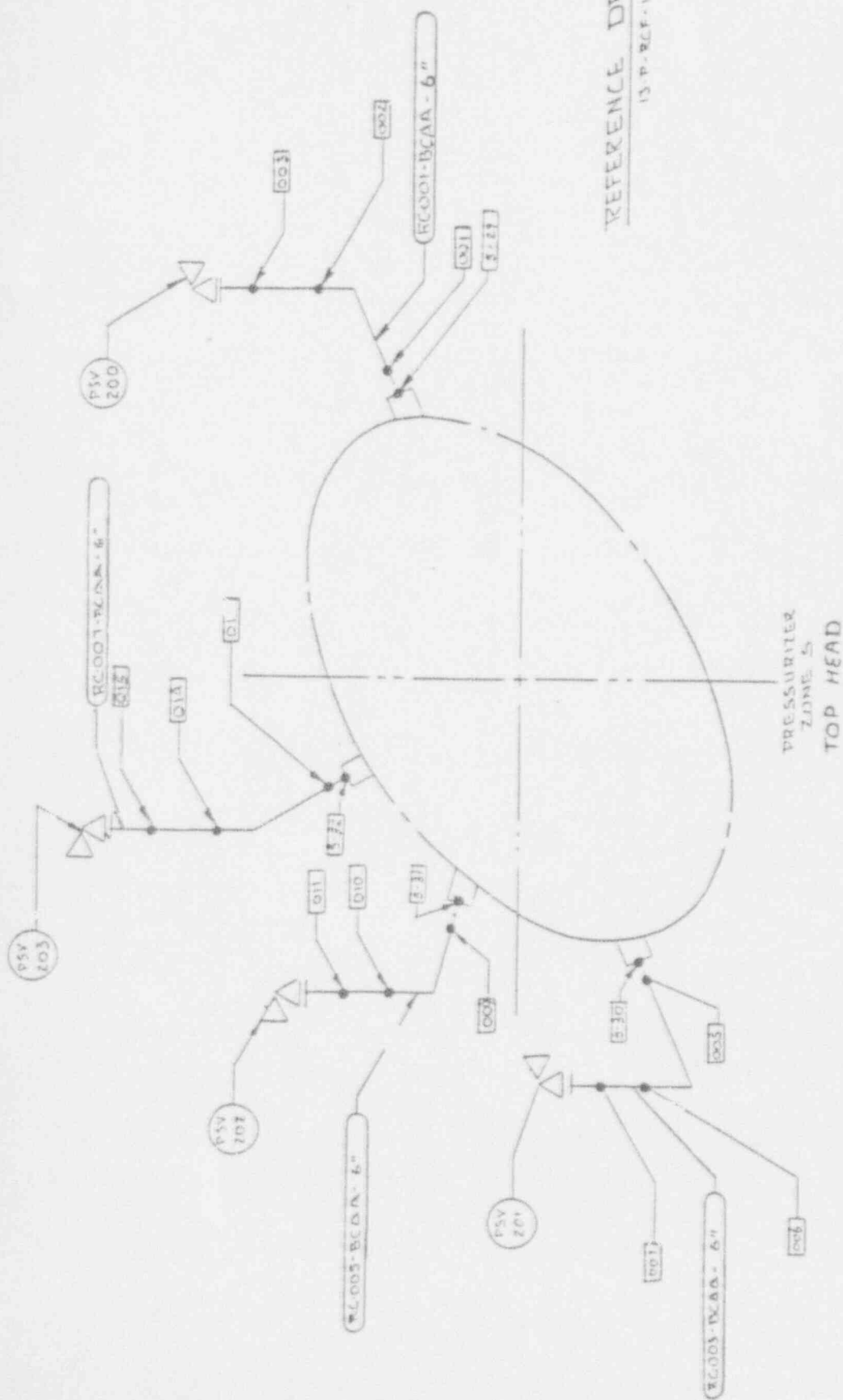
CHECKED BY:

JBS

REFERENCE DRAWINGS:  
13-P-CHF-107



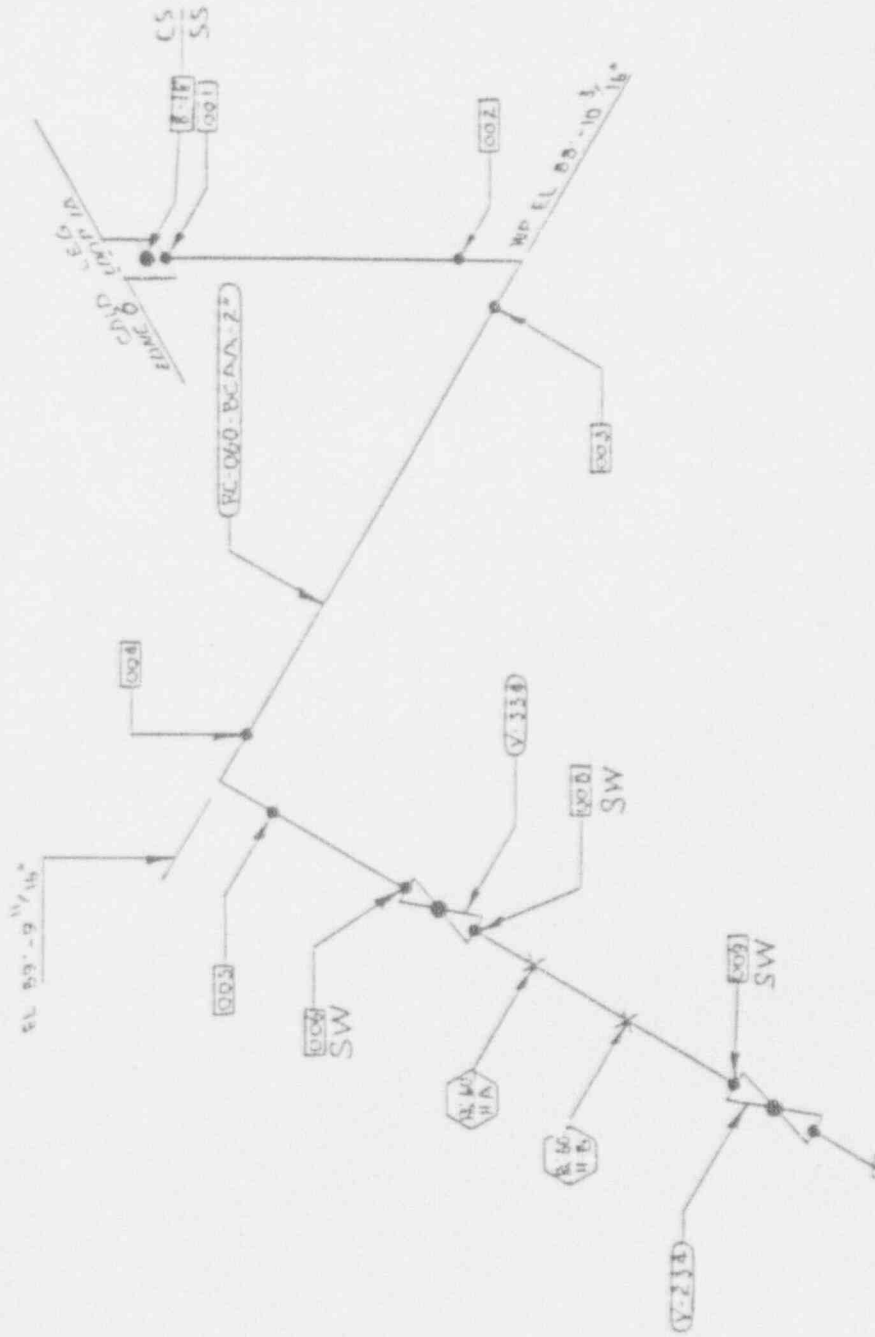
|                       |                      |
|-----------------------|----------------------|
| UNIT 2                | ZONE 30              |
| AUX PRESSURIZER SPRAY |                      |
| DRAWN BY:<br>CTB      | CHECKED BY:<br>12613 |
|                       | REV. 0               |



REFERENCE DRAWING  
13-P-REF-11A REV A

NOTE:  
B-2" X 13 1/2" STUDS / FLANGE

|                       |                               |
|-----------------------|-------------------------------|
| REV. 0                | UNIT 2 ZONE 51                |
| DRAWN BY:<br>J. MOORE | TITLE<br>PRESSURIZER SAFETIES |
| CHECKED BY:<br>JBS    |                               |



REFERENCE DRAWING  
13-P-CMT-110 REV 5

NOTE:  
SW = SOCKET WELD

DWG.

UNIT 2 ZONE 52

DATE

DRAIN LINE 1A

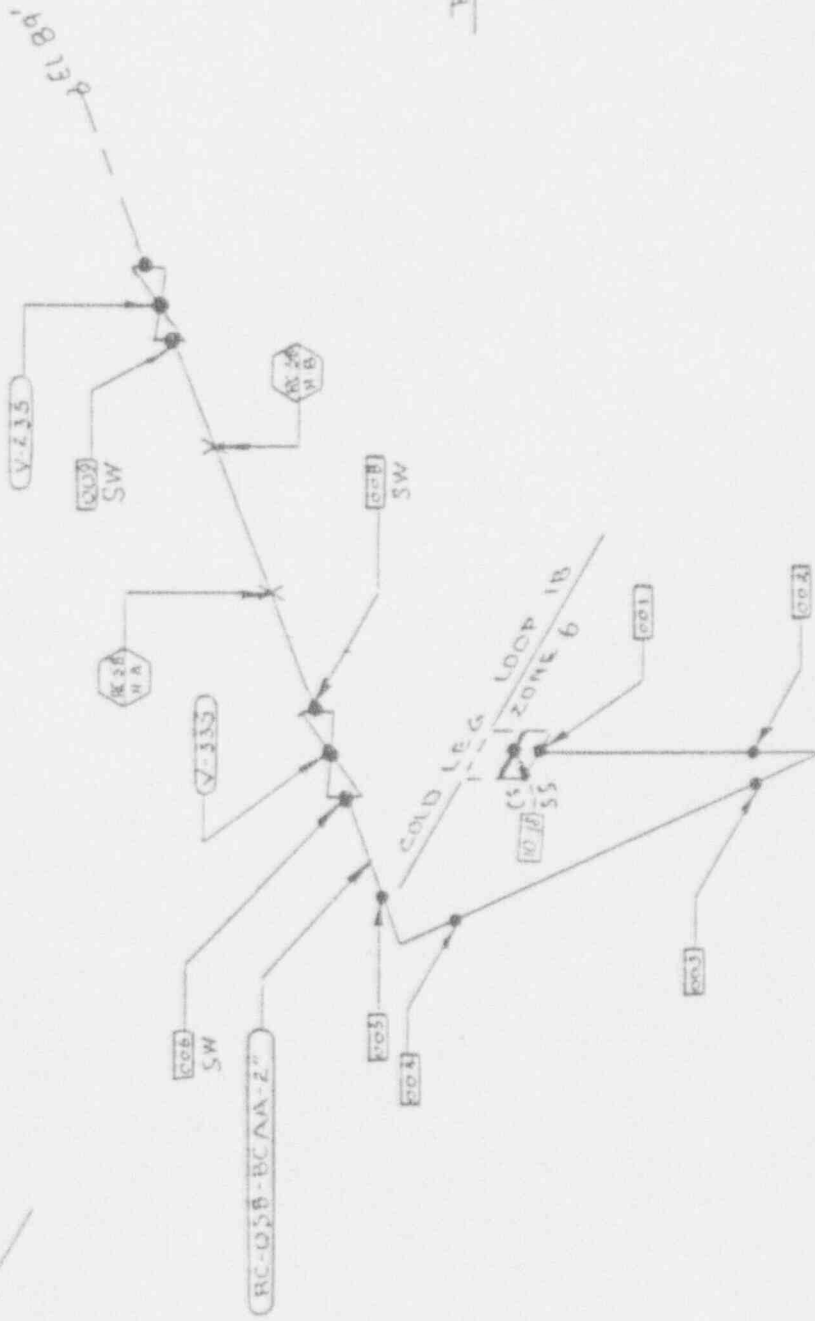
REV. D

DRAWN BY:

3-MILLER

CHECKED BY:

JBS



REFERENCE DRAWING  
15-P-LINE-110 REV 5

NOTE:  
SW: SOCKET WELD

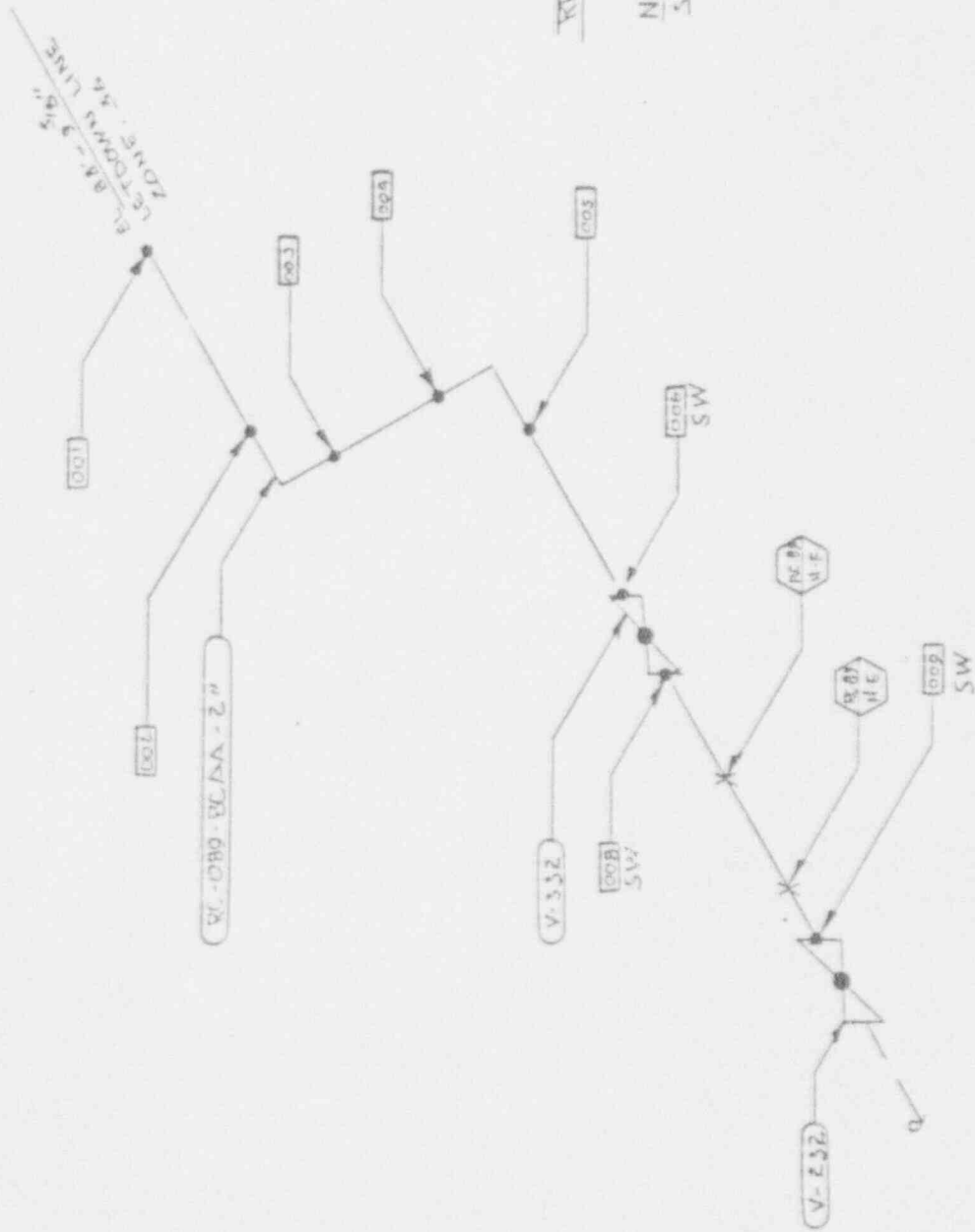
|                     |                      |
|---------------------|----------------------|
| REV: 0              | DWG: UNIT 2 ZONE 33  |
| DRAWN BY: J. HOLLER | TITLE: DRAIN LINE 1B |
| CHECKED BY: JBS     |                      |



# REFERENCE DRAWING

15 P-CME-110 REV 3

|                     |                      |
|---------------------|----------------------|
| REV. D              | UNIT 2 ZONE 3A       |
| DRAWN BY: J. HOLLER | TITLE: DRAIN LINE 2A |
| CHECKED BY: JBS     |                      |

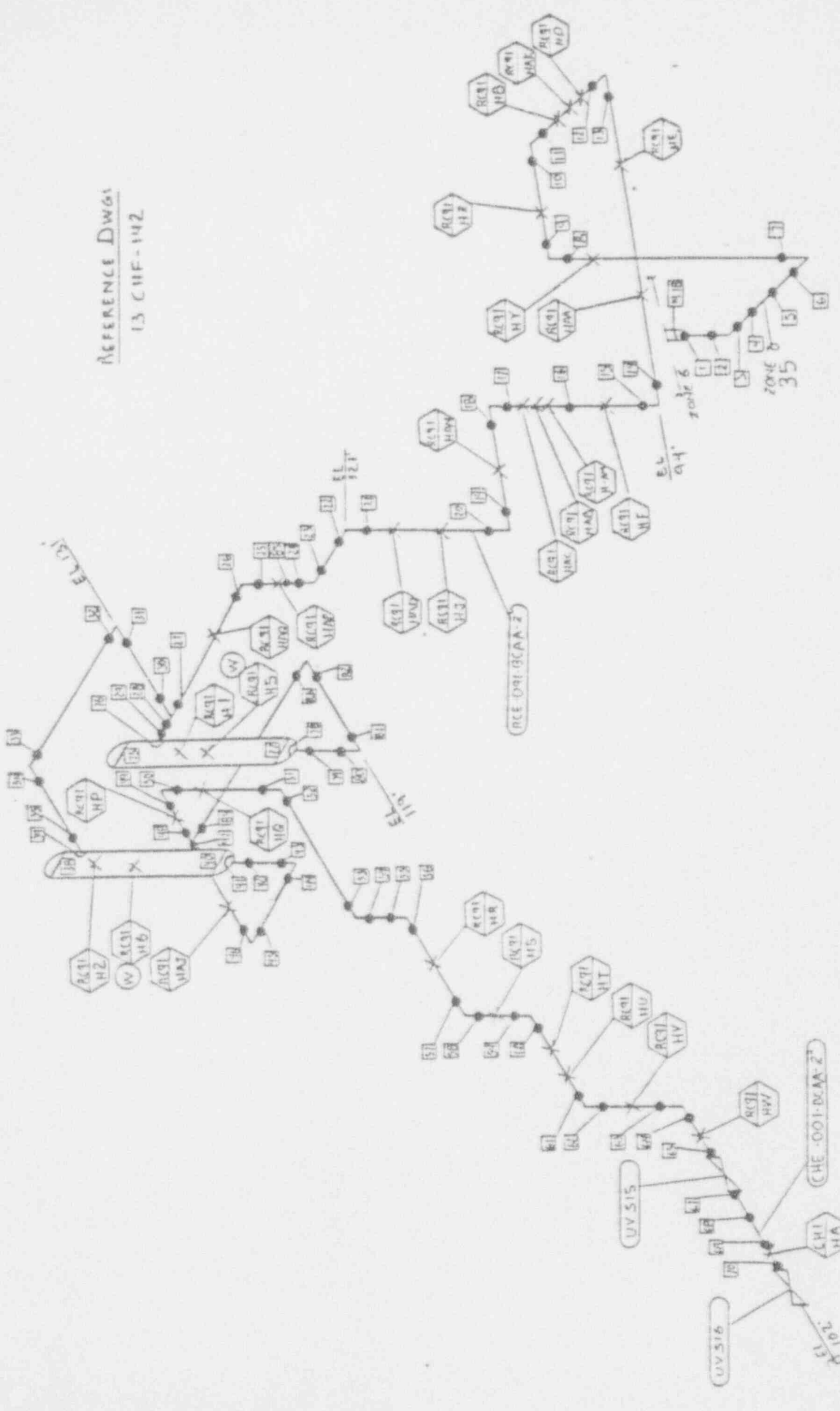


REFERENCE DRAWING  
15 P-CMS-11D REV 3

NOTE:  
SW : SOCKET WELD

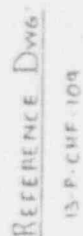
|               |               |
|---------------|---------------|
| REV D         | DWG           |
| UNIT 2        | UNIT 2        |
| ZONE 55       | ZONE 55       |
| TITLE         | TITLE         |
| DRAIN LINE 2B | DRAIN LINE 2B |
| CHECKED BY    | CHECKED BY    |
| JB5           | JB5           |

REFERENCE DWG  
13 CHE-142



|                           |                        |
|---------------------------|------------------------|
| REV 0                     | UNIT 2 ZONE 36         |
| DRAWN BY:<br>D. D. HANSEN | TITLE:<br>LETDOWN LINE |
| CHECKED BY:<br>JBS        |                        |





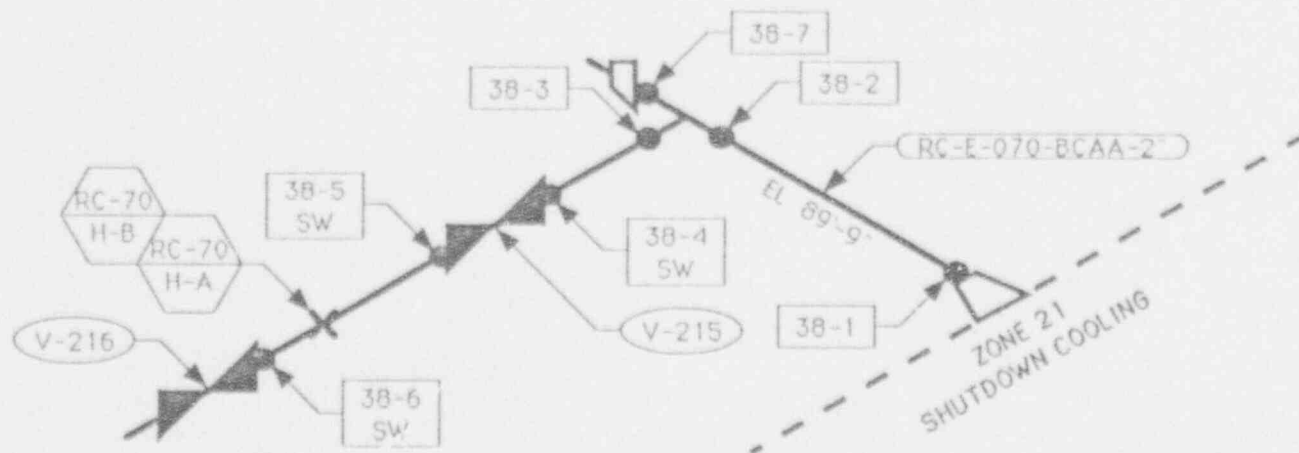
|                        |                         |
|------------------------|-------------------------|
| REV 0                  | UNIT # 2 ZONE 37        |
| DRAWN BY<br>O B HANSEN | TITLE:<br>CHARGING LINE |
| CHECKED BY<br>JBS      |                         |

REFERENCE DRAWINGS:

23-P-SIF-105

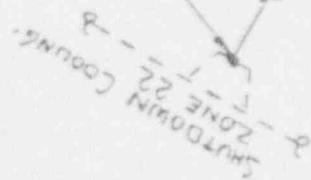
NOTE:

SW = SOCKET WELD



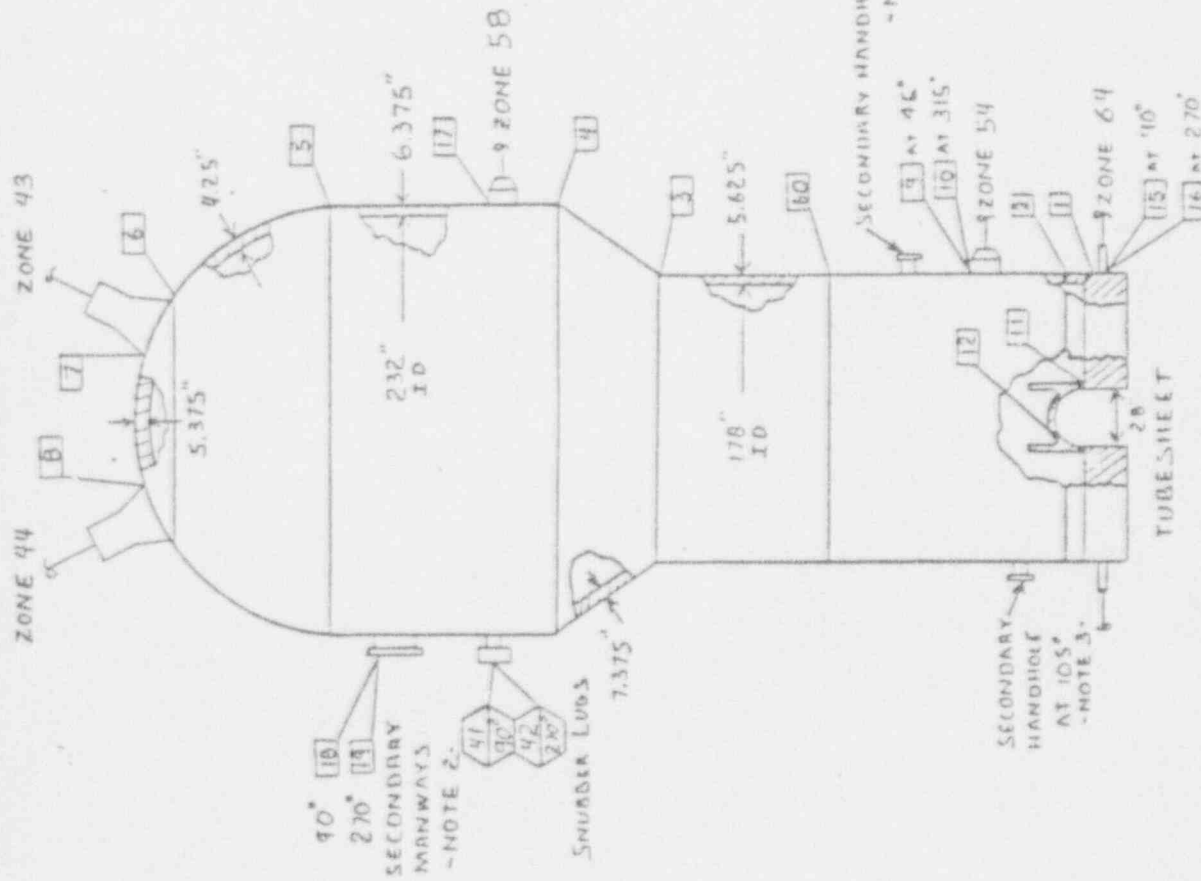
|                   |                            |
|-------------------|----------------------------|
| UNIT 2            | ZONE 38                    |
| DRAIN LINE LOOP 1 |                            |
| DRAWN BY:<br>CTB  | CHECKED BY:<br>R213 REV. 0 |





01-P-51F-103 - KEY J

|        |                       |               |        |                    |
|--------|-----------------------|---------------|--------|--------------------|
| REV. O | DRAWN BY<br>J. HOLLER | TITLE<br>WPSI | UNIT 2 | ZONE 40            |
|        | CHECKED BY<br>JES     |               |        |                    |
|        |                       |               |        | LONG TERM RELIANCE |



# NOTES:

- 1) 0" IS AT 1/4 OF VOT LEG
- 2) STUDS ARE 16- 1.5" X 9"
- 3) STUDS ARE 16- 1" X 6"
- 4) TAG NO. 2MRCE01A (C-E)
- SERIAL NO. 79273-1
- N.B. NO. 22478

## REFERENCE DWGS:

- NOO1- 6.03-9 AND 10
- NOO1- 6.03-103
- NOO1- 6.03-239

| REV                        | DWG | UNIT #2 ZONE 41 |
|----------------------------|-----|-----------------|
| 0                          | 0   | 0               |
| DRAWN BY<br>D. B. HANSEN   |     |                 |
| CHECKED BY<br>JBS          |     |                 |
| TITLE<br>STEAM GENERATOR 1 |     |                 |



- 1) D'S AT 4 OF HOT LEG  
2) STUDS ARE 16-15" X 4"  
3) STUDS ARE 16-1" X 4"  
4) TAG NO. 2MRCLE01B  
SERIAL NO. 79273-2 (CE)  
N.B. NO. 22479

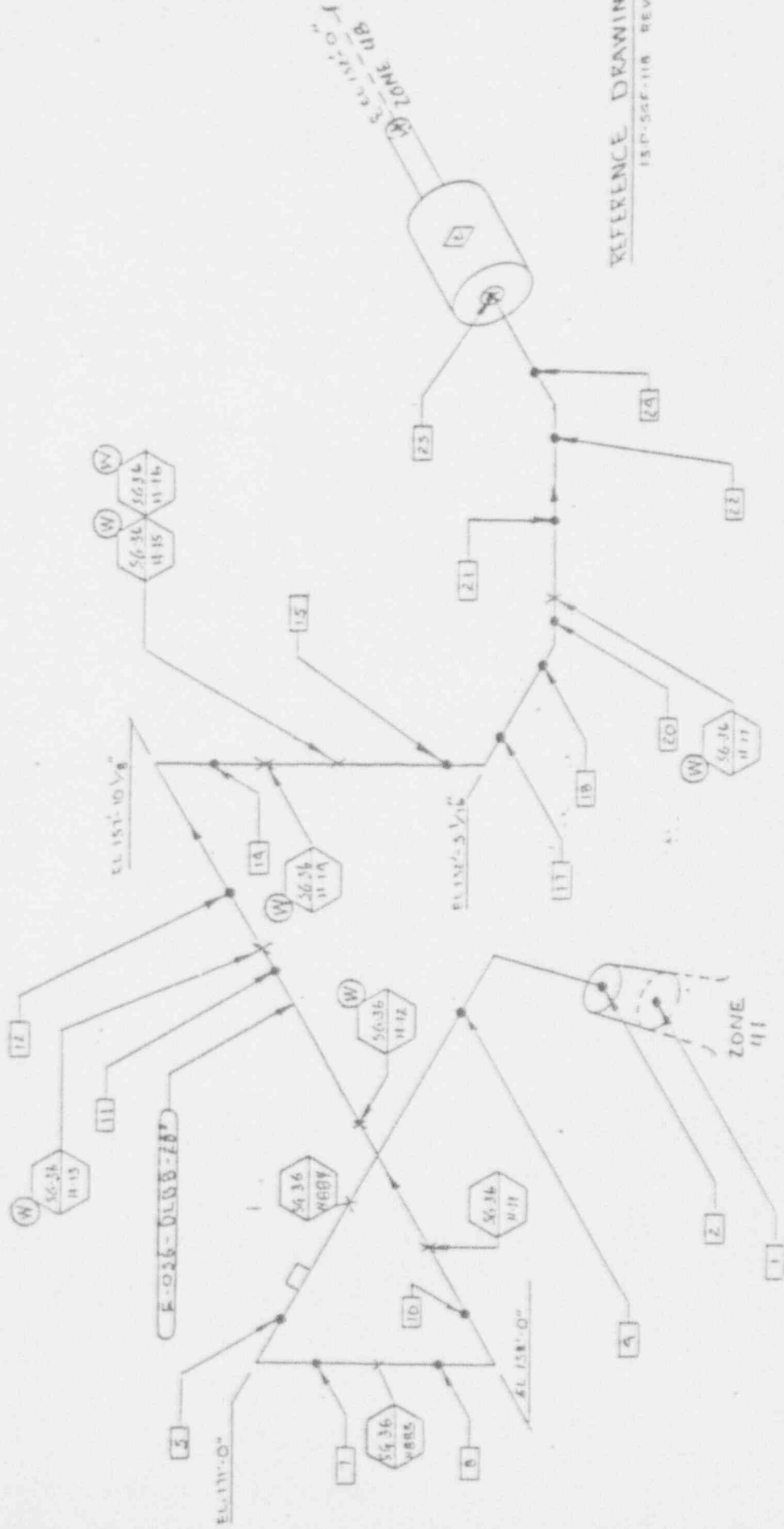
REFERENCE DWG'S:

NO01-603-a AND 10  
NO01-603-103  
NO01-603-239

|   |                             |     |
|---|-----------------------------|-----|
| REV 0                                       | UNIT "2" ZONE 42            | DWG |
| DRAWN BY<br>O D HANSEN<br>CHECKED BY<br>JRS | TITLE:<br>STEAM GENERATOR 2 |     |

PLAN

| LINE | DIA/SCH    | FROM | TO |
|------|------------|------|----|
| 36   | 5" x 2"    | 1    | 2  |
| 36   | 28" x 125" | 2    | 30 |



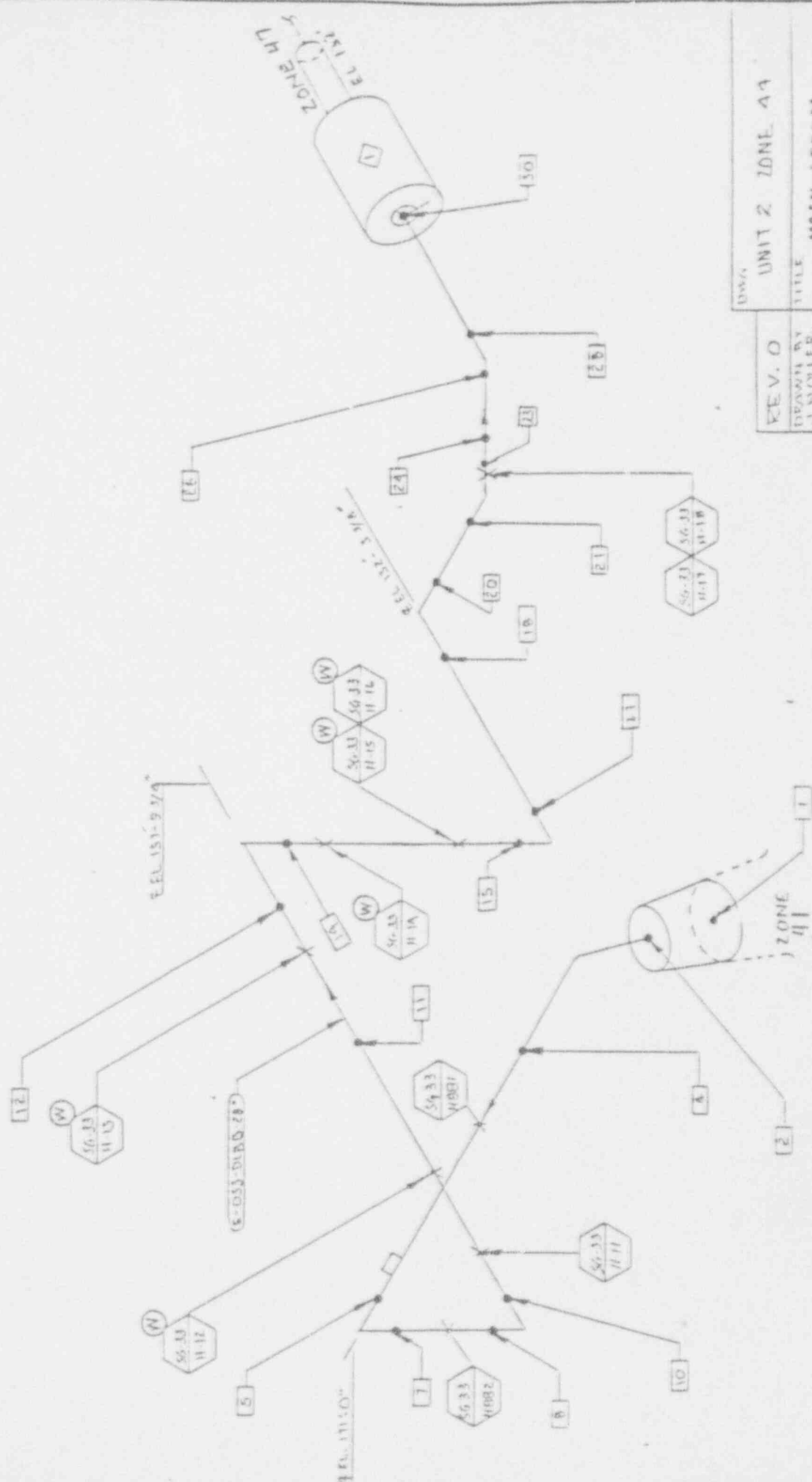
REFERENCE DRAWING  
150-SGF-118 REV 9

|                                  |                                   |
|----------------------------------|-----------------------------------|
| REV. 0                           | UNIT 2 ZONE 43                    |
| DESIGN BY:<br>CHECKED BY:<br>JBS | TITLE:<br>MAIN STEAM<br>SG 1 EAST |



| LINE | DM/SCM      | FROM | TO |
|------|-------------|------|----|
| 33   | 32" X 2"    | 1    | 2  |
| 33   | 28" X 1.25" | 2    | 30 |

REFERENCE DRAWING  
15-P-507-118 REV A

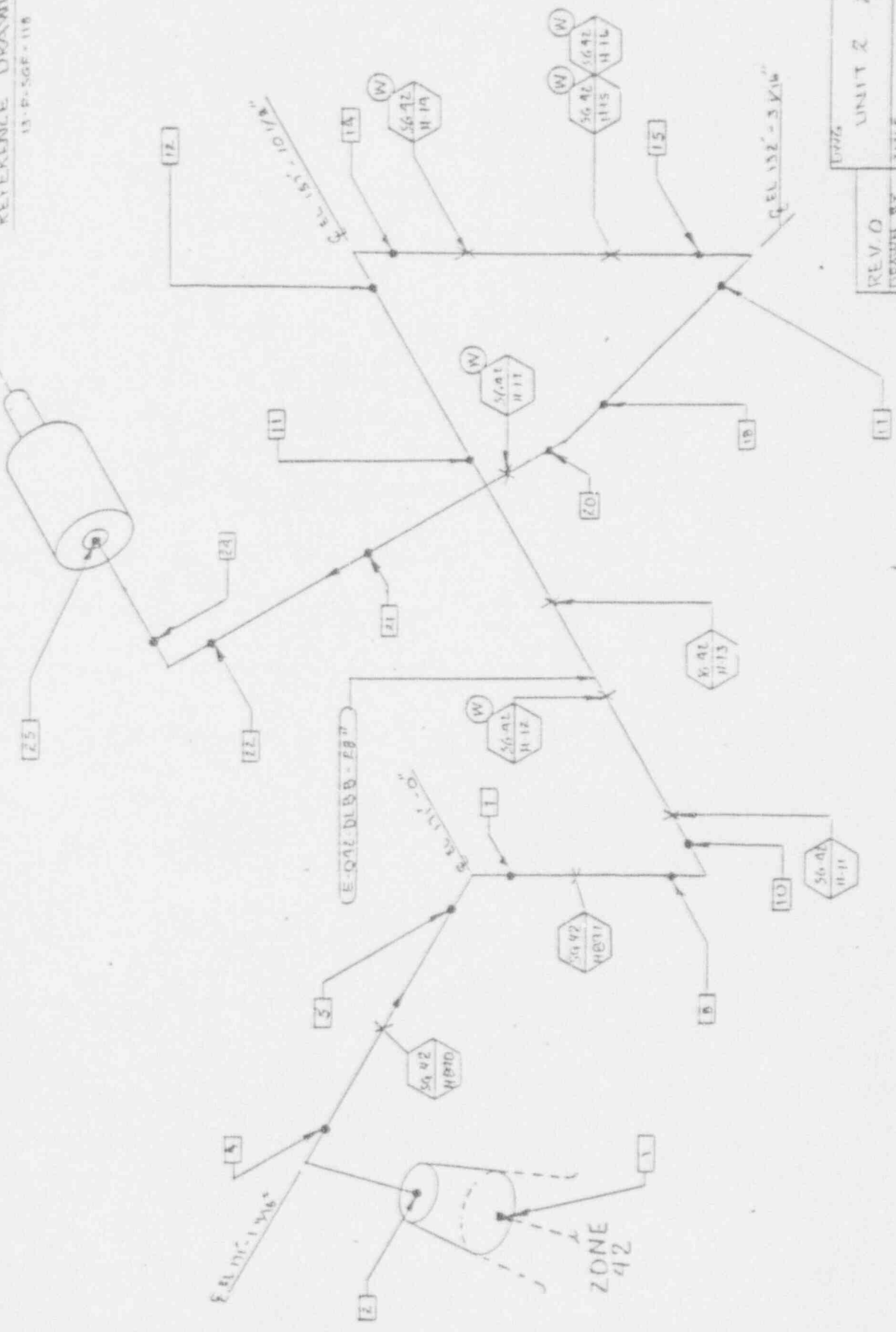


| REV. 0                | UNIT 2 ZONE A9      |
|-----------------------|---------------------|
| DRAWN BY<br>J. MILLER | TITLE<br>MAIN STEAM |
| CHECKED BY<br>JBS     | 59 1 WEST           |



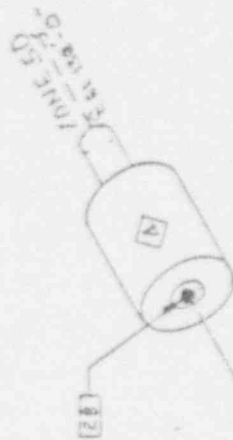
| LINE # | DN/SCH      | FROM | TO |
|--------|-------------|------|----|
| 42     | 32" X 2"    | 1    | 2  |
| 42     | 28" X 1.75" | 2    | 25 |

REFERENCE DRAWING  
13-P-SGF-118 REV A

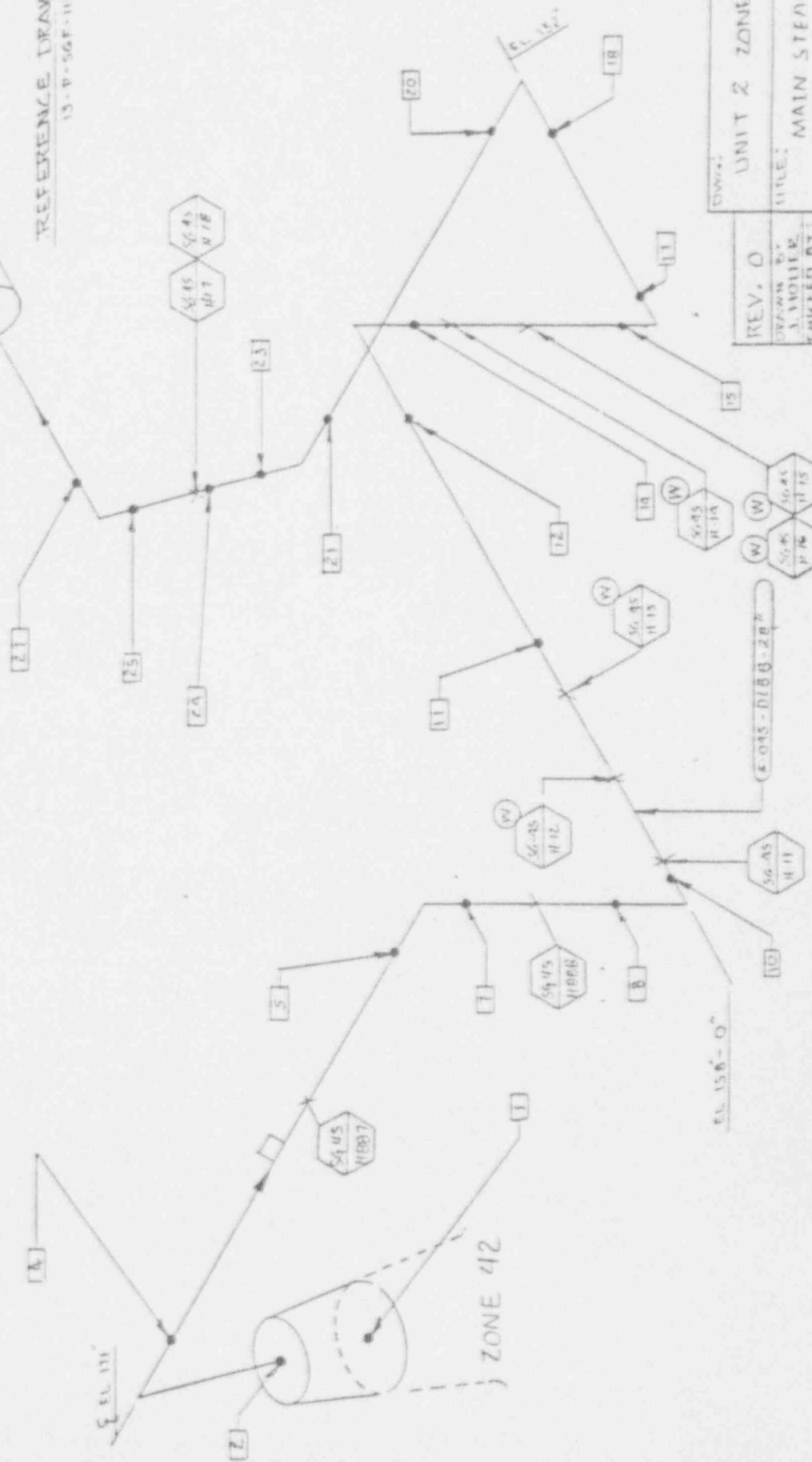


| REV. 0     | UNIT 2 | ZONE A5 |
|------------|--------|---------|
| DESIGN BY  |        |         |
| DRAWN BY   |        |         |
| CHECKED BY |        |         |
| DATE       |        |         |

| LINE # | DIA/SLW     | FROM | TO |
|--------|-------------|------|----|
| 45     | 32" X 2"    | 1    | 2  |
| 45     | 28" X 1.25" | 2    | 28 |



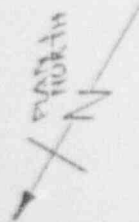
REFERENCE DRAWING  
13-P-56F-118 REV A



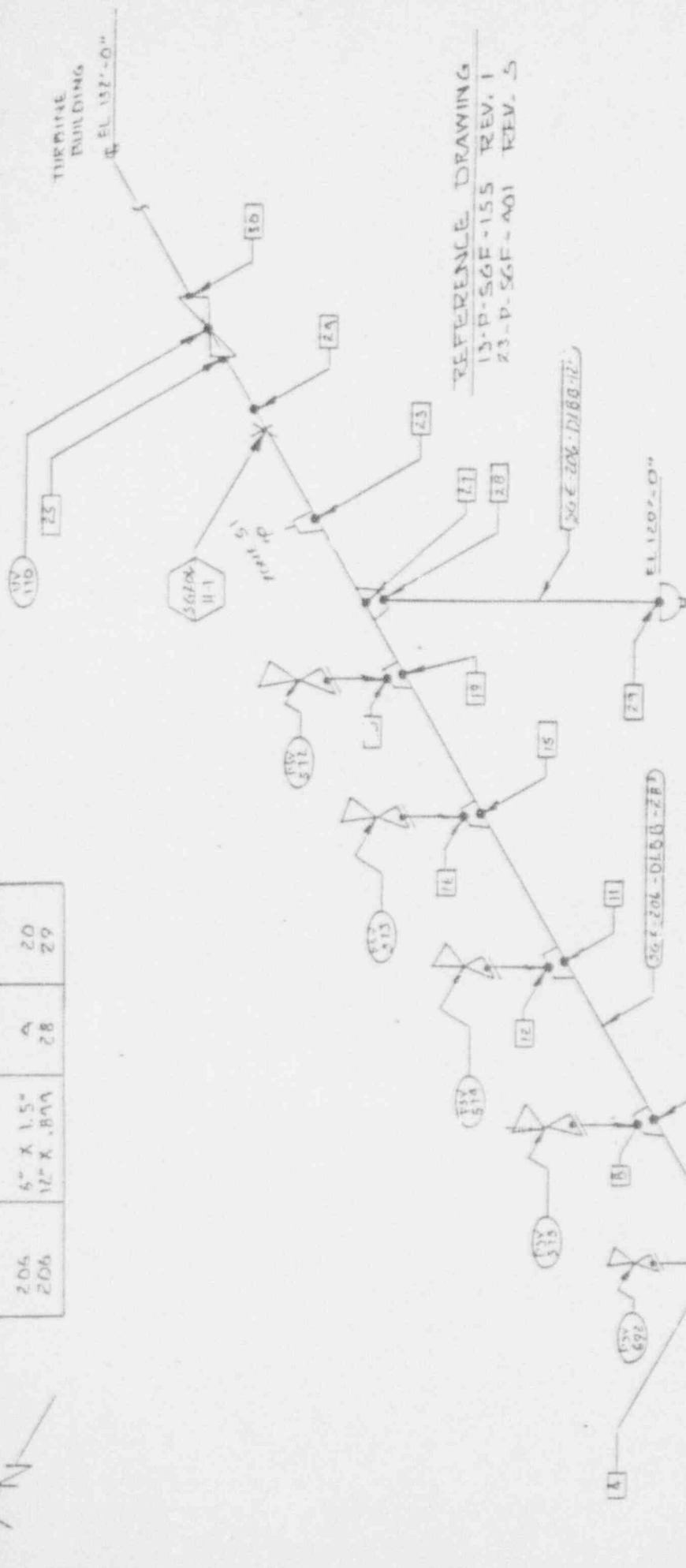
REV. 0  
DRAWN BY:  
J. WOLTER  
CHECKED BY:  
JBS

UNIT 2 ZONE 46

MAIN STEAM  
SG 2 WEST



| LINE # | DIA/SCH     | FROM | TO |
|--------|-------------|------|----|
| 206    | 28" X 1.75" | 1    | 30 |
| 204    | 6" X 1.5"   | A    | 20 |
| 206    | 12" X .899  | 28   | 29 |



REFERENCE DRAWING  
13-P-SGF-155 REV. 1  
23-P-SGF-A01 REV. 5

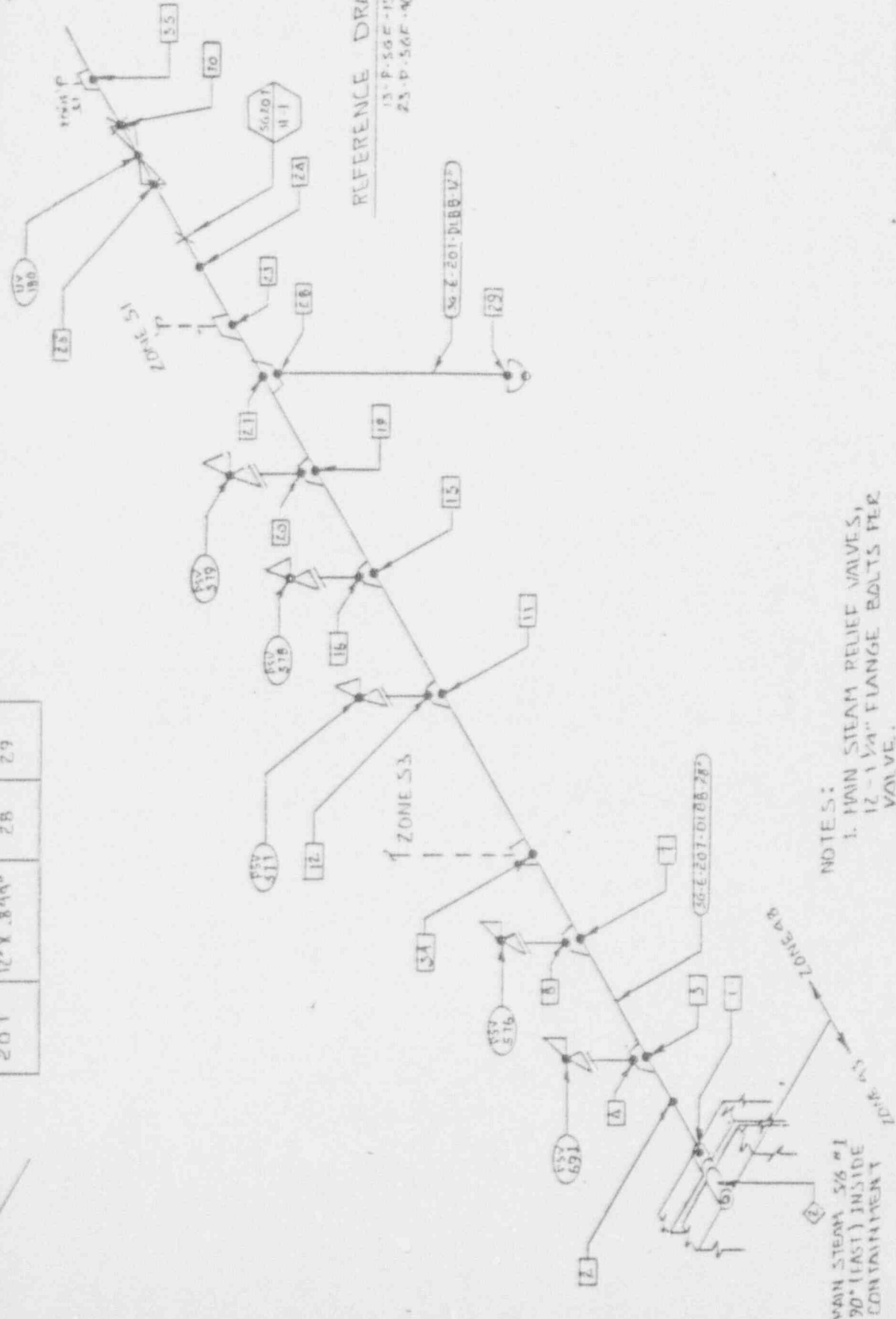
NOTE:  
1) 12-1/4" DIA FLANGE BOLTS  
PER EACH RELIEF VALVE.  
2) MSIV 20-2 1/2" BODY TO  
BONNET BOLTS

|                     |        |               |
|---------------------|--------|---------------|
| REV. 0              | UNIT 2 | ZONE A7       |
| DRAWN BY<br>JHOLLER | TITLE  | MAIN STEAM    |
| CHECKED BY<br>JBS   |        | S/G #1 (WEST) |



| LINE # | DN / SCH     | FROM | TO |
|--------|--------------|------|----|
| 201    | 28" X 1.125" | 1    | 30 |
| 201    | 6" X 1.5"    | A    | 20 |
| 201    | 12" X .849"  | 28   | 29 |

TURBINE BUILDING  
ELEV 132'-0"



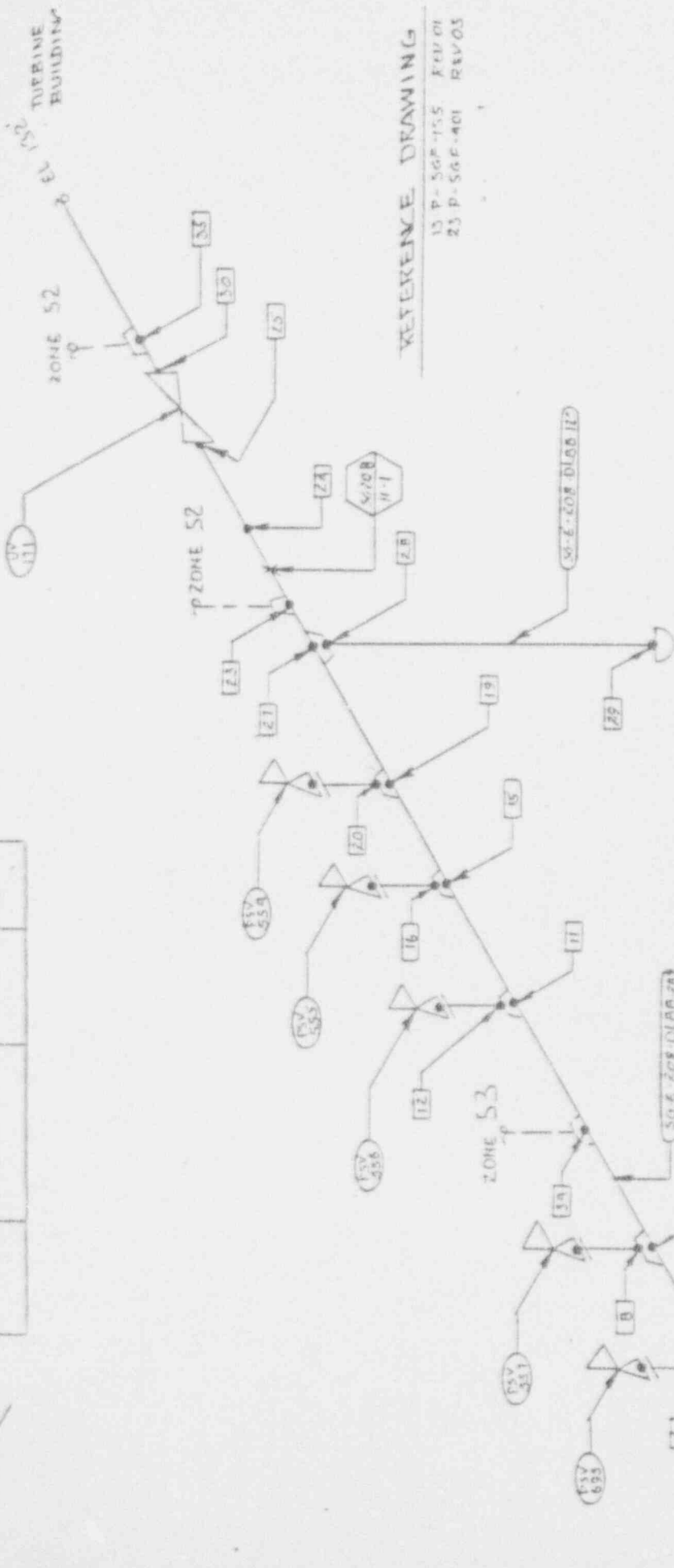
REFERENCE DRAWING  
13-P-56E-155 REV 1  
23-P-56E-401 REV 5

- NOTES:
1. MAIN STEAM RELIEF VALVES, 12-1 1/2" FLANGE BOLTS PER VALVE.
  2. MSIV, 20-2 1/4" BODY TO BONNET BOLTS.

|                        |                   |         |
|------------------------|-------------------|---------|
| REV. 0                 | UNIT 2            | ZONE 4B |
| DRAWN BY:<br>J. HALLER | TITLE: MAIN STEAM |         |
| CHECKED BY:<br>JBS     | S/61 EAST         |         |



| LINE NO | VALVE / SCH | FROM | TO |
|---------|-------------|------|----|
| 208     | 28" X 1.75" | 1    | 30 |
| 208     | 6" X 1.5"   | A    | 20 |
| 208     | 12" X .894" | 28   | 29 |



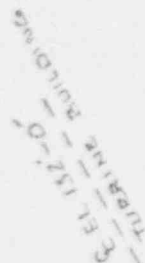
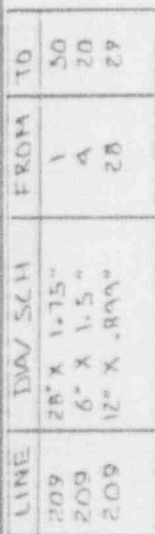
NOTE:

1. MAIN STEAM RELIEF VALVE, 12-1/4" FLANGE BOLTS PER VLV.
2. MSV, 20-2 1/4" BODY TO BONNET BOLTS

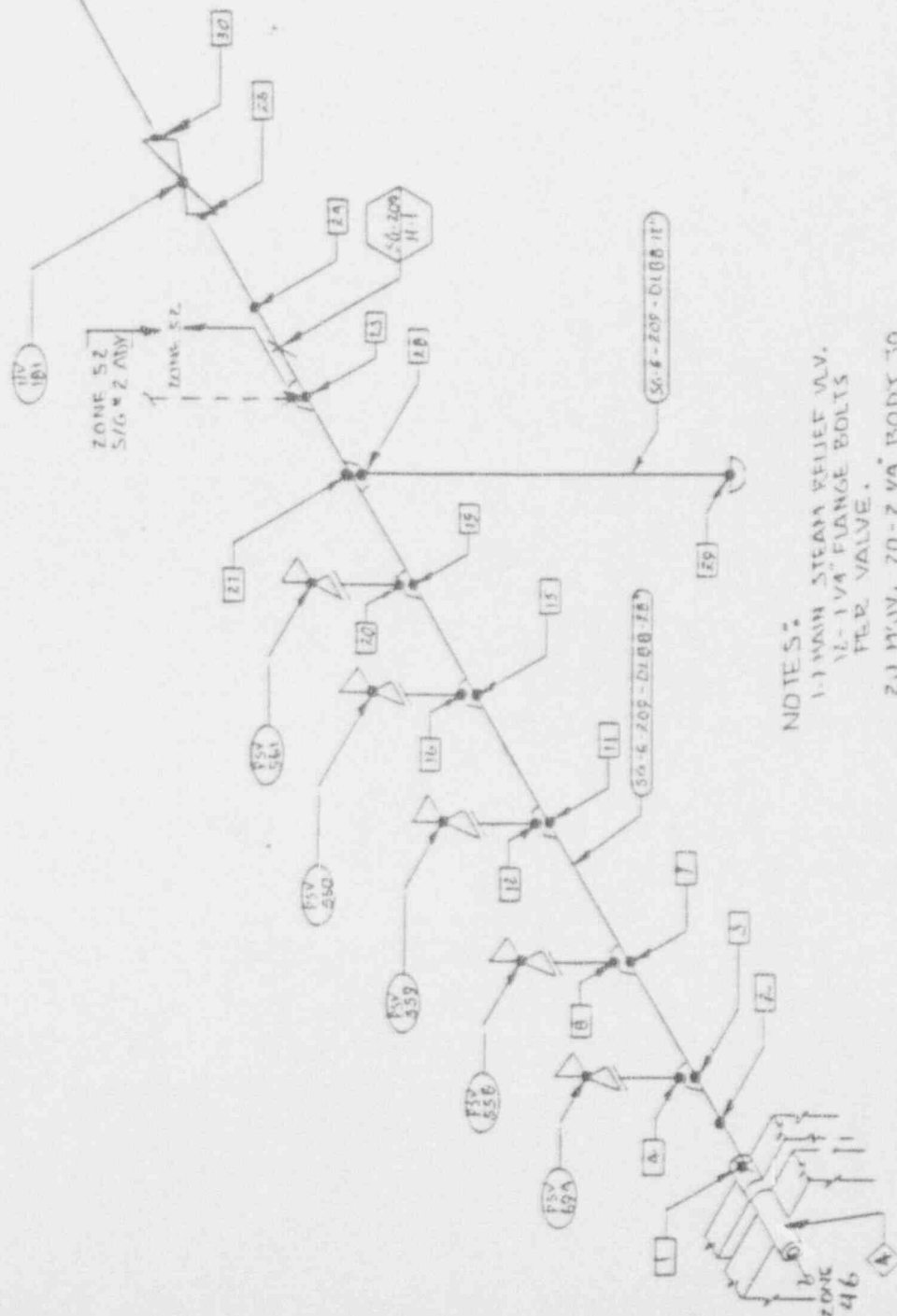
# REFERENCE DRAWING

13 P-SGP-155 REV 01  
23 P-SGP-401 REV 05

|                       |                                   |
|-----------------------|-----------------------------------|
| REV. 0                | DWG.                              |
| DRAWN BY<br>J. MILLER | UNIT 2 ZONE A9                    |
| CHECKED BY:<br>JBS    | TITLE: MAIN STEAM<br>SIG 2 (EAST) |



REFERENCE DRAWING



NOTES:

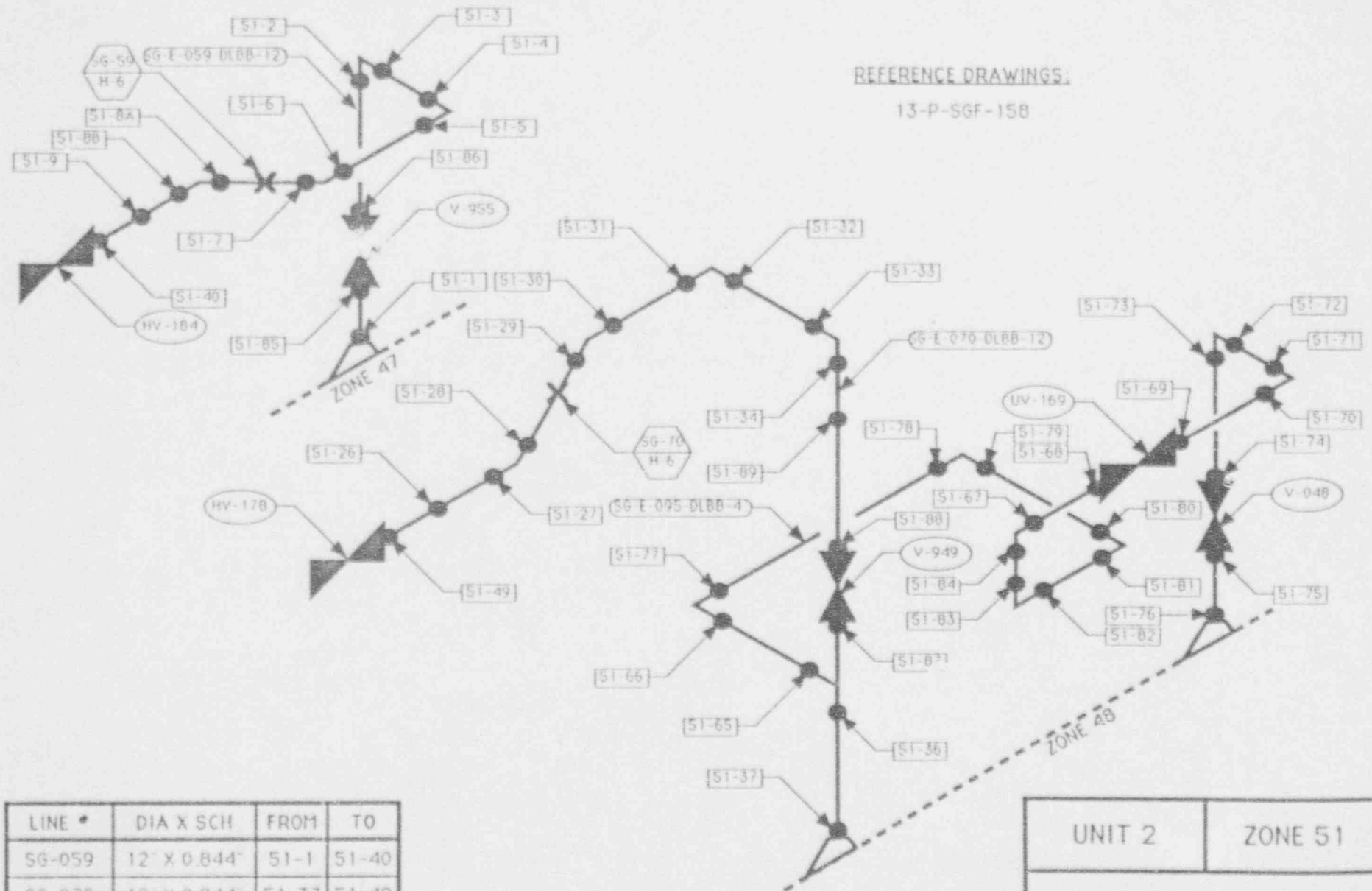
1.1 MAIN STEAM RELIEF VALVE.  
12-1/4" FLANGE BOLTS  
PER VALVE.

2.1 MAIN 20"-2 1/2" BODY TO  
BONNET BOLTS

|                        |                                      |      |
|------------------------|--------------------------------------|------|
| REV D                  | UNIT 2 ZONE 50                       | DATE |
| DRAWN BY:<br>J. HOLLER | TITLE: MAINA STEAM<br>S/G = Z (WEST) | DATE |
| CHECKED BY:<br>JES     |                                      | DATE |

# REFERENCE DRAWINGS:

13-P-SGF-158

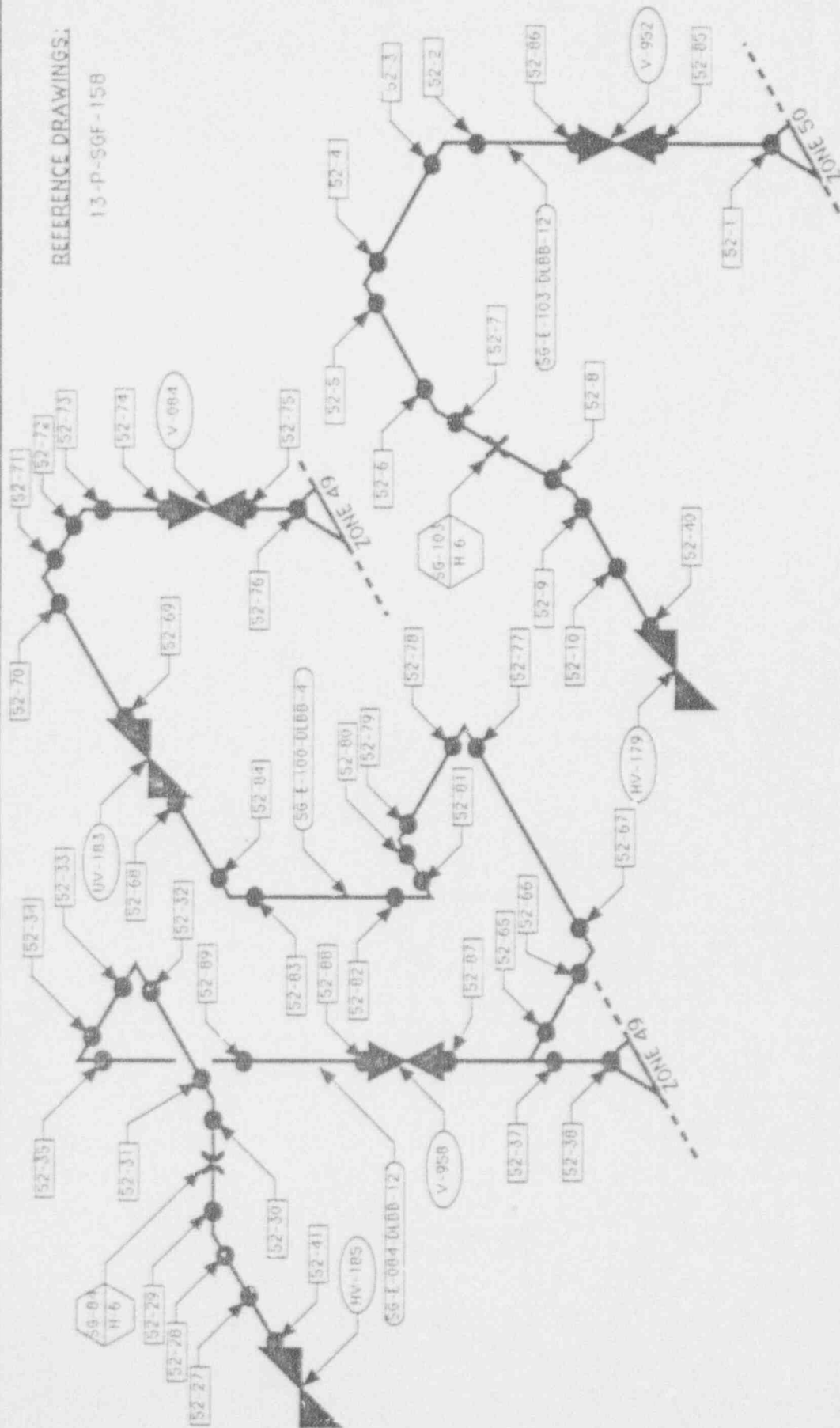


| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SG-059 | 12" X 0.844" | 51-1  | 51-40 |
| SG-070 | 12" X 0.844" | 51-37 | 51-49 |
| SG-095 | 4" X 0.337"  | 51-65 | 51-76 |

|                       |                    |
|-----------------------|--------------------|
| UNIT 2                | ZONE 51            |
| ATMOSPHERIC DUMP NO 1 |                    |
| DRAWN BY<br>CAB       | CREATED BY<br>JLLR |
| REV 0                 |                    |

REFERENCE DRAWINGS:

13-P-SGF-158



| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SG-103 | 12" X 0.844" | 52-1  | 52-40 |
| SG-084 | 12" X 0.844" | 52-38 | 52-41 |
| SG-100 | 4" X 0.337"  | 52-65 | 52-76 |

UNIT 2

ZONE 52

ATMOSPHERIC DUMP NO 2

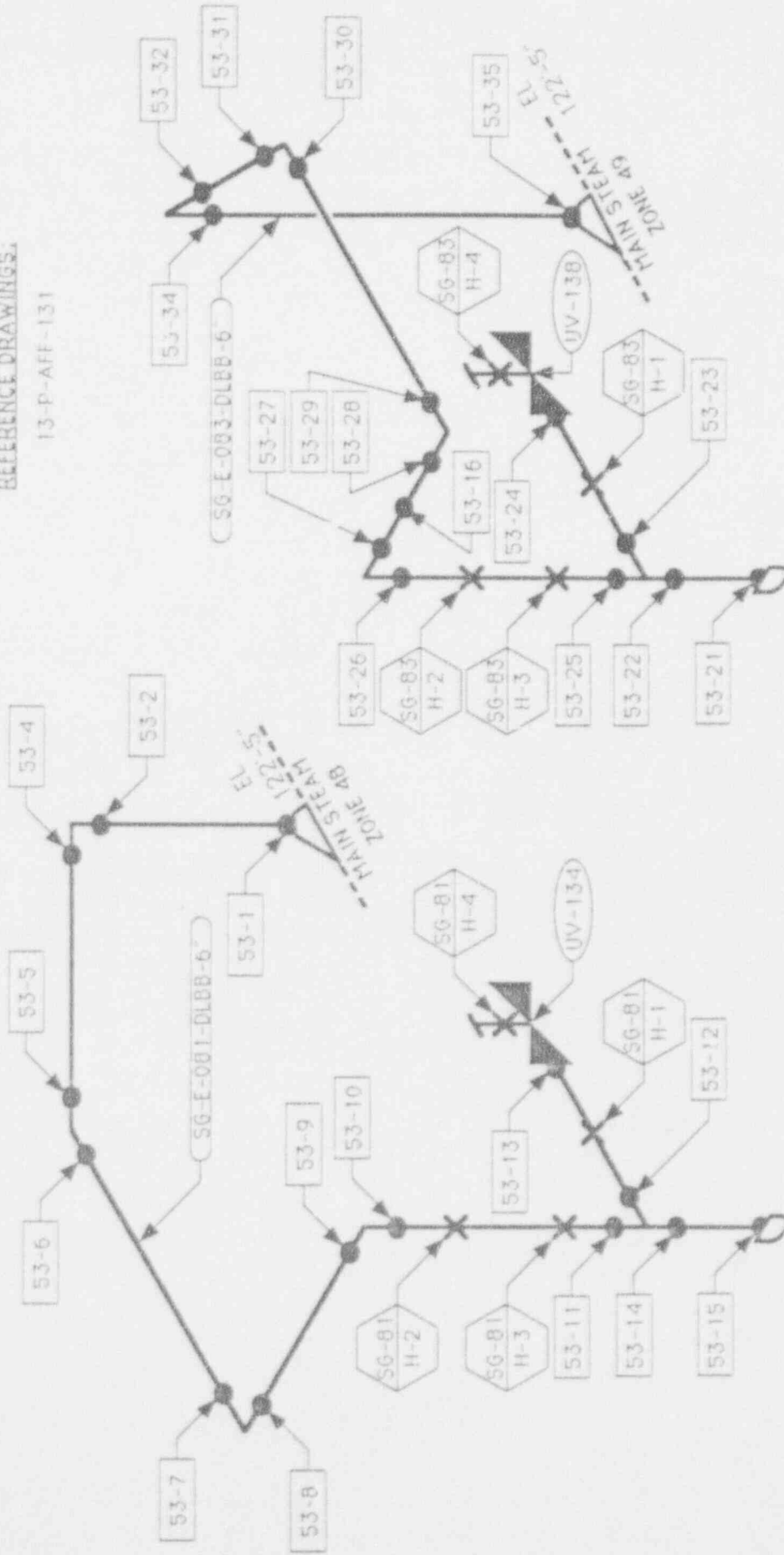
DATE: 01/10/01

REV. 0



REFERENCE DRAWINGS:

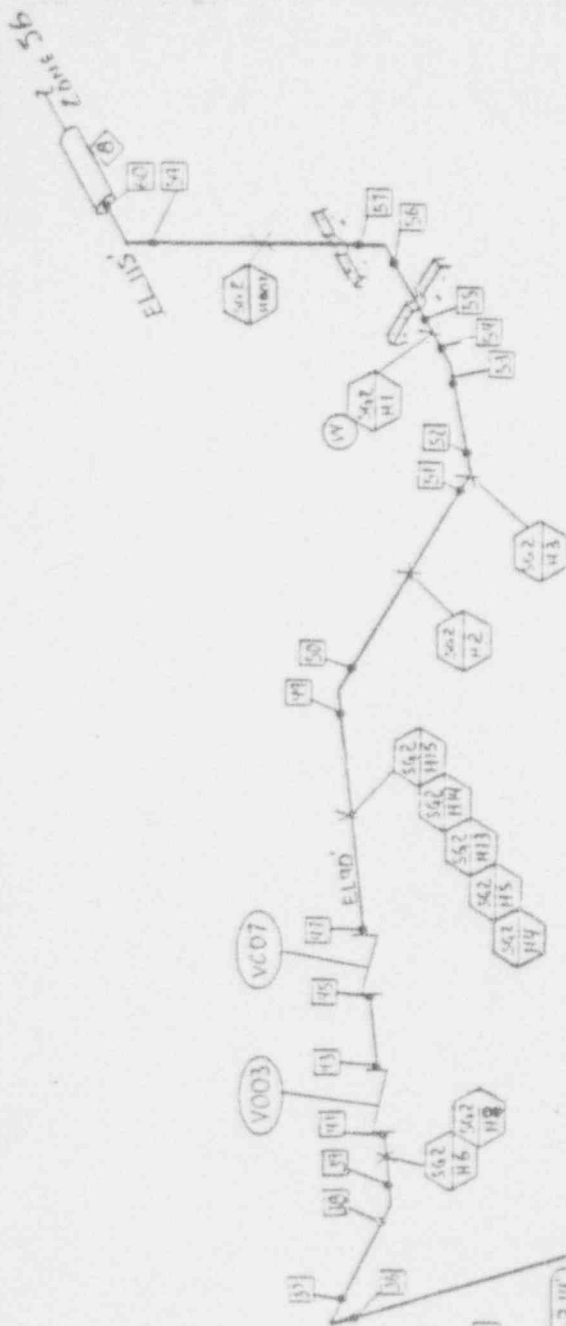
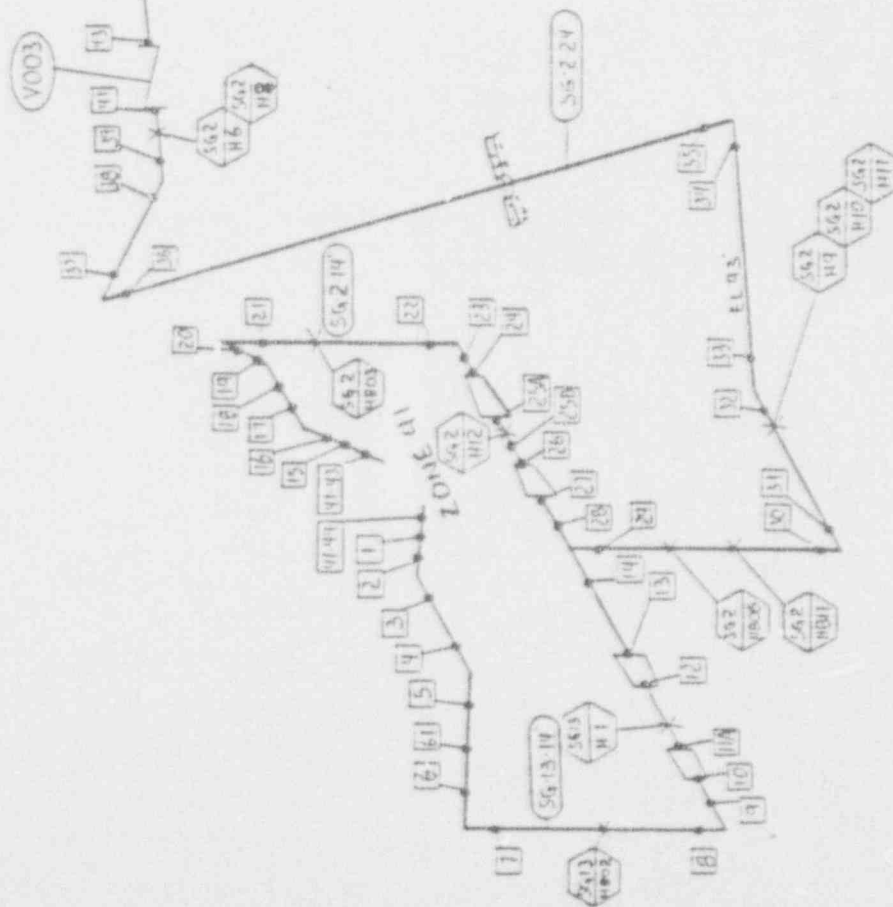
13-P-AFF-131



| LINE   | DIA X SCH   | FROM  | TO    |
|--------|-------------|-------|-------|
| SG-081 | 6" X 0.432" | 53-1  | 53-15 |
| SG-083 | 6" X 0.432" | 53-21 | 53-35 |

|                                  |                   |
|----------------------------------|-------------------|
| UNIT 2                           | ZONE 53           |
| STEAM TO AUX<br>FEEDWATER SYSTEM |                   |
| DRAWN BY<br>CTB                  | CHECKED BY<br>RLB |
| REV 0                            |                   |

| LINE | DIA/SCH      | FROM   | TO |
|------|--------------|--------|----|
| 2    | 14" x .138"  | 15     | 24 |
| 2    | 16" x .844"  | 25A    | 26 |
| 2    | 16" x 1.75"  | 41-44  | -  |
| 2    | 24" x 1.218" | 13, 27 | 60 |
| 13   | 14" x .438"  | 1      | 10 |
| 13   | 16" x .844"  | 11A    | 12 |
| 13   | 16" x 1.75"  | 41-43  | -  |

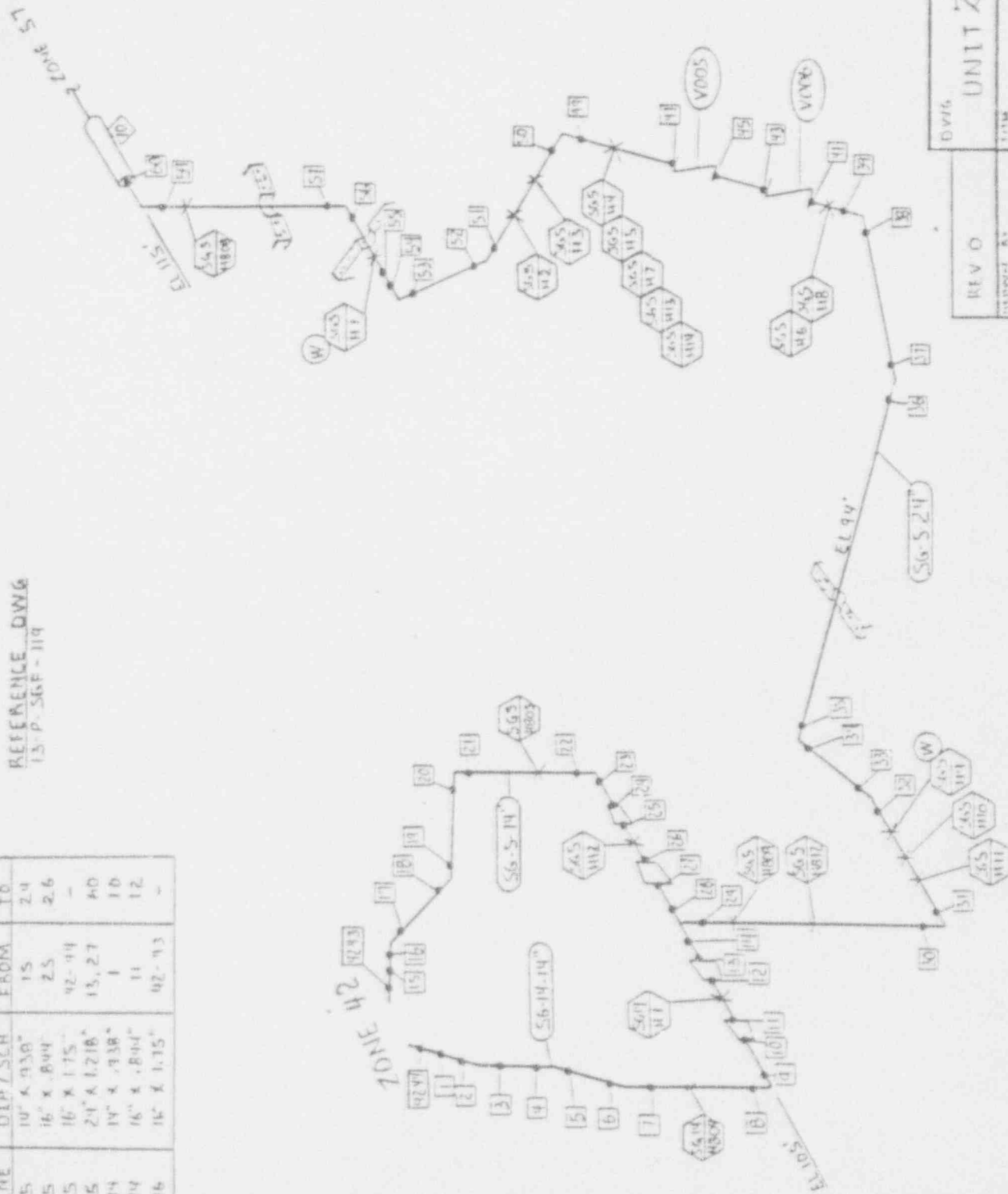


REFERENCE DWG  
15-P-56F-119

|                            |       |                  |
|----------------------------|-------|------------------|
| REV. 0                     | DWG   | UNIT 2 ZONE 54   |
| DESIGNED BY<br>D.B. HANSEN | TITLE | FEEDWATER SG NO. |
| CHECKED BY<br>JBS          |       |                  |

| LINE | DIP / SCH    | FROM   | TO |
|------|--------------|--------|----|
| 5    | 10" x .938"  | 15     | 24 |
| 5    | 16" x .804"  | 25     | 26 |
| 5    | 16" x .175"  | 42-44  | -  |
| 5    | 21" x 1.218" | 13, 27 | 40 |
| 14   | 14" x .938"  | 1      | 10 |
| 14   | 16" x .804"  | 11     | 12 |
| 16   | 16" x 1.135" | 42-43  | -  |

REFERENCE DWG  
13-P-SGF-119

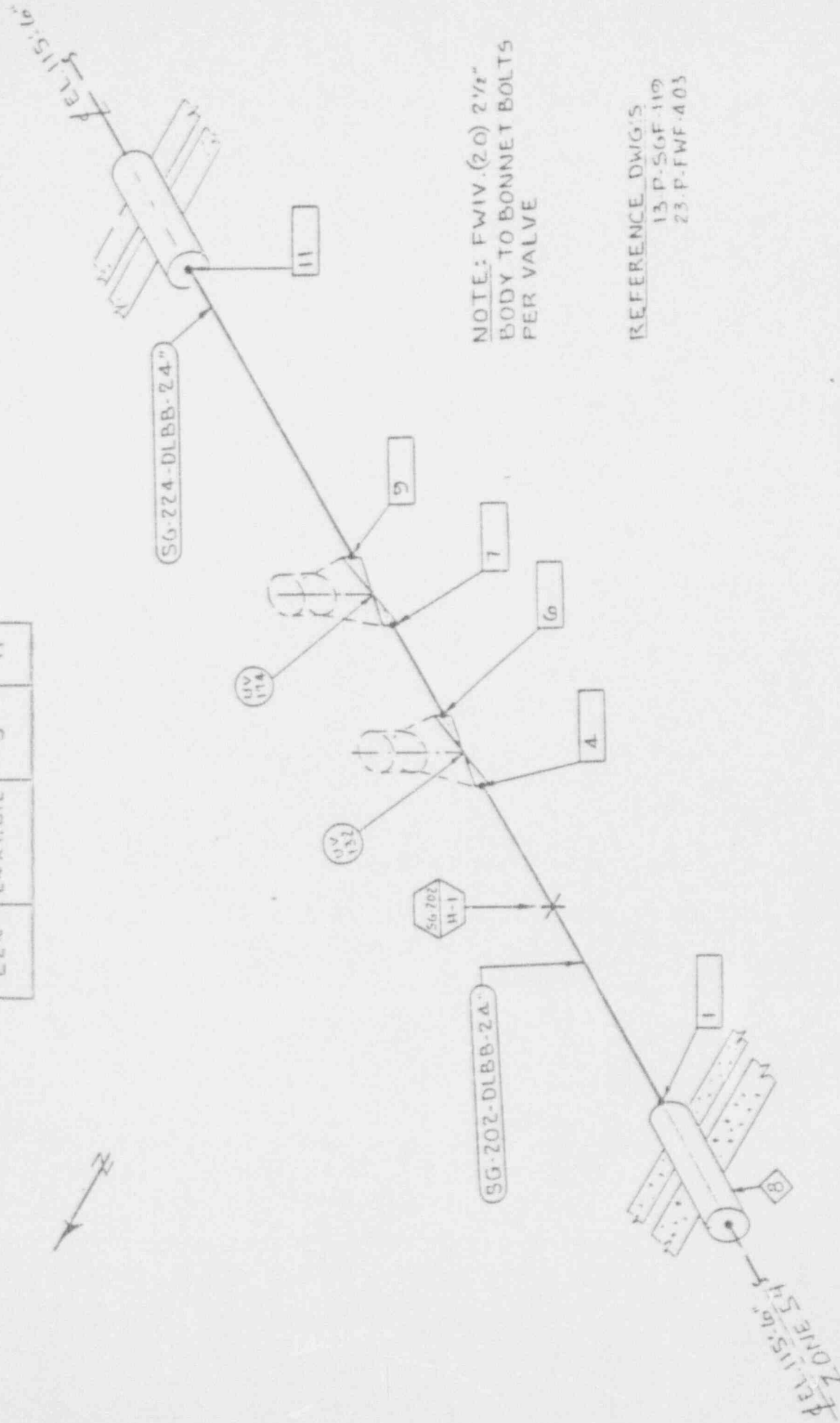


| REV | BY  | DATE |
|-----|-----|------|
| 0   | JBS | 7/85 |

UNIT Z, ZONE 55

FEEDWATER, SG N02

| LINE # | DIA/SCH    | FRL | TO |
|--------|------------|-----|----|
| 202    | 24"x1.531" | 1   | 4  |
| 201    | 24"x1.812" | 6   | 7  |
| 224    | 24"x1.812" | 9   | 11 |

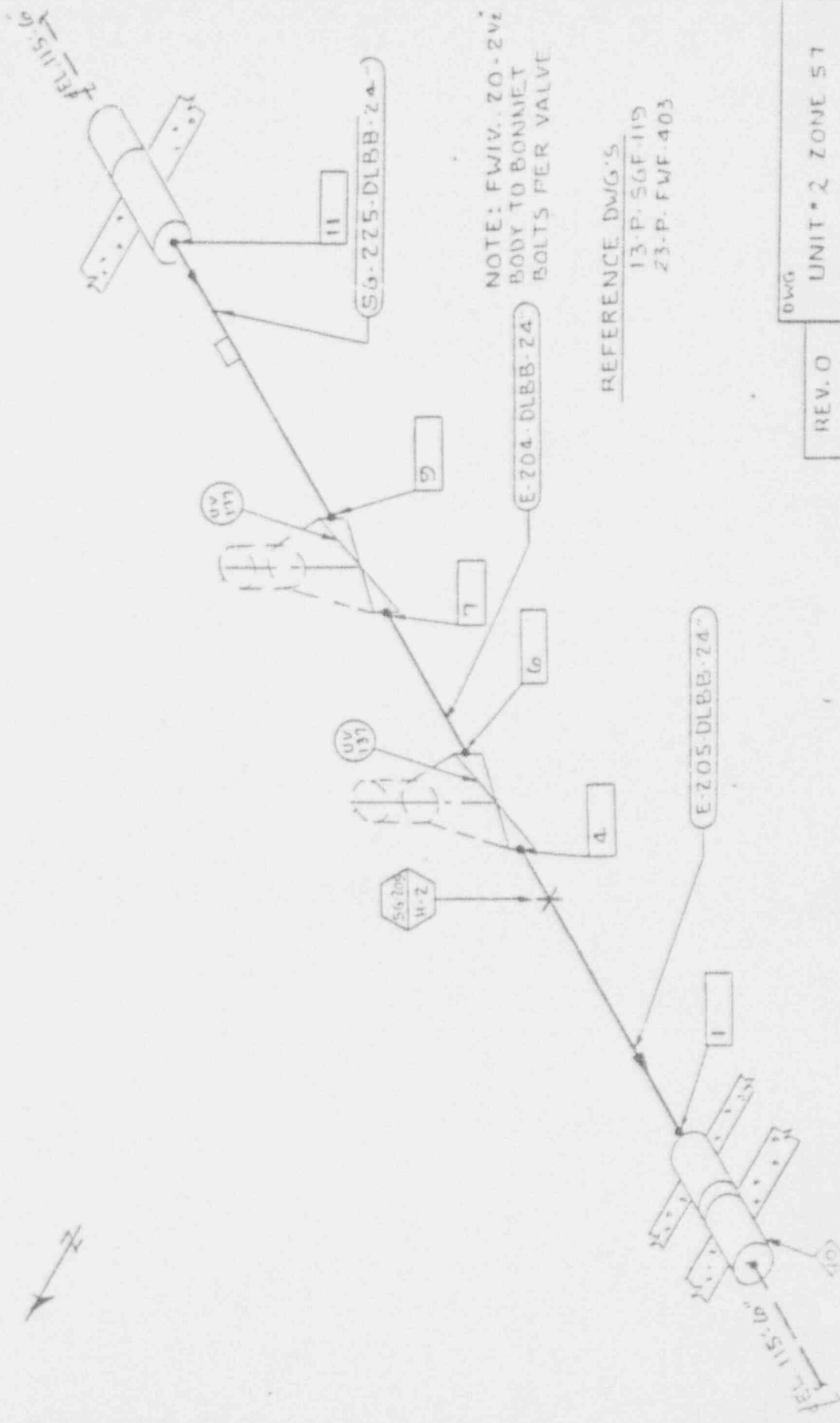


NOTE: FWIV (20) 2 1/2"  
BODY TO BONNET BOLTS  
PER VALVE

REFERENCE DWG'S  
13-P-SGF-119  
23-P-FWF-403

|                       |   |
|-----------------------|---|
| DWG                   | UNIT #2 ZONE 50                         |
| REV. 0                | TITLE: FEEDWATER<br>STEAM GENERATOR # 1 |
| DRAWN BY<br>R. CURCIO | CHECKED BY<br>JRS                       |

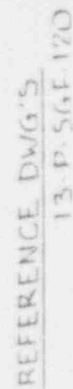
| LINE # | DIA/SCH     | FROM | TO |
|--------|-------------|------|----|
| 205    | 24" x 1.531 | 1    | 4  |
| 204    | 24" x 1.812 | 6    | 7  |
| 225    | 24" x 1.812 | 9    | 11 |



NOTE: FWIV, ZO-2VZ  
BODY TO BONNET  
BOLTS PER VALVE

REFERENCE DWG'S  
13-P. SGF-119  
23-P. FWF-403

|                          |     |                     |
|--------------------------|-----|---------------------|
| REV. 0                   | DWG | UNIT # 2 ZONE 57    |
| DESIGNED BY<br>R. CURCIO |     | TITLE FEEDWATER     |
| CHECKED BY<br>JBS        |     | STEAM GENERATOR # 2 |



| LINE# | DIA/SCH    | FROM  | TO |
|-------|------------|-------|----|
| 56-B  | 6" x .432" | 1     | 3  |
| 56-B  | 6" x .500" | 4     | 25 |
| AF-A  | 6" x .562" | 19    | 34 |
| 56-B  | 6" x 1.8"  | 41 39 | -  |

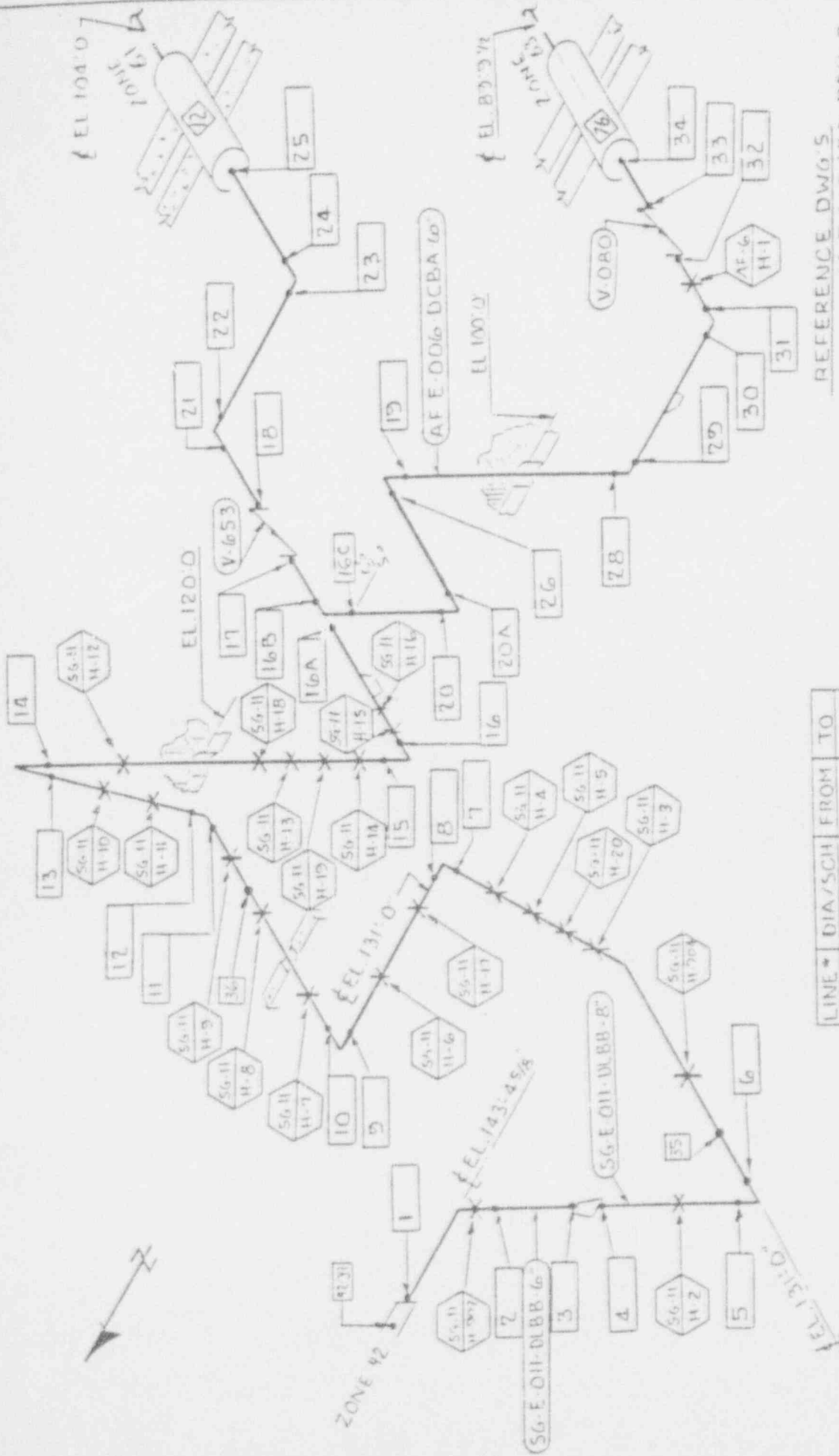
OWG:

UNIT #2 ZONE 5B

REV. O

|                       |  |
|-----------------------|--|
| DRAWN BY<br>R. CURCIO | TITLE<br>AIR 2 DOWNCOMER<br>FEEDWATER STEAM GEN. # 1 |
|-----------------------|--|

五

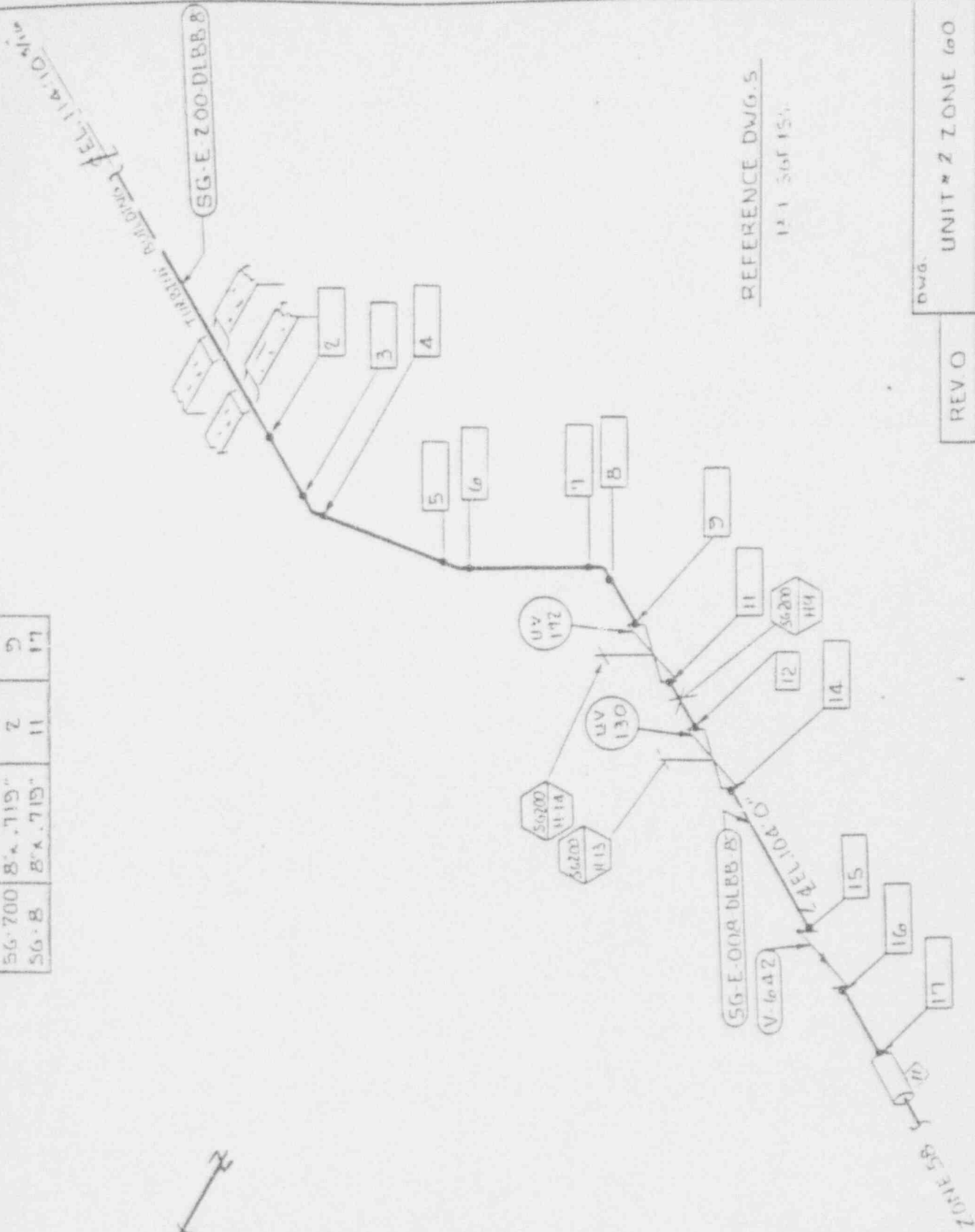


REFERENCE DWG 5  
13-P.56F.120 REV. 2

| LINE # | DIA./SCH   | FROM | TO |
|--------|------------|------|----|
| SG-11  | 6" x .437" | 1    | 3  |
| SG-11  | 8" x .500" | 4    | 25 |
| AF-6   | 6" x .562" | 16C  | 34 |
| SG-11  | 6" x 1.8"  | 4239 | -  |

| REV. 0 | DWG | UNIT #2 | ZONE 59 |
|--------|-----|---------|---------|
| 0      | 0   | 0       | 0       |
| 1      | 1   | 1       | 1       |
| 2      | 2   | 2       | 2       |
| 3      | 3   | 3       | 3       |
| 4      | 4   | 4       | 4       |
| 5      | 5   | 5       | 5       |
| 6      | 6   | 6       | 6       |
| 7      | 7   | 7       | 7       |
| 8      | 8   | 8       | 8       |
| 9      | 9   | 9       | 9       |
| 10     | 10  | 10      | 10      |
| 11     | 11  | 11      | 11      |
| 12     | 12  | 12      | 12      |
| 13     | 13  | 13      | 13      |
| 14     | 14  | 14      | 14      |
| 15     | 15  | 15      | 15      |
| 16     | 16  | 16      | 16      |
| 17     | 17  | 17      | 17      |
| 18     | 18  | 18      | 18      |
| 19     | 19  | 19      | 19      |
| 20     | 20  | 20      | 20      |
| 21     | 21  | 21      | 21      |
| 22     | 22  | 22      | 22      |
| 23     | 23  | 23      | 23      |
| 24     | 24  | 24      | 24      |
| 25     | 25  | 25      | 25      |
| 26     | 26  | 26      | 26      |
| 27     | 27  | 27      | 27      |
| 28     | 28  | 28      | 28      |
| 29     | 29  | 29      | 29      |
| 30     | 30  | 30      | 30      |
| 31     | 31  | 31      | 31      |
| 32     | 32  | 32      | 32      |
| 33     | 33  | 33      | 33      |
| 34     | 34  | 34      | 34      |
| 35     | 35  | 35      | 35      |
| 36     | 36  | 36      | 36      |
| 37     | 37  | 37      | 37      |
| 38     | 38  | 38      | 38      |
| 39     | 39  | 39      | 39      |
| 40     | 40  | 40      | 40      |
| 41     | 41  | 41      | 41      |
| 42     | 42  | 42      | 42      |
| 43     | 43  | 43      | 43      |
| 44     | 44  | 44      | 44      |
| 45     | 45  | 45      | 45      |
| 46     | 46  | 46      | 46      |
| 47     | 47  | 47      | 47      |
| 48     | 48  | 48      | 48      |
| 49     | 49  | 49      | 49      |
| 50     | 50  | 50      | 50      |
| 51     | 51  | 51      | 51      |
| 52     | 52  | 52      | 52      |
| 53     | 53  | 53      | 53      |
| 54     | 54  | 54      | 54      |
| 55     | 55  | 55      | 55      |
| 56     | 56  | 56      | 56      |
| 57     | 57  | 57      | 57      |
| 58     | 58  | 58      | 58      |
| 59     | 59  | 59      | 59      |
| 60     | 60  | 60      | 60      |
| 61     | 61  | 61      | 61      |
| 62     | 62  | 62      | 62      |
| 63     | 63  | 63      | 63      |
| 64     | 64  | 64      | 64      |
| 65     | 65  | 65      | 65      |
| 66     | 66  | 66      | 66      |
| 67     | 67  | 67      | 67      |
| 68     | 68  | 68      | 68      |
| 69     | 69  | 69      | 69      |
| 70     | 70  | 70      | 70      |
| 71     | 71  | 71      | 71      |
| 72     | 72  | 72      | 72      |
| 73     | 73  | 73      | 73      |
| 74     | 74  | 74      | 74      |
| 75     | 75  | 75      | 75      |
| 76     | 76  | 76      | 76      |
| 77     | 77  | 77      | 77      |
| 78     | 78  | 78      | 78      |
| 79     | 79  | 79      | 79      |
| 80     | 80  | 80      | 80      |
| 81     | 81  | 81      | 81      |
| 82     | 82  | 82      | 82      |
| 83     | 83  | 83      | 83      |
| 84     | 84  | 84      | 84      |
| 85     | 85  | 85      | 85      |
| 86     | 86  | 86      | 86      |
| 87     | 87  | 87      | 87      |
| 88     | 88  | 88      | 88      |
| 89     | 89  | 89      | 89      |
| 90     | 90  | 90      | 90      |
| 91     | 91  | 91      | 91      |
| 92     | 92  | 92      | 92      |
| 93     | 93  | 93      | 93      |
| 94     | 94  | 94      | 94      |
| 95     | 95  | 95      | 95      |
| 96     | 96  | 96      | 96      |
| 97     | 97  | 97      | 97      |
| 98     | 98  | 98      | 98      |
| 99     | 99  | 99      | 99      |
| 100    | 100 | 100     | 100     |

| LINE # | DIA/SCH    | FROM | TO |
|--------|------------|------|----|
| SG-700 | 8" x .719" | 2    | 3  |
| SG-8   | 8" x .719" | 11   | 17 |



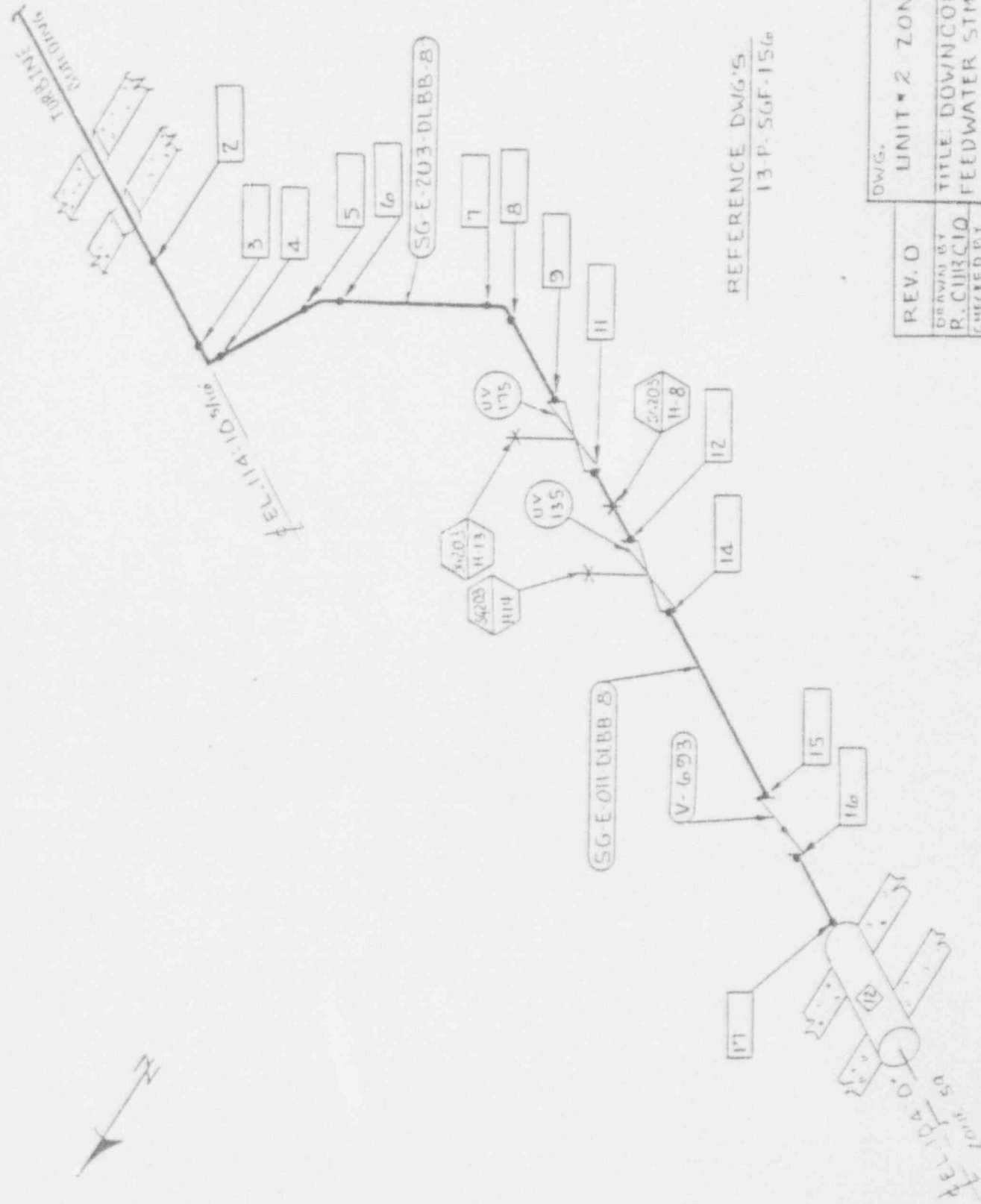
REFERENCE DWG. 5

121 561 151

| REV | DATE | BY        | CHKD | DATE | UNIT             | ZONE  | 60 |
|-----|------|-----------|------|------|------------------|-------|----|
| 0   |      | R. CURCIO |      |      | TITLE: DOWNCOMER |       |    |
|     |      |           |      |      | FEEDWATER STM    | GEN#1 |    |
|     |      |           |      |      |                  |       |    |



| LINE # | DIA/SCH   | ROM | TO |
|--------|-----------|-----|----|
| SG-203 | 8" x .713 | 2   | 9  |
| SG-11  | 8" x .713 | 11  | 17 |

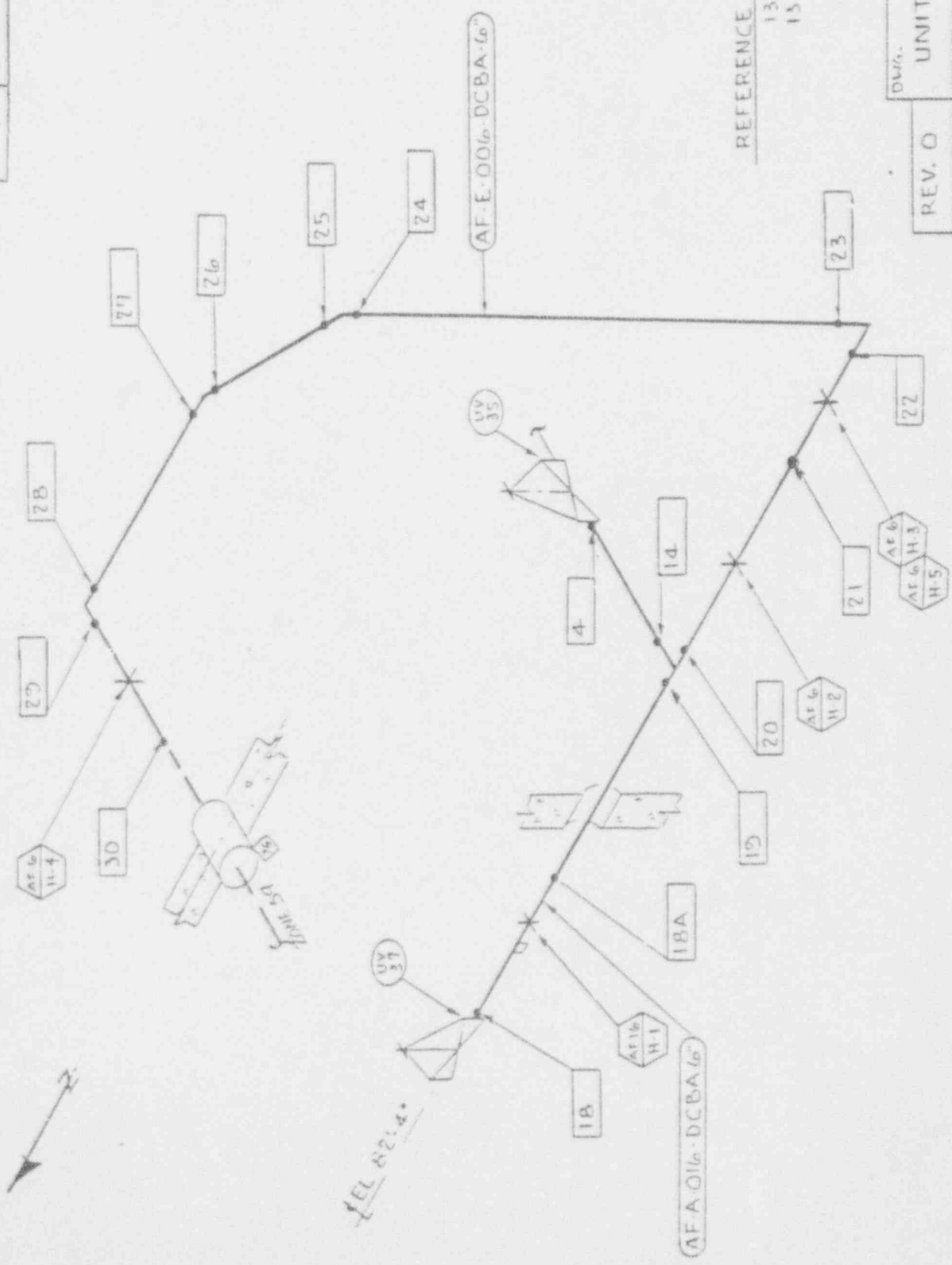


REFERENCE DWG'S  
13-P. SGF-156

|                       |      |                       |
|-----------------------|------|-----------------------|
| REV. 0                | DWG. | UNIT # 2 ZONE 61      |
| DRAWN BY<br>R. CURCIO |      | TITLE: DOWNCOMER      |
| CHECKED BY<br>JRS     |      | FEEDWATER STM GEN # 2 |



| LINE # | DA/SCH    | FR | TD |
|--------|-----------|----|----|
| AF-6   | 6" x 562" | 4  | 30 |
| AF-16  | 6" x 562" | 18 | 19 |

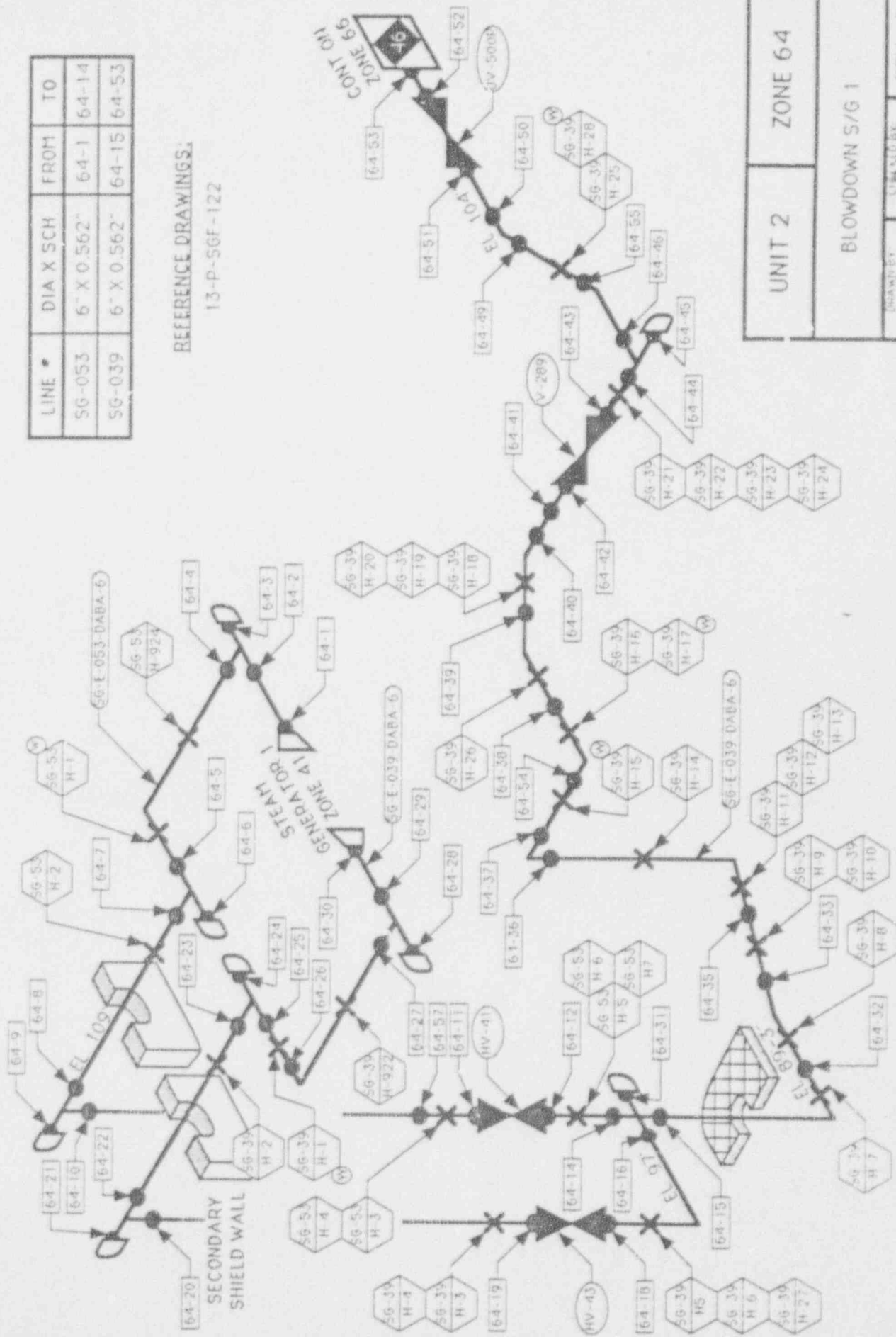


REFERENCE DWG'S  
13-P-AFF-132  
15-P-AFF-133

|                       |                            |
|-----------------------|----------------------------|
| REV. 0                | UNIT # 2 ZONE 603          |
| DRAWN BY<br>R. CURCIO | TITLE: AUXILIARY FEEDWATER |
| CHECKED BY<br>JBS     | STEAM GENERATOR # 2        |

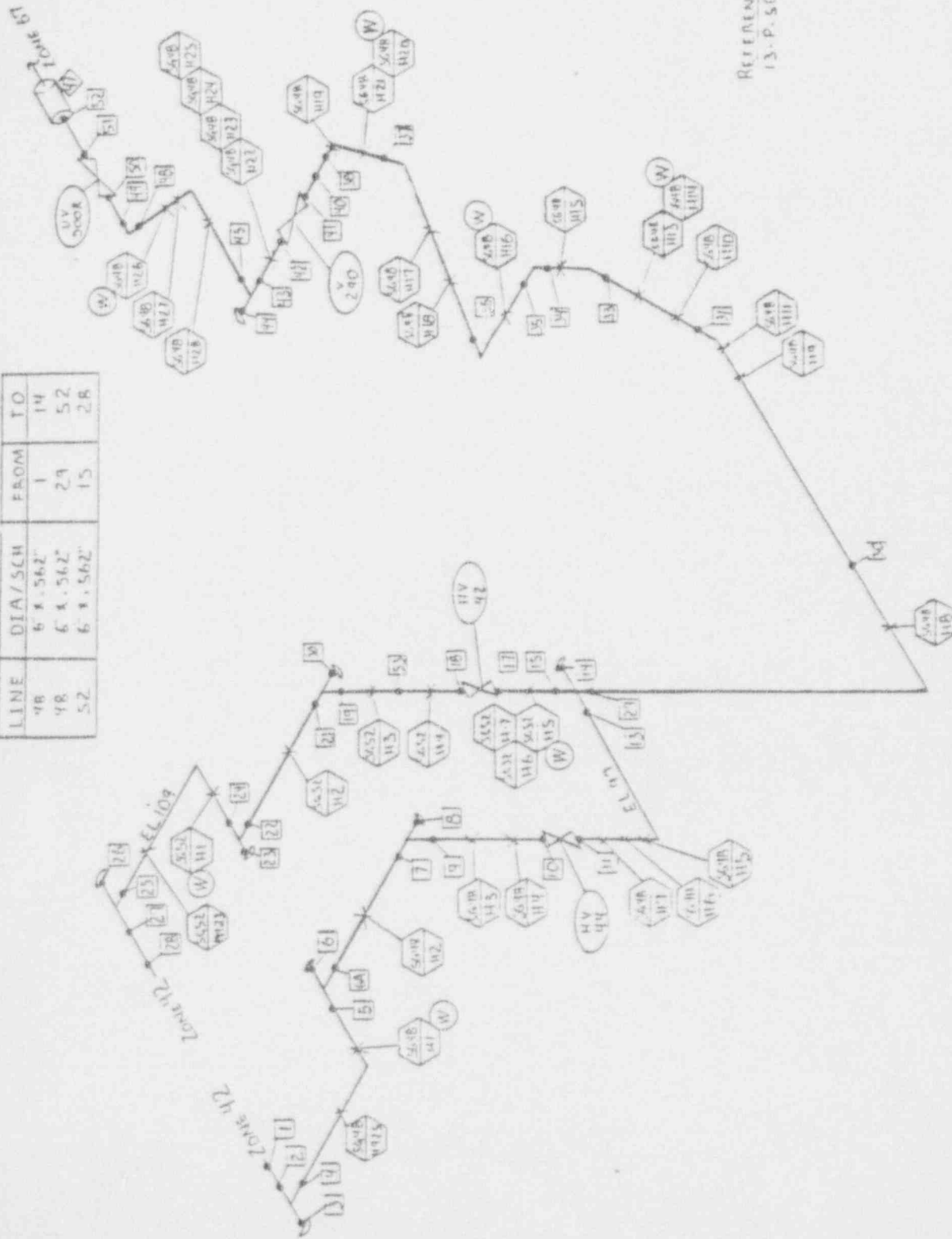
| LINE   | DIA X SCH   | FROM  | TO    |
|--------|-------------|-------|-------|
| SG-053 | 6" X 0.562" | 64-1  | 64-14 |
| SG-039 | 6" X 0.562" | 64-15 | 64-53 |

REFERENCE DRAWINGS:  
13-P-SGF-122



|                    |                   |
|--------------------|-------------------|
| UNIT 2             | ZONE 64           |
| BLOWDOWN S/G 1     |                   |
| DESIGNED BY<br>CTB | CHECKED BY<br>JLH |
| REV. 0             |                   |

| LINE | DIA/SCH  | FROM | TO |
|------|----------|------|----|
| 48   | 6 x 562" | 1    | 14 |
| 48   | 6 x 562" | 29   | 52 |
| 52   | 6 x 562" | 15   | 28 |



REFERENCE DWG  
13-P-562-140

DWG

REV 0

UNIT 2 ZONE 65

DESIGNED BY  
D. W. HANSEN

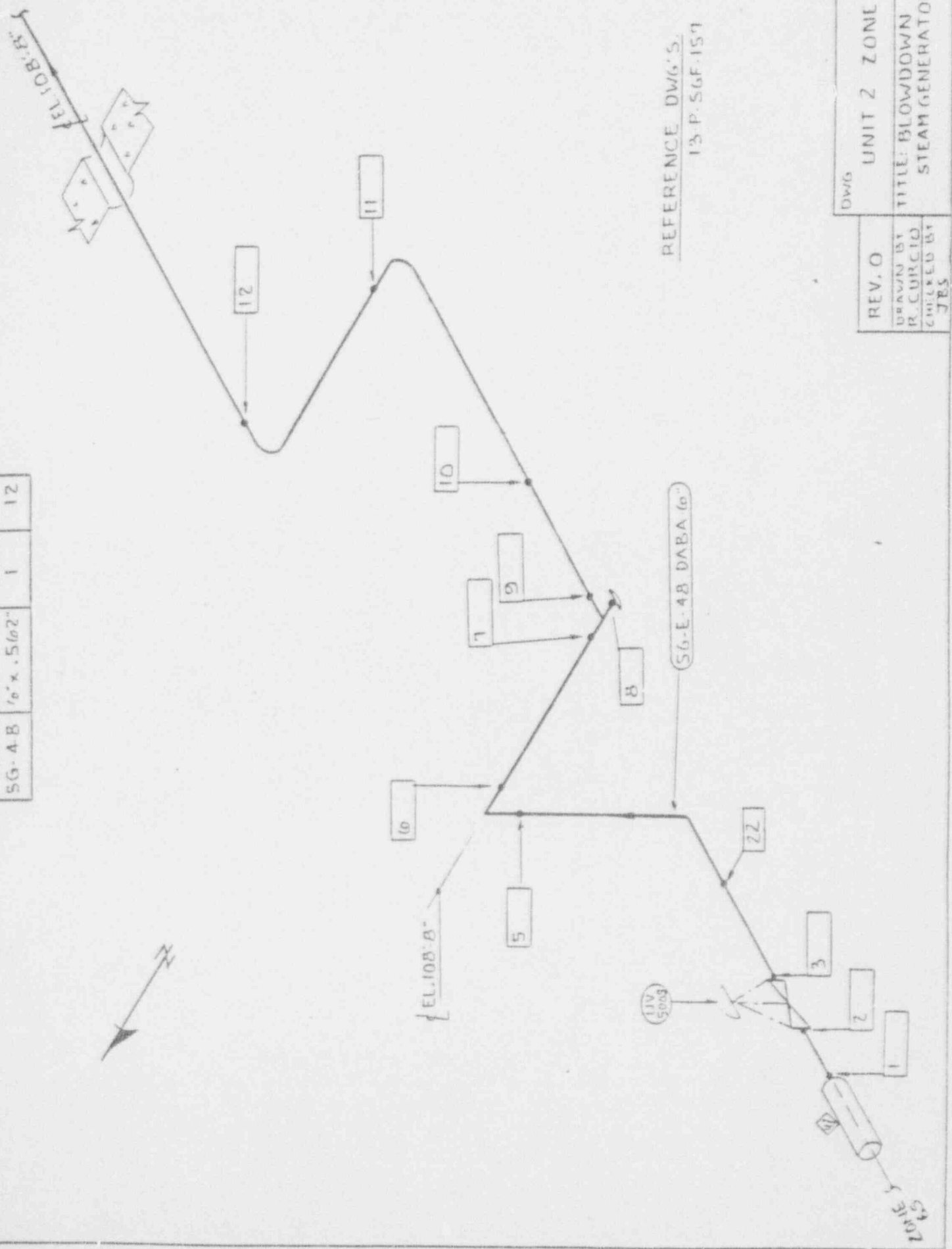
CHECKED BY

JES

BLOWDOWN 5/6 2



| LINE # | DIA/SCH     | OM | TO |
|--------|-------------|----|----|
| SG-4B  | 10" x .562" | 1  | 12 |



REFERENCE DWG'S.  
13 P. 56F. 157

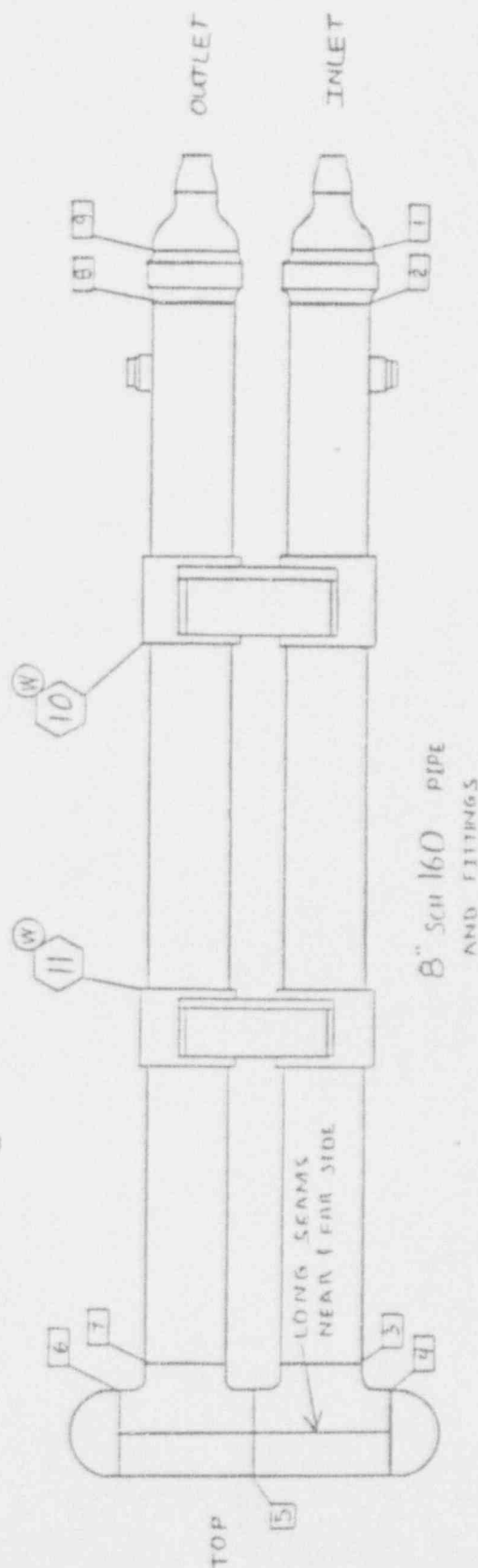
| REV. 0                | DWG | UNIT 2 ZONE 67                        |
|-----------------------|-----|---------------------------------------|
| DRAWN BY<br>R. CURCIO |     | TITLE: BLOWDOWN<br>STEAM GENERATOR #2 |
| CHECKED BY<br>JES     |     |                                       |

# NOTES:

TAG NO. 2MCHEEOI  
SERIAL NO. 79313 AMETER  
N.B. NO. 547

## REFERENCE DWGS:

N001-7.03-1  
N001-7.05-48 THRU 50



|                           |        |                |
|---------------------------|--------|----------------|
| REV 0                     | DWG    | UNIT 2 ZONE 68 |
| DRAWN BY<br>O. B. LIANSEN | TITLE: | REGENERATIVE   |
| CHECKED BY<br>JB3         |        | HEAT EXCHANGER |

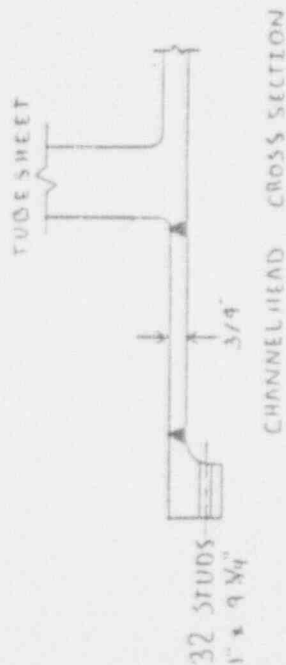


# NOTES:

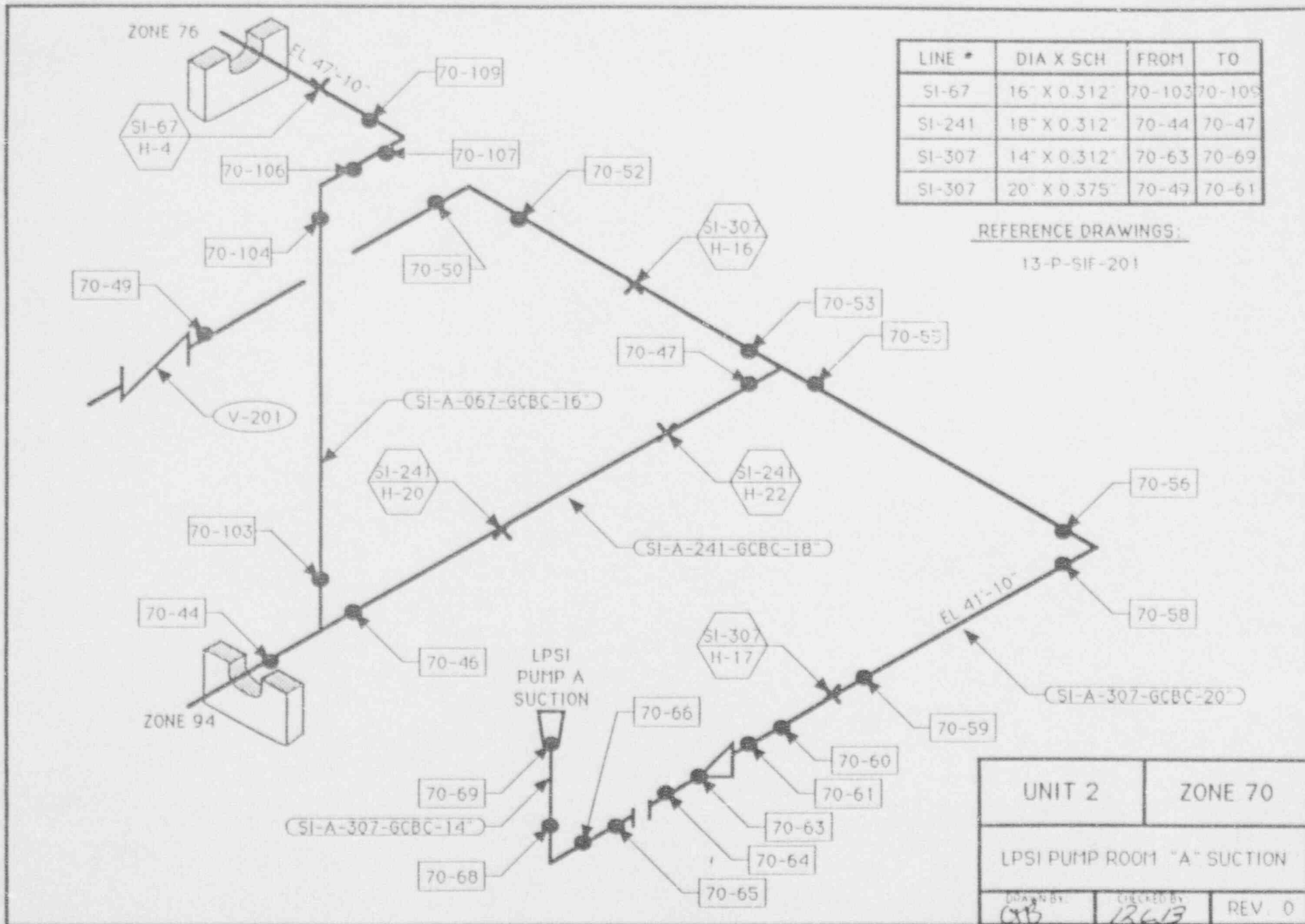
TAG NO. 2MCHNE02  
 SERIAL NO. N2373 (RICHMOND ENGR)  
 N.B. NO. 77334

## REFERENCE DRAWINGS:

N001-7.03-26  
 N001-7.03-27  
 N001-7.03-28  
 N001-7.03-29



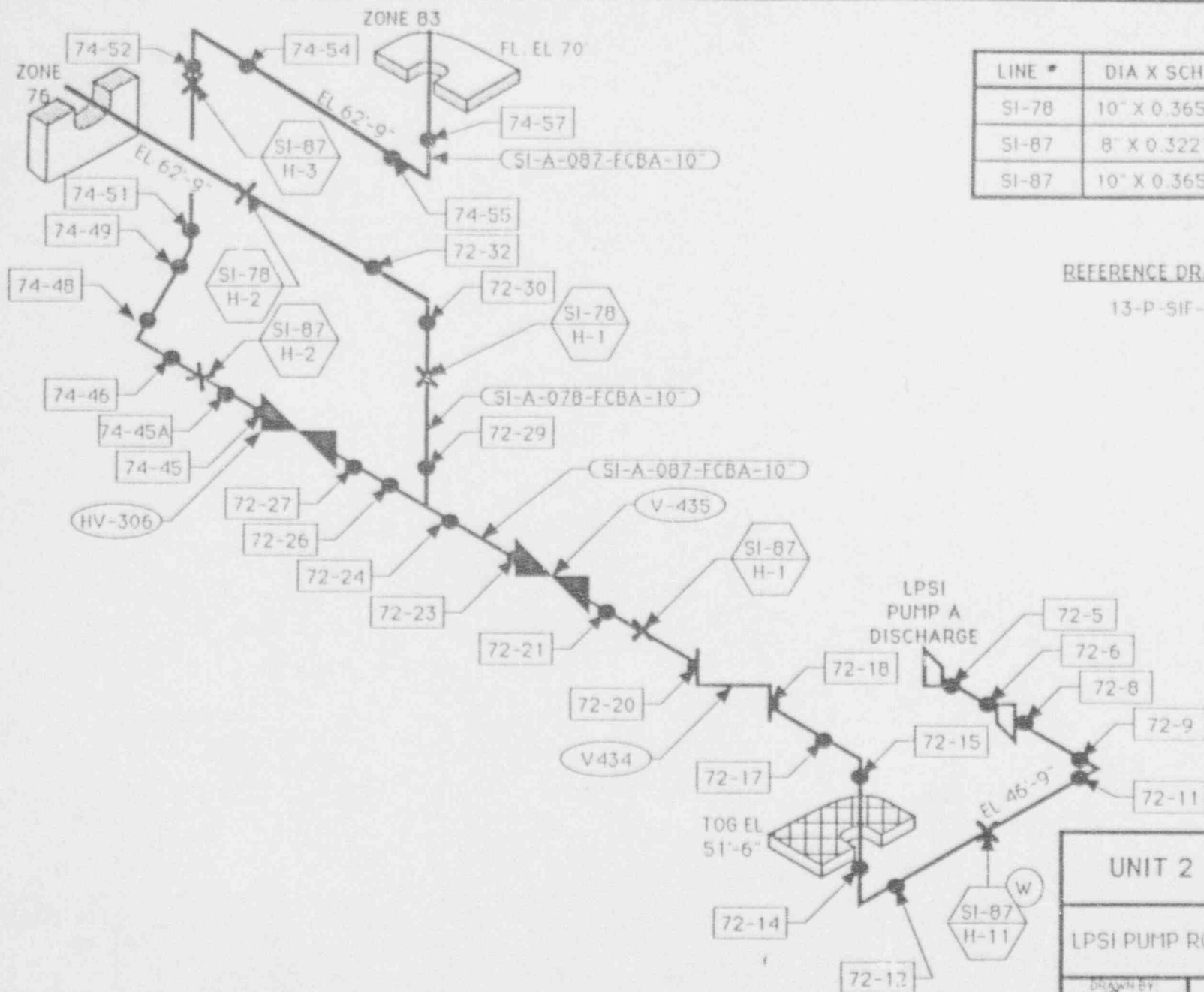
|                      |                                     |      |
|----------------------|-------------------------------------|------|
| REV. 0               | UNIT 2 ZONE 69                      | DWG. |
| DRAWN BY<br>DBHANSEN | TITLE:<br>LETDOWN<br>HEAT EXCHANGER |      |
| CHECKED BY<br>JBS    |                                     |      |



| LINE # | DIA X SCH    | FROM   | TO     |
|--------|--------------|--------|--------|
| SI-67  | 16" X 0.312" | 70-103 | 70-109 |
| SI-241 | 18" X 0.312" | 70-44  | 70-47  |
| SI-307 | 14" X 0.312" | 70-63  | 70-69  |
| SI-307 | 20" X 0.375" | 70-49  | 70-61  |

REFERENCE DRAWINGS:  
13-P-SIF-201

|                            |                      |
|----------------------------|----------------------|
| UNIT 2                     | ZONE 70              |
| LPSI PUMP ROOM "A" SUCTION |                      |
| DRAWN BY:<br>CAB           | CHECKED BY:<br>12613 |
| REV. 0                     |                      |

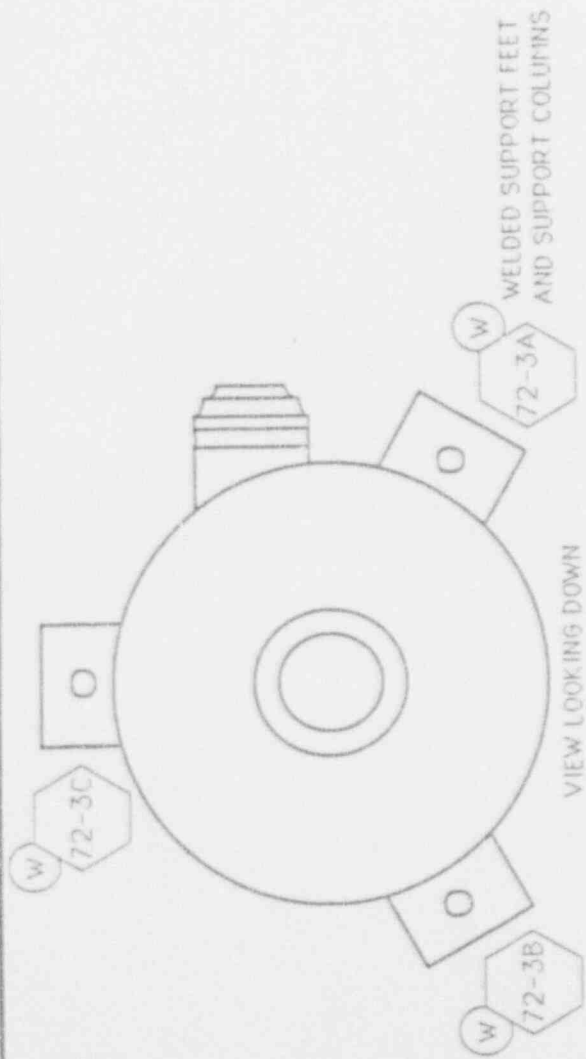


| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-78  | 10" X 0.365" | 72-29 | 72-32 |
| SI-87  | 8" X 0.322"  | 72-5  | 72-6  |
| SI-87  | 10" X 0.365" | 72-8  | 74-57 |

REFERENCE DRAWINGS:

13-P-SIF-207

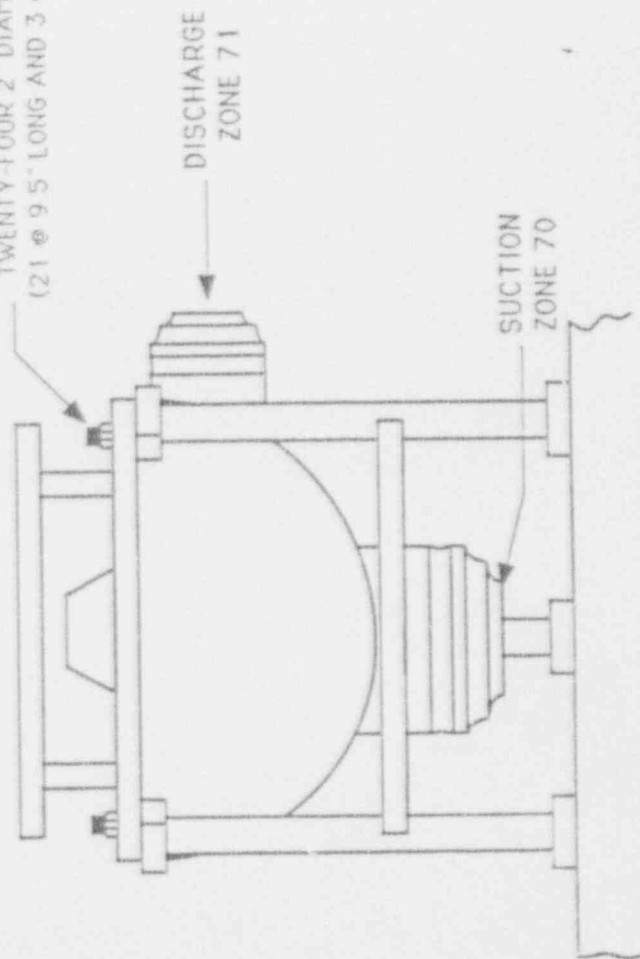
|                              |                      |
|------------------------------|----------------------|
| UNIT 2                       | ZONE 71              |
| LPSI PUMP ROOM "A" DISCHARGE |                      |
| DRAWN BY:<br>CTB             | CHECKED BY:<br>RCL/B |
| REV. 0                       |                      |



**NOTES:**

- 1) TAG NUMBER: 2H5IAPO1
- 2) SERIAL NUMBER: 0876-40 INGERSOLL RAND

TWENTY-FOUR 2" DIAMETER STUDS  
(21 @ 9.5" LONG AND 3 @ 8.88" LONG)



**REFERENCE DRAWINGS:**

N001-11.01-36  
N001-11.01-50

|                    |                    |
|--------------------|--------------------|
| UNIT 2             | ZONE 72            |
| LPSI PUMP A        |                    |
| DESIGNED BY<br>CAB | CHECKED BY<br>JELB |
| REV. 0             |                    |

1

IMAGE EVALUATION  
TEST TARGET (MT-3)

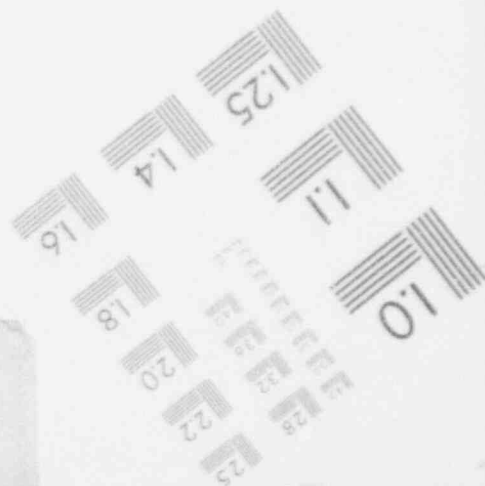
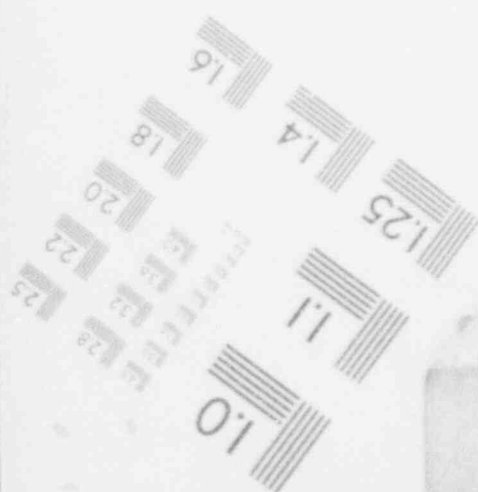
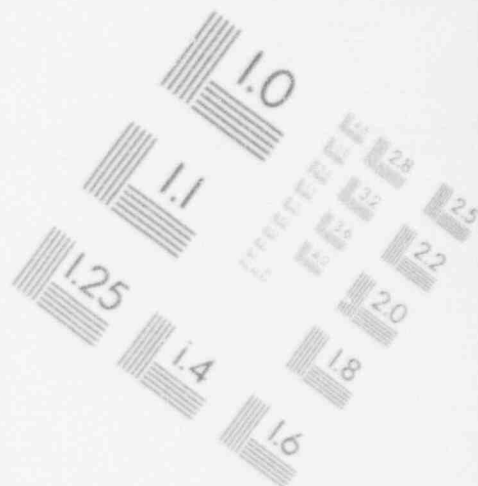
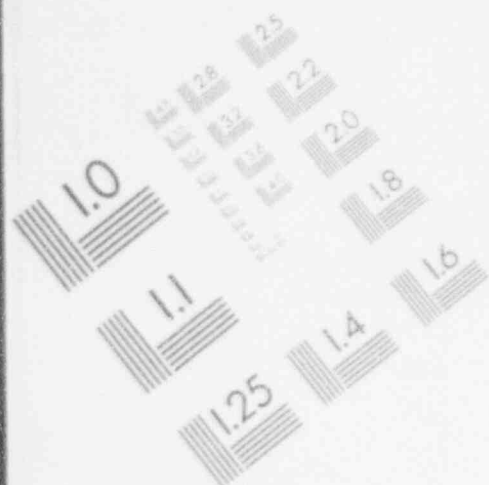
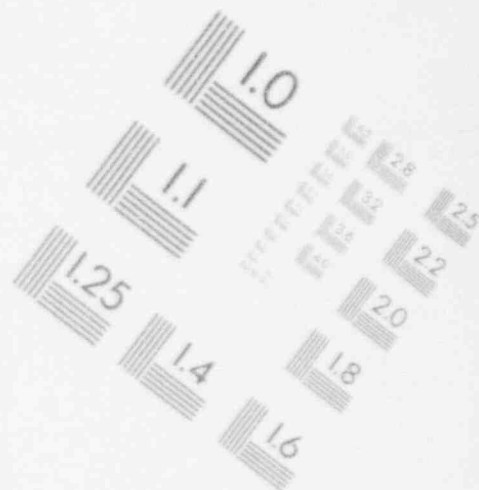
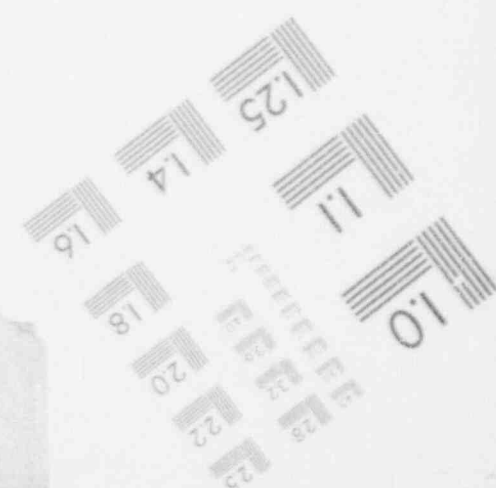


IMAGE EVALUATION  
TEST TARGET (MT-3)



6.4

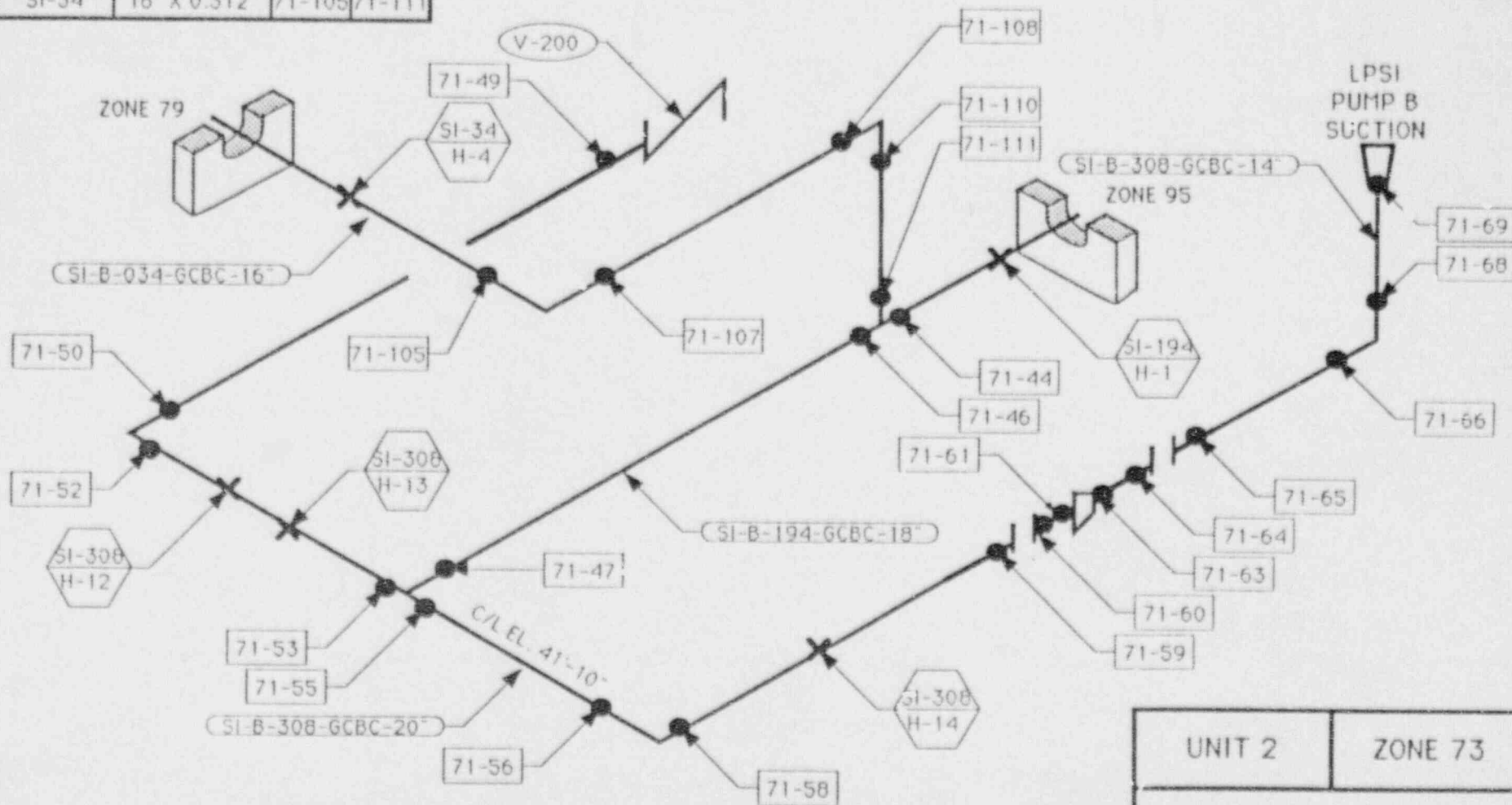




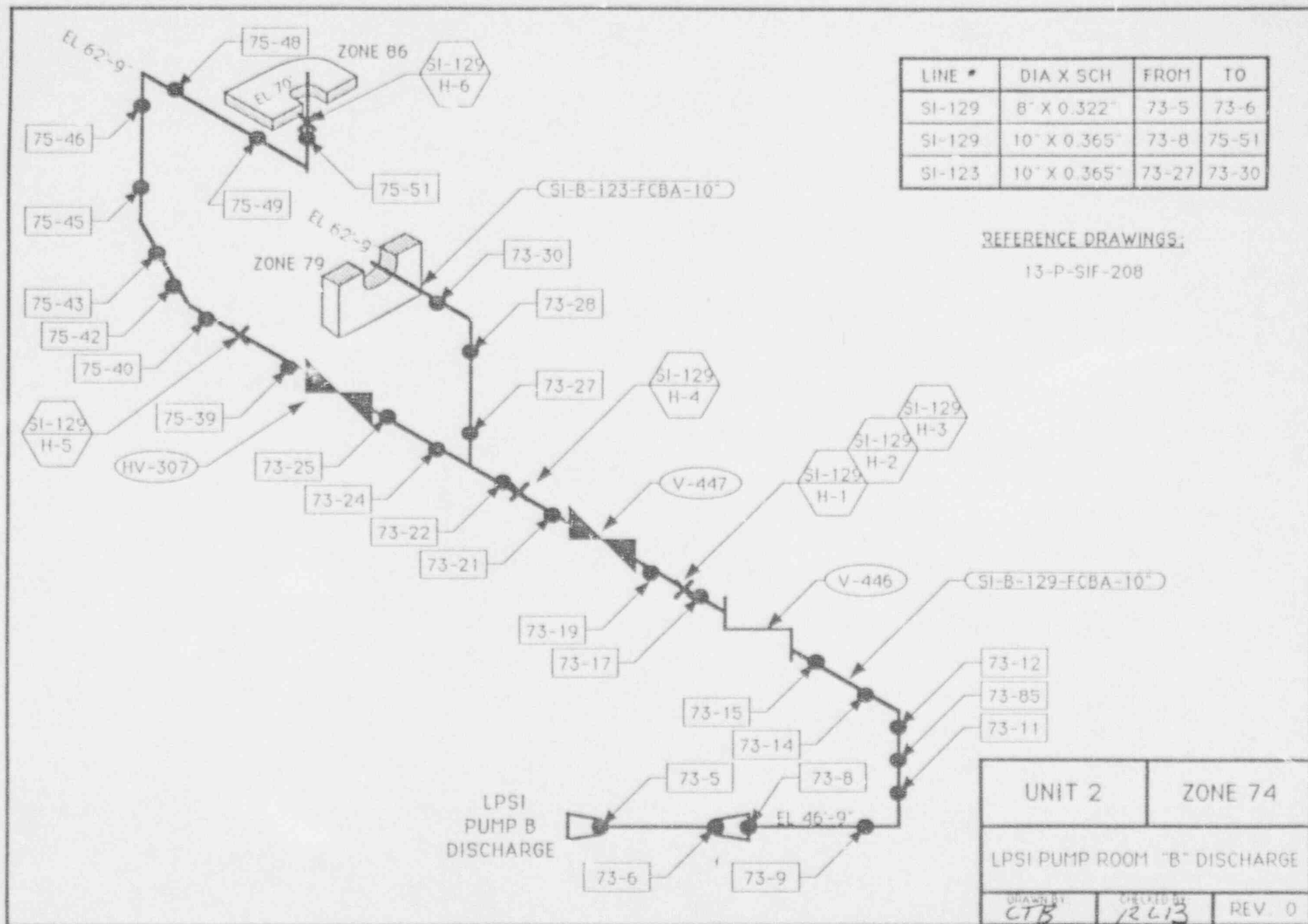
| LINE # | DIA X SCH    | FROM   | TO     |
|--------|--------------|--------|--------|
| SI-308 | 14" X 0.312" | 71-63  | 71-69  |
| SI-308 | 20" X 0.375" | 71-49  | 71-61  |
| SI-194 | 18" X 0.312" | 71-44  | 71-47  |
| SI-34  | 16" X 0.312" | 71-105 | 71-111 |

REFERENCE DRAWINGS:

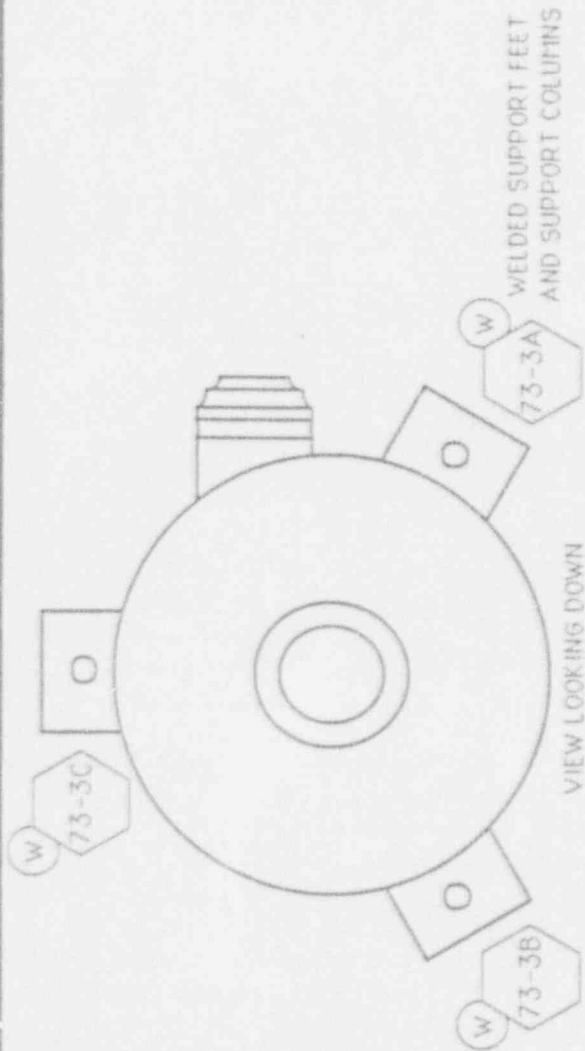
13-P-SIF-202



|                            |                    |
|----------------------------|--------------------|
| UNIT 2                     | ZONE 73            |
| LPSI PUMP ROOM "B" SUCTION |                    |
| DRAWN BY:<br>CTB           | CHECKED BY:<br>ZLB |
| REV. 0                     |                    |



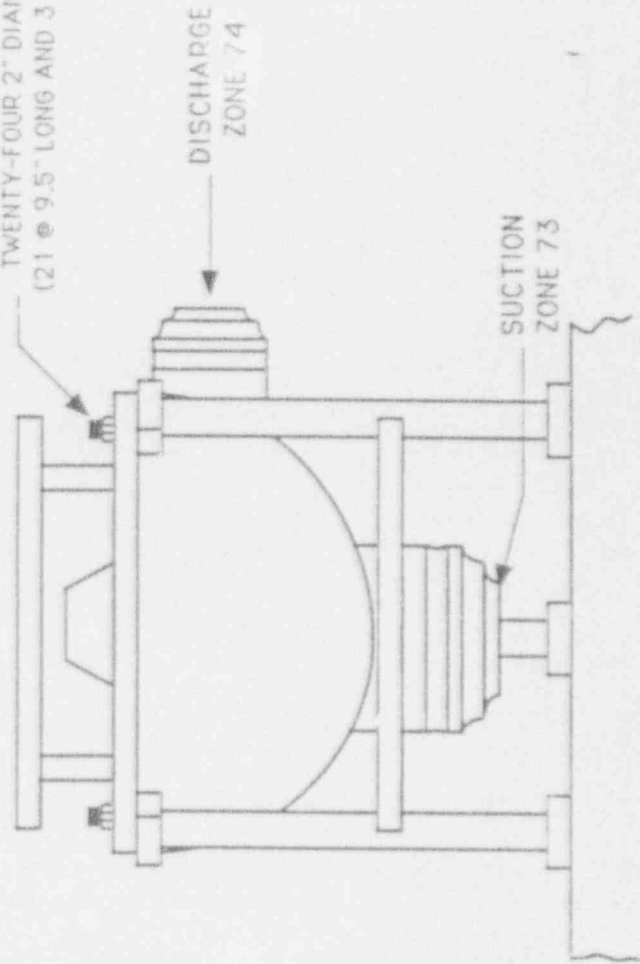




**NOTES:**

- 1) TAG NUMBER: 211SIBD01
- 2) SERIAL NUMBER: 0876-41 INGERSOLL RAND

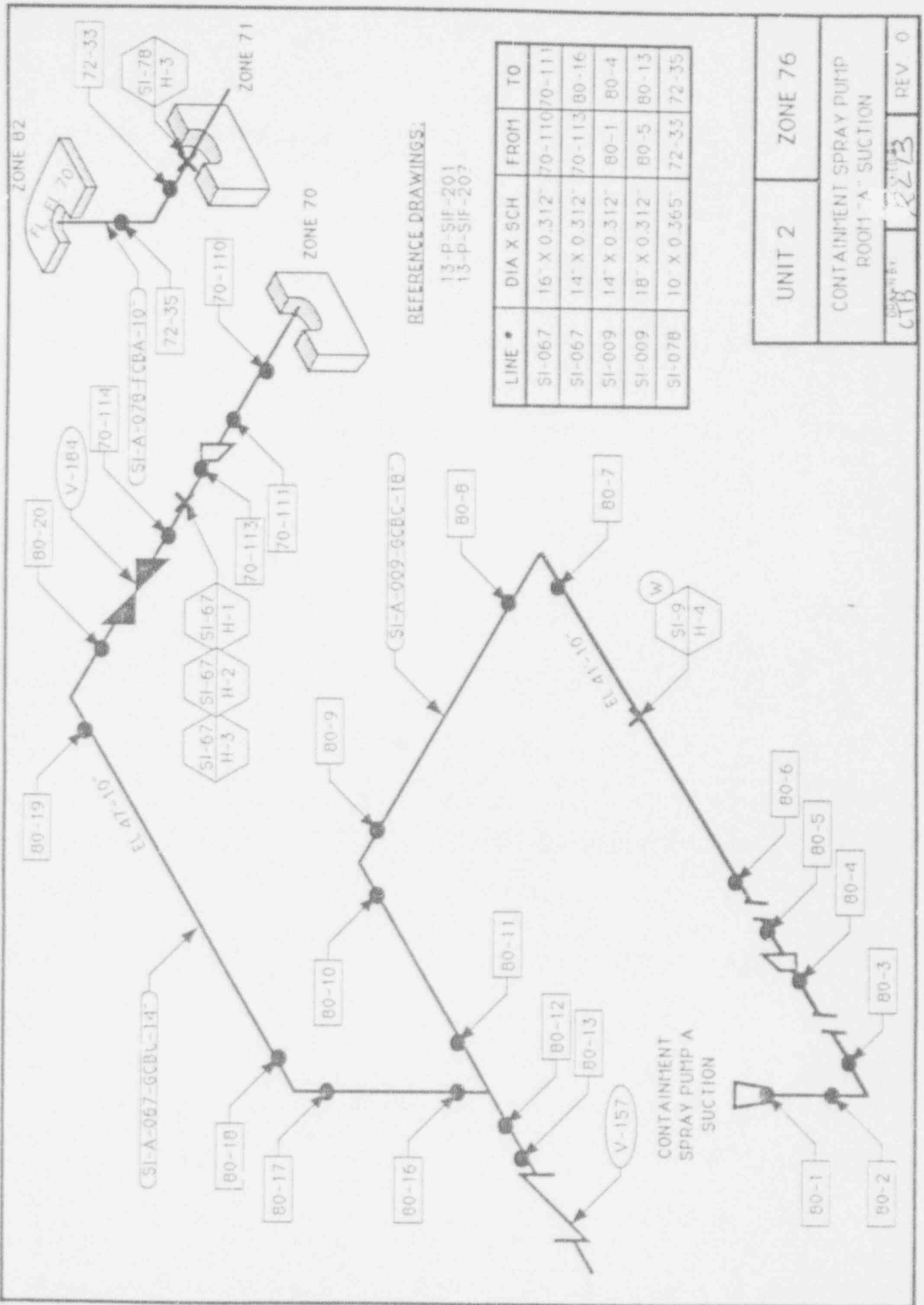
TWENTY-FOUR 2" DIAMETER STUDS  
(21 @ 9.5" LONG AND 3 @ 8.88" LONG)

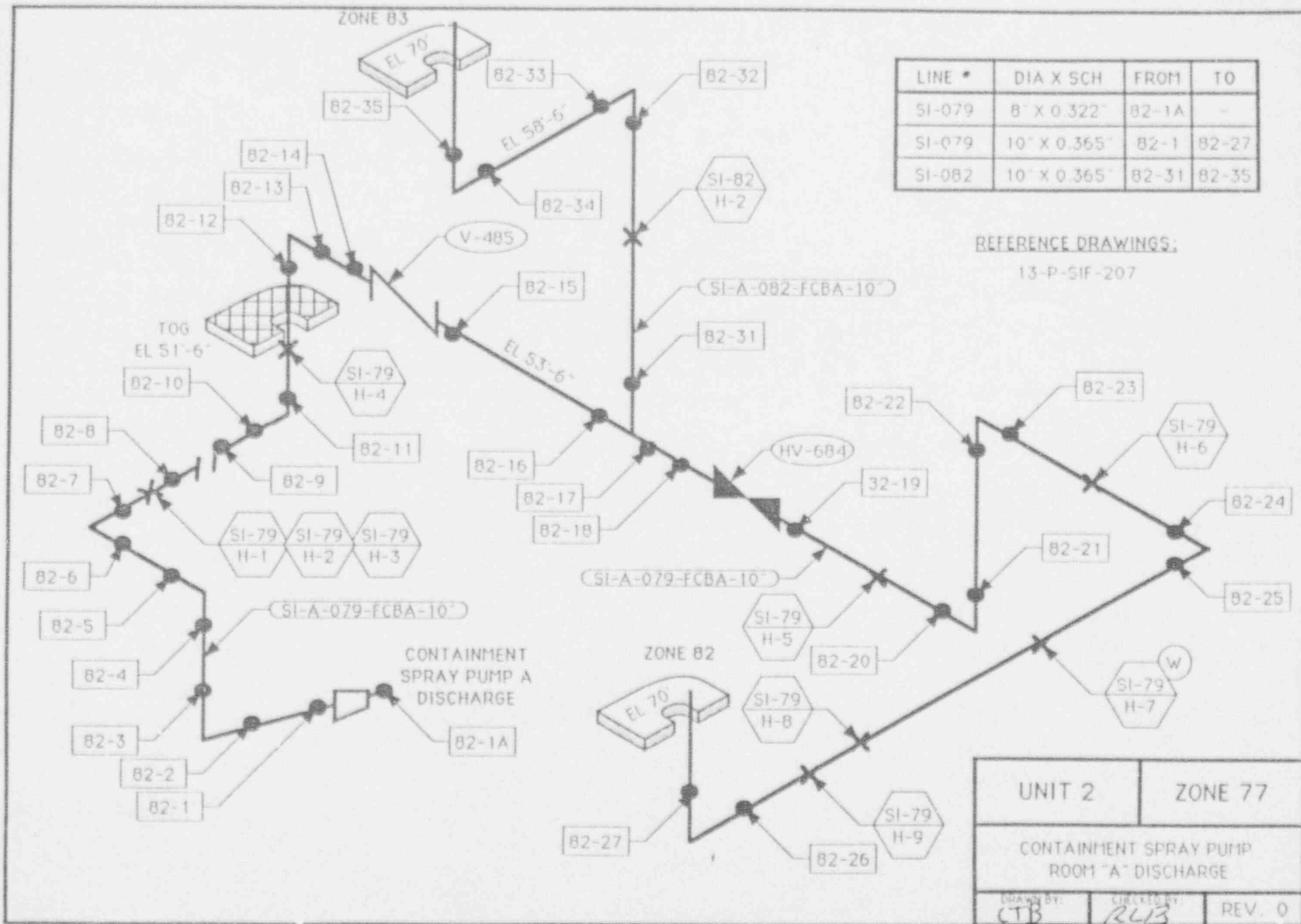


**REFERENCE DRAWINGS:**

N001-11.01-36  
N001-11.01-50

|  |         |
|--|---------|
| UNIT 2   | ZONE 75 |
| LPSI PUMP B  |         |
| Drawn BY: <b>CTB</b><br>Checked BY: <b>CTB</b><br>Date: <b>12/13</b> | REV 0   |





| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-079 | 8" X 0.322"  | 82-1A | -     |
| SI-079 | 10" X 0.365" | 82-1  | 82-27 |
| SI-082 | 10" X 0.365" | 82-31 | 82-35 |

REFERENCE DRAWINGS:

13-P-SIF-207

UNIT 2

ZONE 77

CONTAINMENT SPRAY PUMP  
ROOM "A" DISCHARGE

DRAWN BY:  
CTB

CHECKED BY:  
RLB

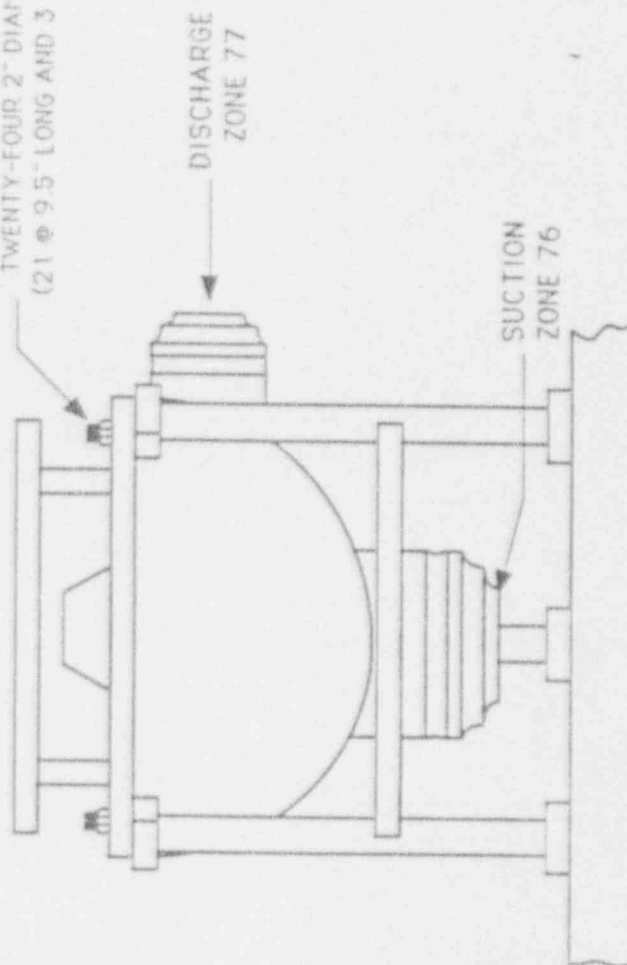
REV. 0



**NOTES:**

- 1) TAG NUMBER: 2H5IAPO3
- 2) SERIAL NUMBER: 0876-42 INGERSOLL RAND

TWENTY-FOUR 2" DIAMETER STUDS  
(21 @ 9.5" LONG AND 3 @ 8.88" LONG)



**REFERENCE DRAWINGS:**

N001-11.01-36

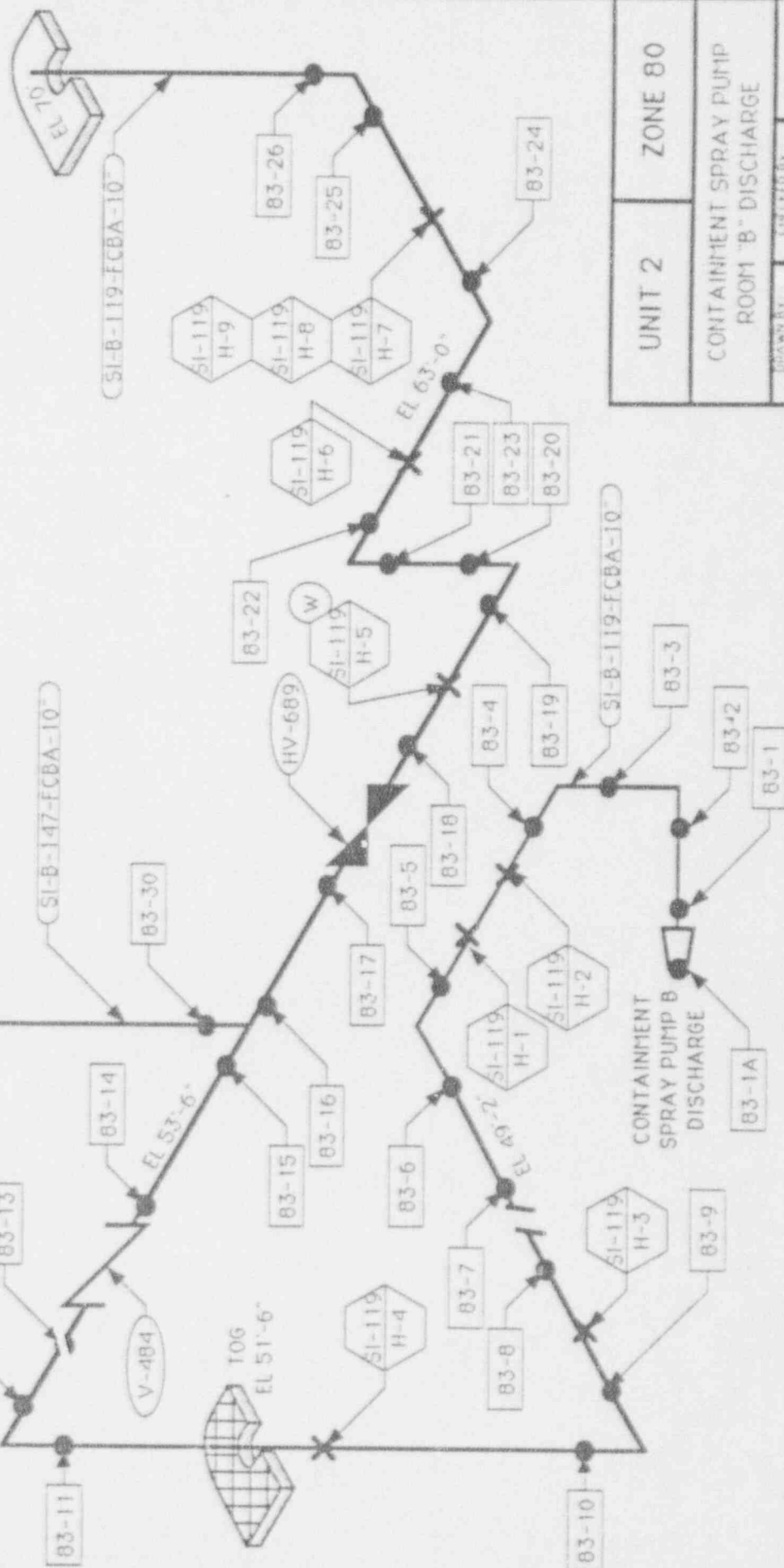
|                          |                   |
|--------------------------|-------------------|
| UNIT 2                   | ZONE 78           |
| CONTAINMENT SPRAY PUMP A |                   |
| DESIGNED BY<br>CIB       | CHECKED BY<br>BLL |
| REV. 0                   |                   |



| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-119 | 8" X 0.322"  | 83-1A | -     |
| SI-119 | 10" X 0.365" | 83-1  | 83-26 |
| SI-147 | 10" X 0.365" | 83-30 | 83-34 |

REFERENCE DRAWINGS:

13-P-SIF-208



UNIT 2 ZONE 80

CONTAINMENT SPRAY PUMP  
ROOM "B" DISCHARGE

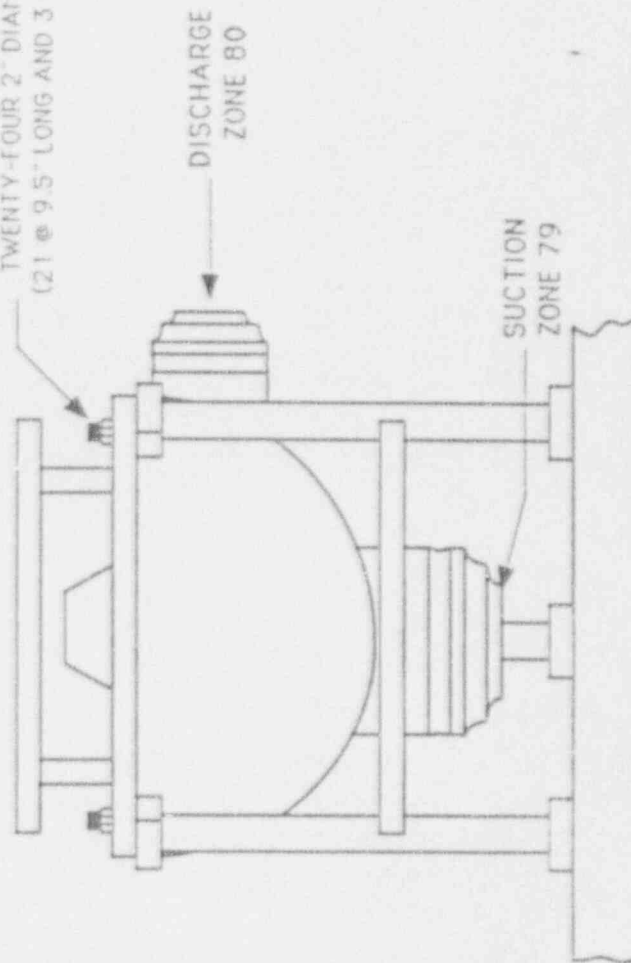
DRAWN BY: *CTB* CHECKED BY: *RLB* REV. 0



**NOTES:**

- 1) TAG NUMBER: 2MSIBP03
- 2) SERIAL NUMBER: 0876-43 INGERSOL RAND

TWENTY-FOUR 2" DIAMETER STUDS  
(21 @ 9.5" LONG AND 3 @ 8.88" LONG)



**REFERENCE DRAWINGS:**

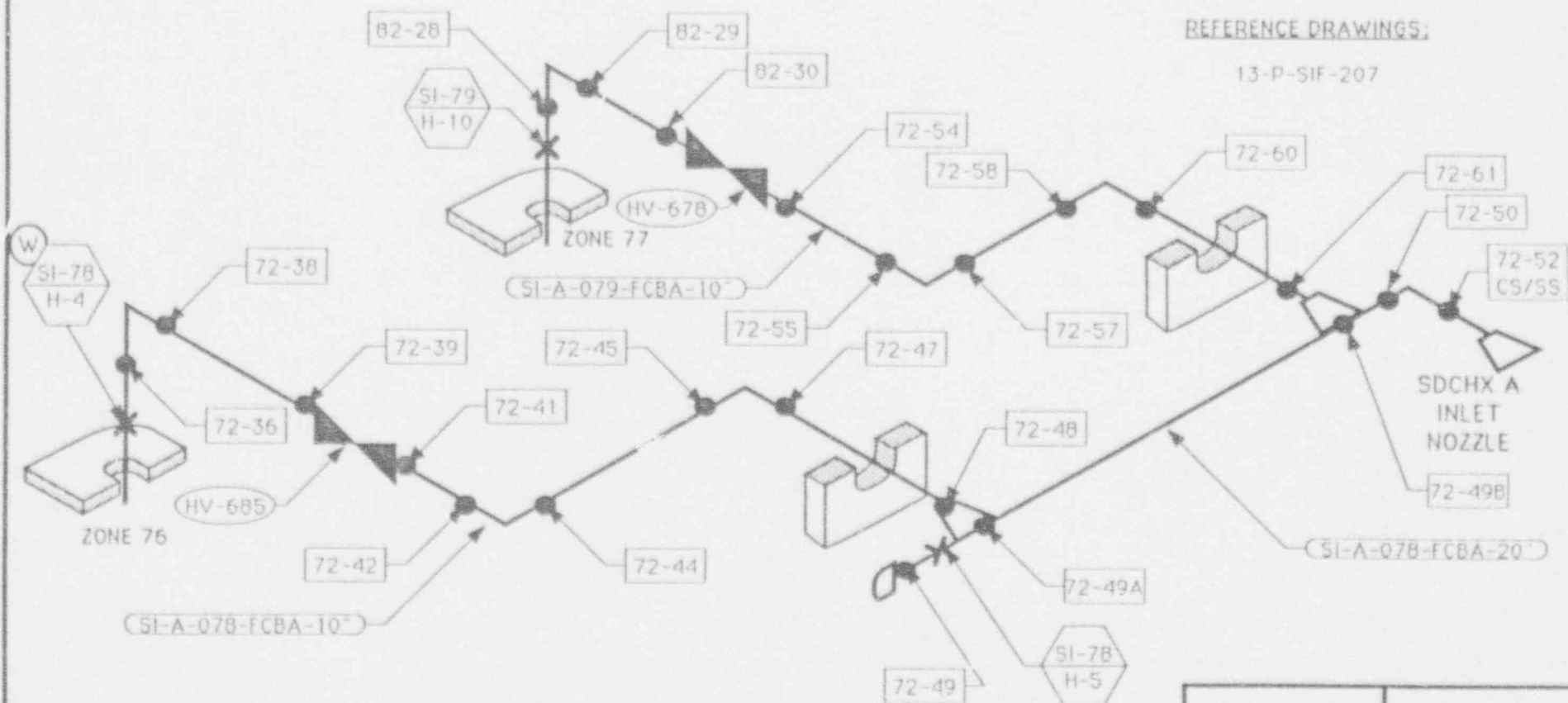
N001-11.01-36

|                          |                   |
|--------------------------|-------------------|
| UNIT 2                   | ZONE 81           |
| CONTAINMENT SPRAY PUMP B |                   |
| DRAWN BY<br>CAB          | CHECKED BY<br>RLB |
| REV. 0                   |                   |

| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-078 | 10" X 0.365" | 72-36 | 72-48 |
| SI-078 | 20" X 0.500" | 72-49 | 72-52 |
| SI-079 | 10" X 0.365" | 82-28 | 72-61 |

REFERENCE DRAWINGS:

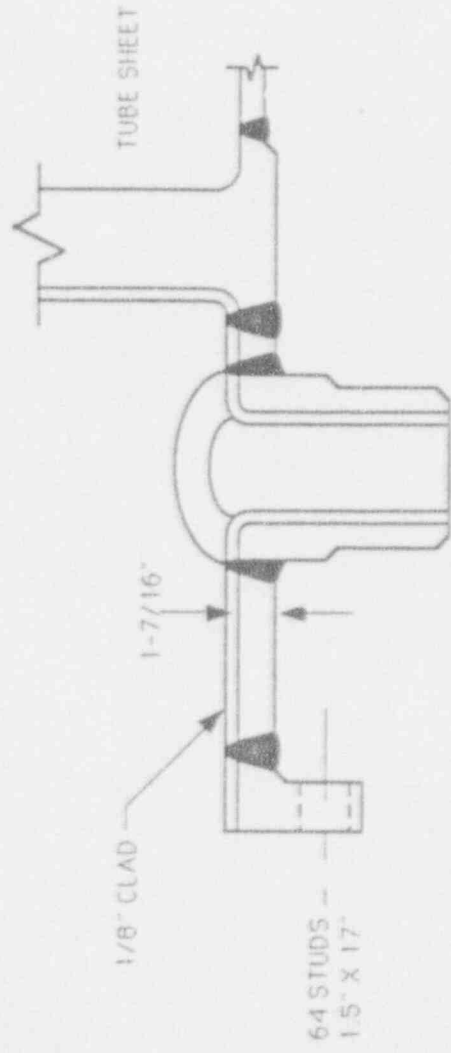
13-P-SIF-207



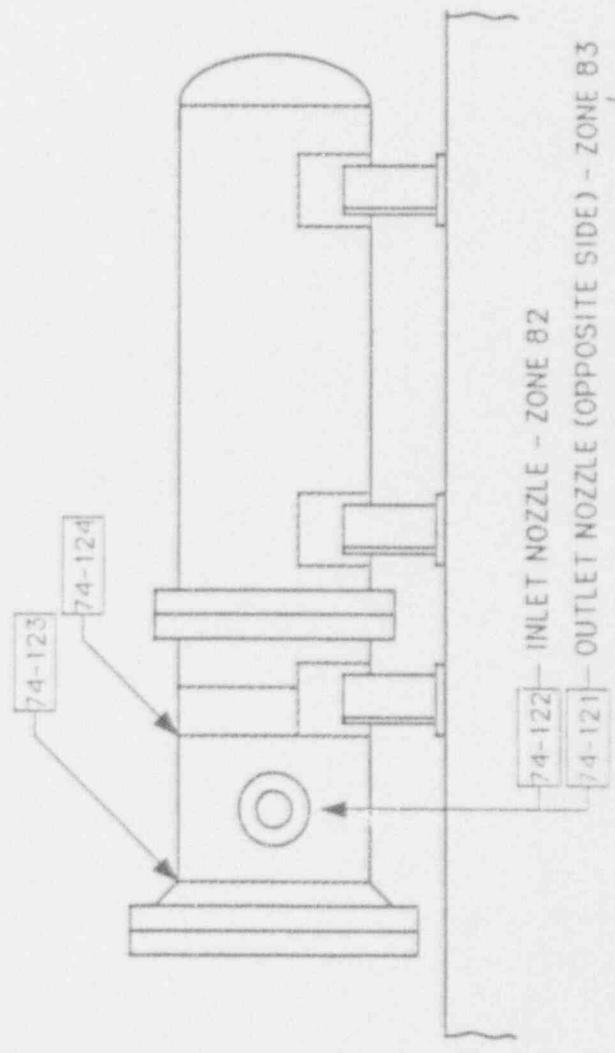
|  |                   |
|--|-------------------|
| UNIT 2                                 | ZONE 82           |
| SHUTDOWN COOLING HEAT EXCHANGER ROOM A |                   |
| DRAWN BY<br>CTB                        | CHECKED BY<br>JLB |
| REV. 0                                 |                   |







CHANNEL HEAD CROSS SECTION



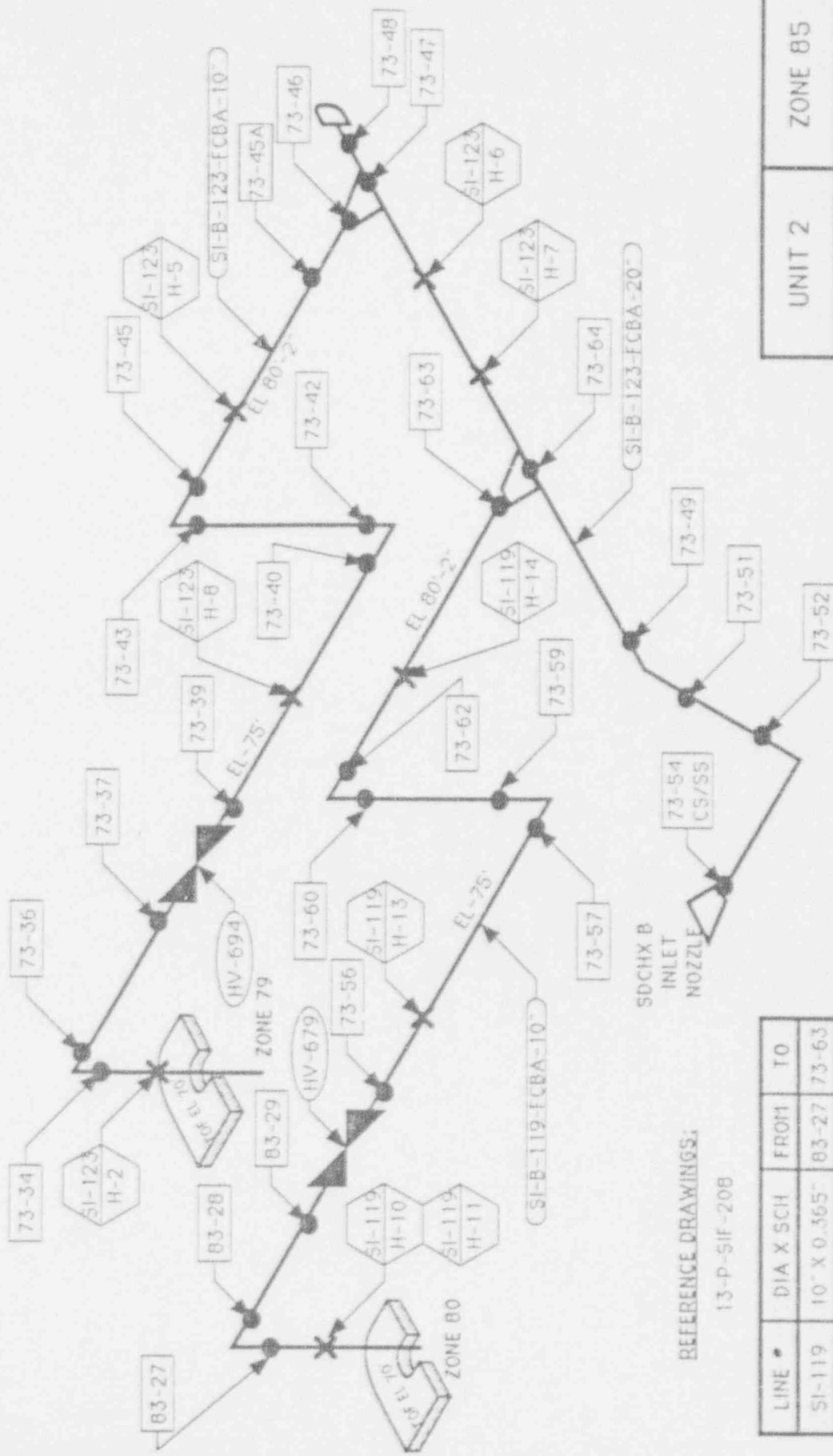
NOTES:

- 1) TAG NUMBER: 2H1SIAE01
- 2) SERIAL NUMBER: S-1B343 (ENGR & FABRICATORS)

REFERENCE DRAWINGS:

- NC01-7.03-20
- NC01-7.03-25

|                                      |                     |
|--------------------------------------|---------------------|
| UNIT 2                               | ZONE 84             |
| SHUTDOWN COOLING<br>HEAT EXCHANGER A |                     |
| DESIGNED BY<br>CAB                   | CHECKED BY<br>/24/3 |
| REV. 0                               |                     |

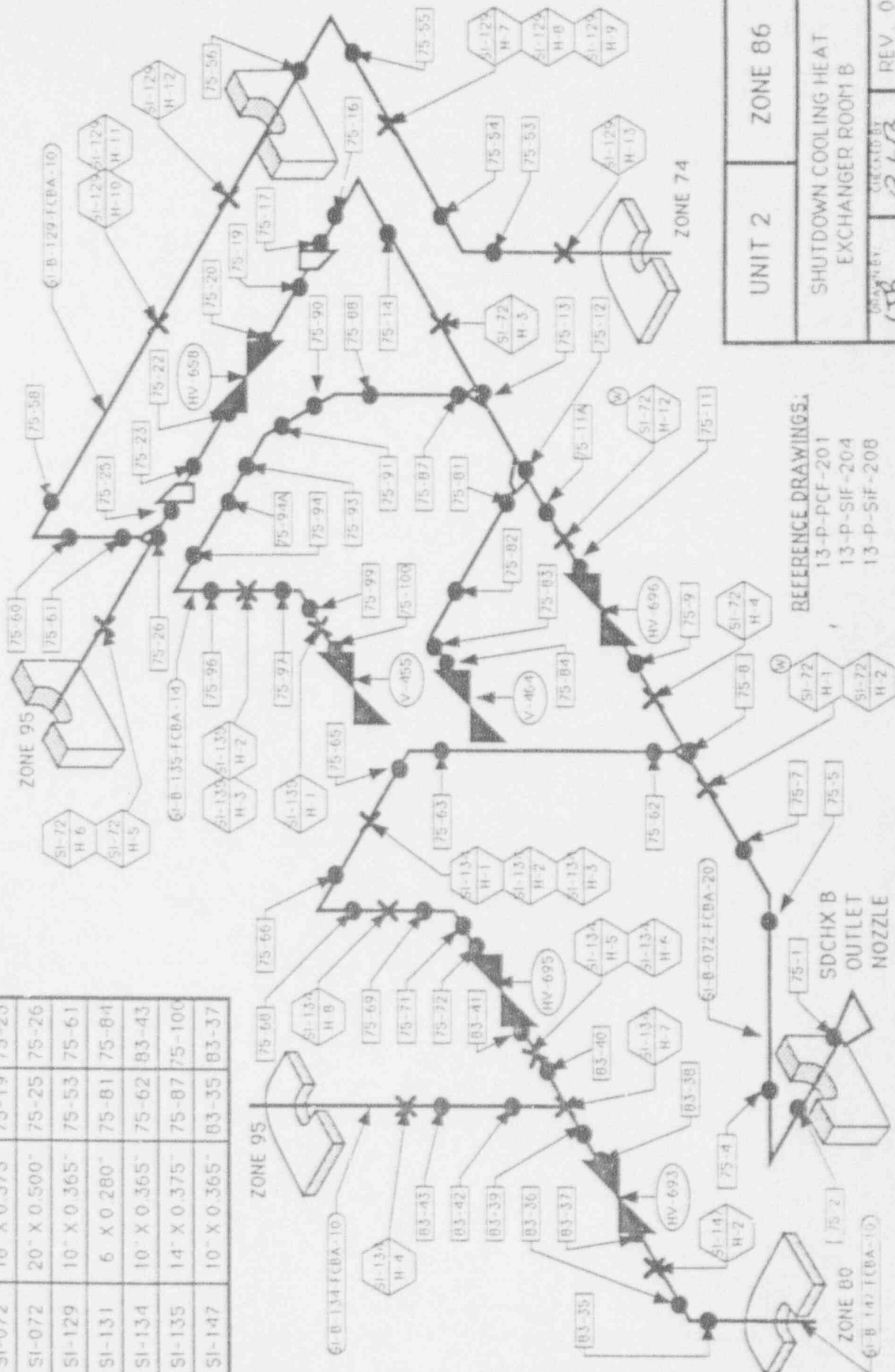


REFERENCE DRAWINGS:  
13-P-SIF-208

| LINE   | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-119 | 10" X 0.365" | 83-27 | 73-63 |
| SI-123 | 10" X 0.365" | 73-34 | 73-46 |
| SI-123 | 20" X 0.500" | 73-48 | 73-54 |

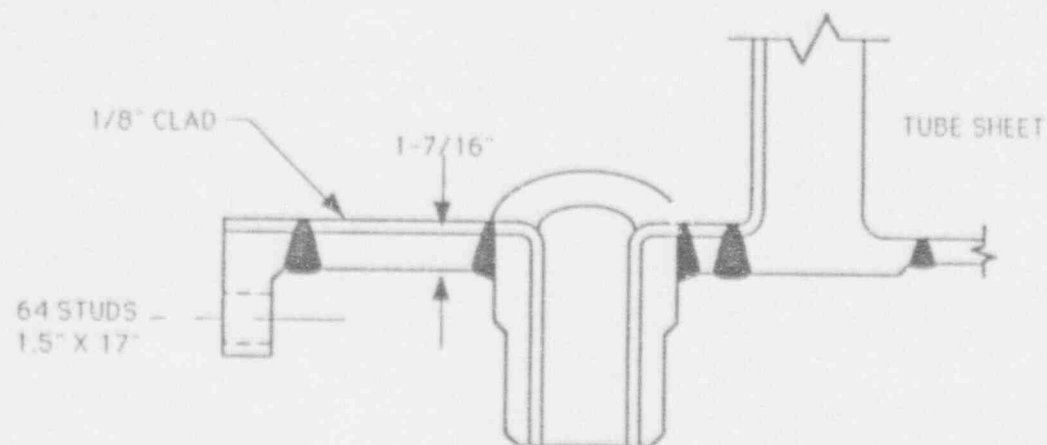
|  |                   |
|--|-------------------|
| UNIT 2                                   | ZONE 85           |
| SHUTDOWN COOLING HEAT EXCHANGER ROOM 1 B |                   |
| DESIGNED BY<br>CTB                       | CHECKED BY<br>RLB |
| REV. 0                                   |                   |

| LINE   | DIA X SCH    | FROM  | TO     |
|--------|--------------|-------|--------|
| SI-072 | 20" X 0.500" | 75-1  | 75-17  |
| SI-072 | 16" X 0.375" | 75-19 | 75-23  |
| SI-072 | 20" X 0.500" | 75-25 | 75-26  |
| SI-129 | 10" X 0.365" | 75-53 | 75-61  |
| SI-131 | 6" X 0.280"  | 75-81 | 75-84  |
| SI-134 | 10" X 0.365" | 75-62 | 83-43  |
| SI-135 | 14" X 0.375" | 75-87 | 75-100 |
| SI-147 | 10" X 0.365" | 83-35 | 83-37  |

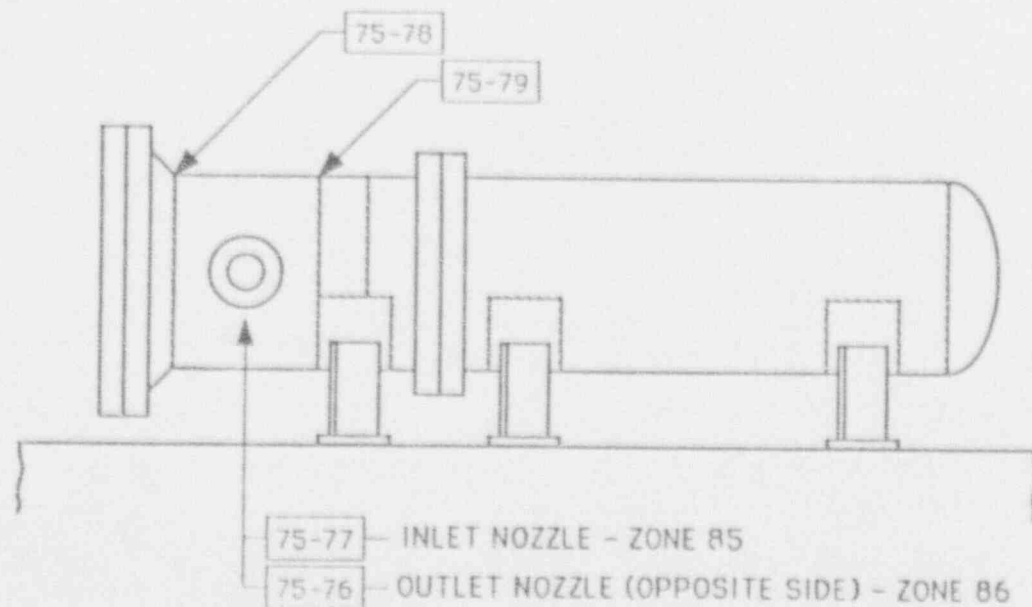


REFERENCE DRAWINGS:  
 13-P-PCF-201  
 13-P-SIF-204  
 13-P-SIF-208

|  |                        |
|--|------------------------|
| UNIT 2                                 | ZONE 86                |
| SHUTDOWN COOLING HEAT EXCHANGER ROOM B |                        |
| DESIGNED BY: <b>CSB</b>                | CHECKED BY: <b>243</b> |
| REV. 0                                 |                        |



CHANNEL HEAD CROSS SECTION



NOTES:

- 1) TAG NUMBER: 2H5IBE01
- 2) SERIAL NUMBER: S-1B344  
(ENGR & FABRICATORS)

REFERENCE DRAWINGS:

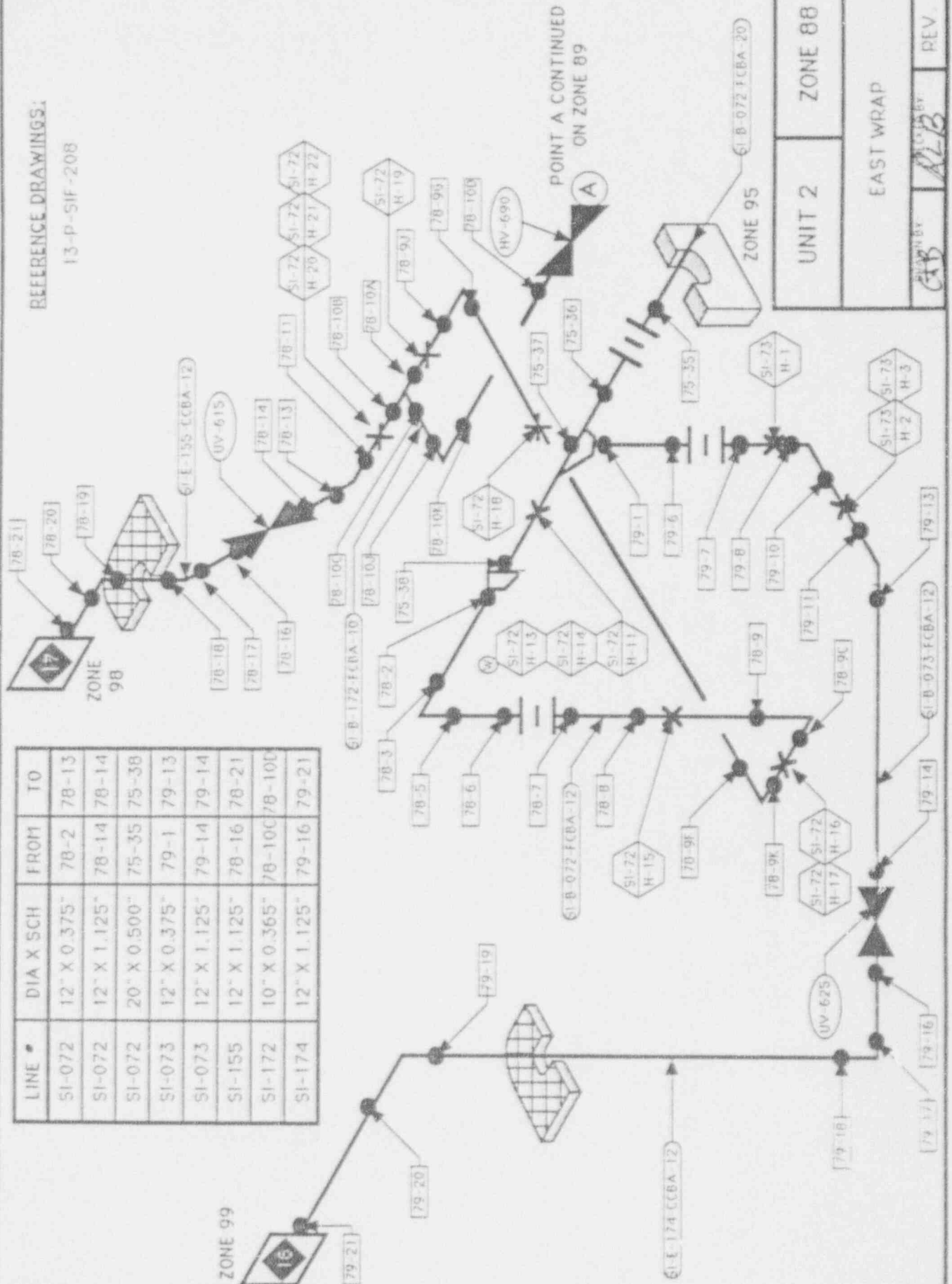
N001-7 03-20  
N001-7 03-25

|                                      |                     |
|--------------------------------------|---------------------|
| UNIT 2                               | ZONE 87             |
| SHUTDOWN COOLING<br>HEAT EXCHANGER B |                     |
| DRAWN BY:<br>CTB                     | CHECKED BY:<br>2413 |
| REV. 0                               |                     |

REFERENCE DRAWINGS:

13-P-SIF-208

| LINE   | DIA X SCH    | FROM   | TO     |
|--------|--------------|--------|--------|
| SI-072 | 12" X 0.375" | 78-2   | 78-13  |
| SI-072 | 12" X 1.125" | 78-14  | 78-14  |
| SI-072 | 20" X 0.500" | 75-35  | 75-38  |
| SI-073 | 12" X 0.375" | 79-1   | 79-13  |
| SI-073 | 12" X 1.125" | 79-14  | 79-14  |
| SI-155 | 12" X 1.125" | 78-16  | 78-21  |
| SI-172 | 10" X 0.365" | 78-10C | 78-10C |
| SI-174 | 12" X 1.125" | 79-16  | 79-21  |



UNIT 2 ZONE 88

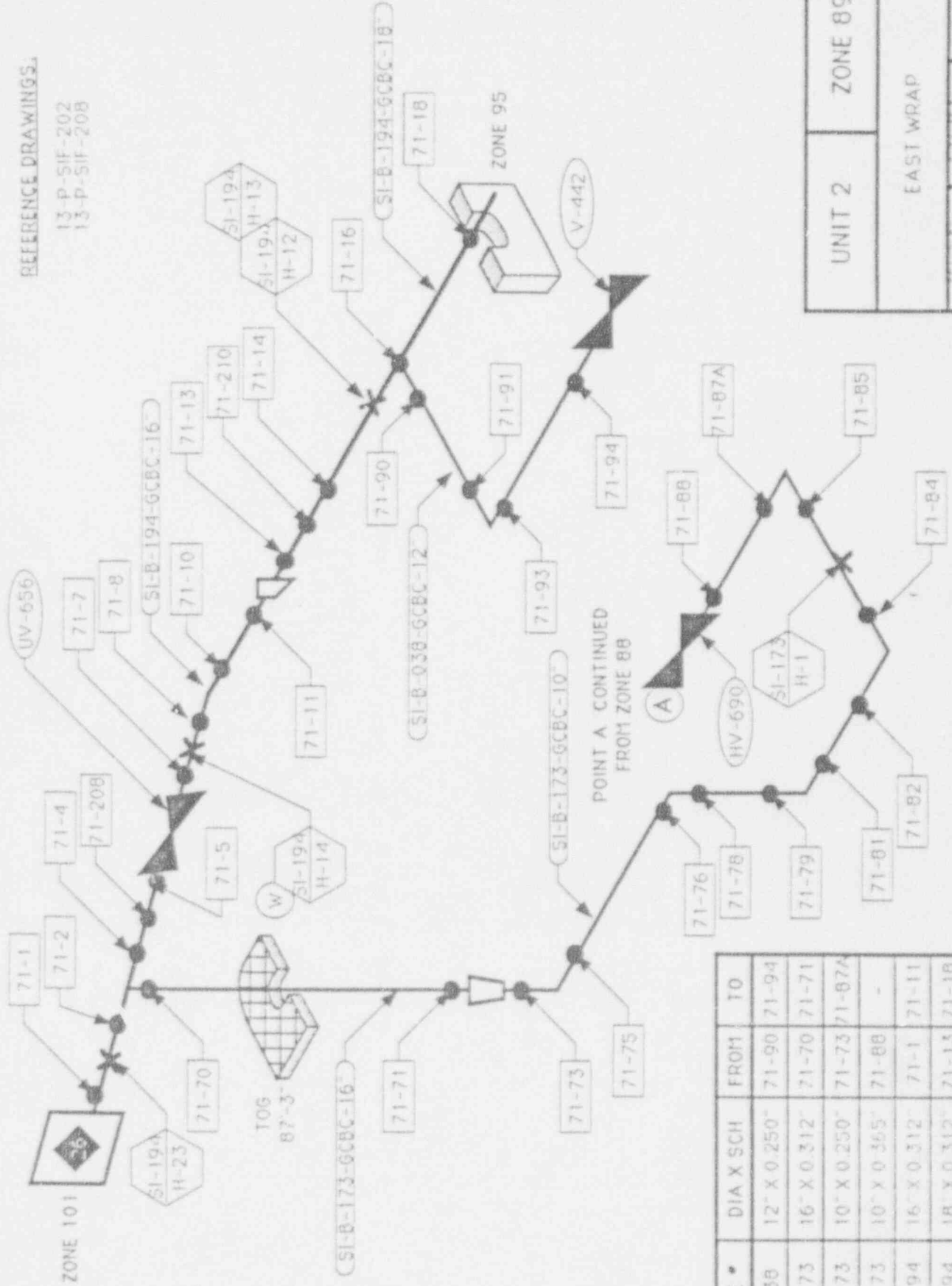
EAST WRAP

REV. 0



REFERENCE DRAWINGS:

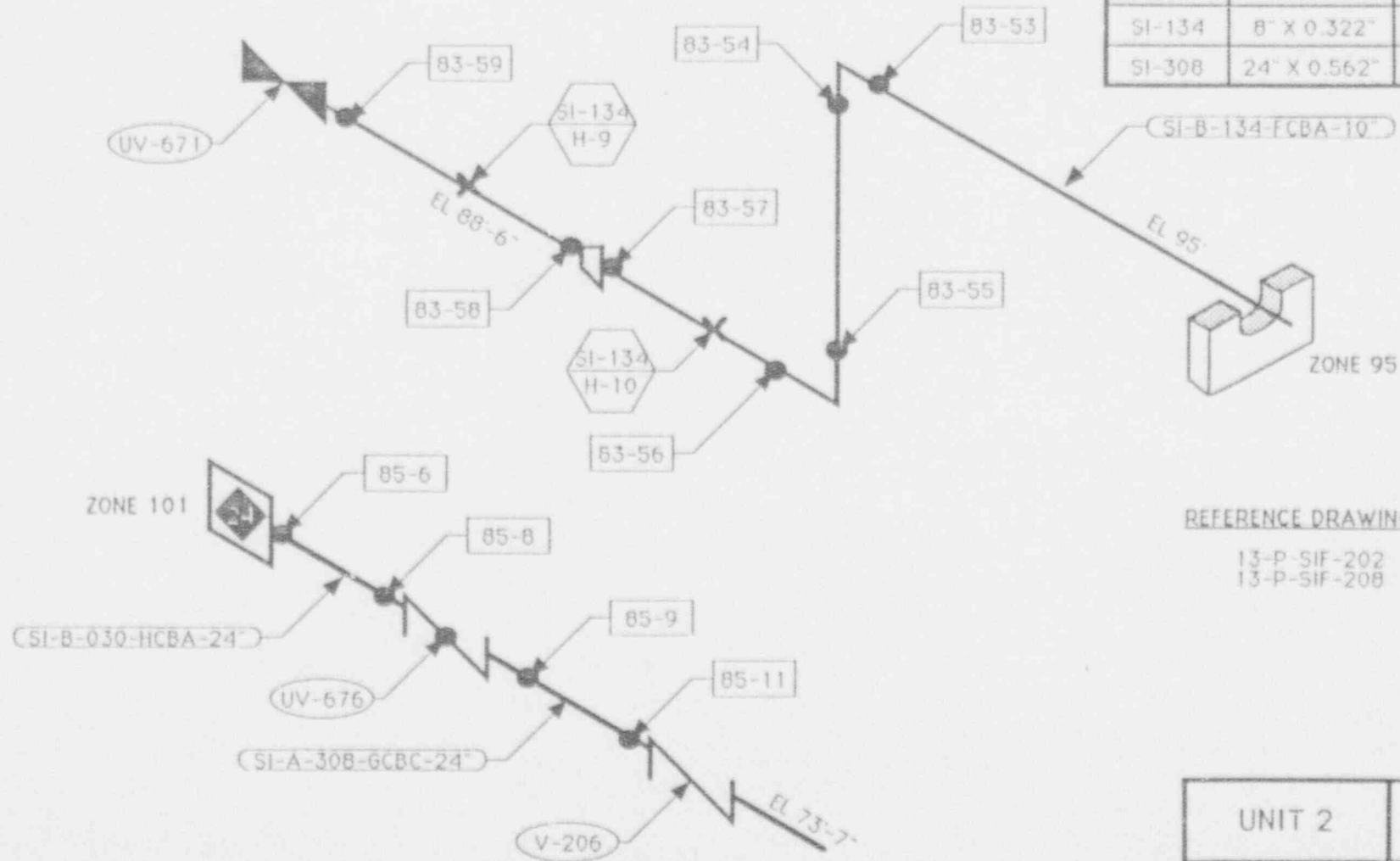
13-P-SIF-202  
13-P-SIF-208



| LINE # | DIA X SCH    | FROM  | TO     |
|--------|--------------|-------|--------|
| SI-38  | 12" X 0 250" | 71-90 | 71-94  |
| SI-173 | 16" X 0 312" | 71-70 | 71-71  |
| SI-173 | 10" X 0 250" | 71-73 | 71-87A |
| SI-173 | 10" X 0 365" | 71-88 | -      |
| SI-194 | 16" X 0 312" | 71-1  | 71-11  |
| SI-194 | 18" X 0 312" | 71-13 | 71-18  |

|             |         |
|-------------|---------|
| UNIT 2      | ZONE 89 |
| EAST WRAP   |         |
| DATE: 12/13 | REV: 0  |

| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-030 | 24" X 0.375" | 85-6  | 85-8  |
| SI-134 | 10" X 0.365" | 83-53 | 83-57 |
| SI-134 | 8" X 0.322"  | 83-58 | 83-59 |
| SI-308 | 24" X 0.562" | 85-9  | 85-11 |

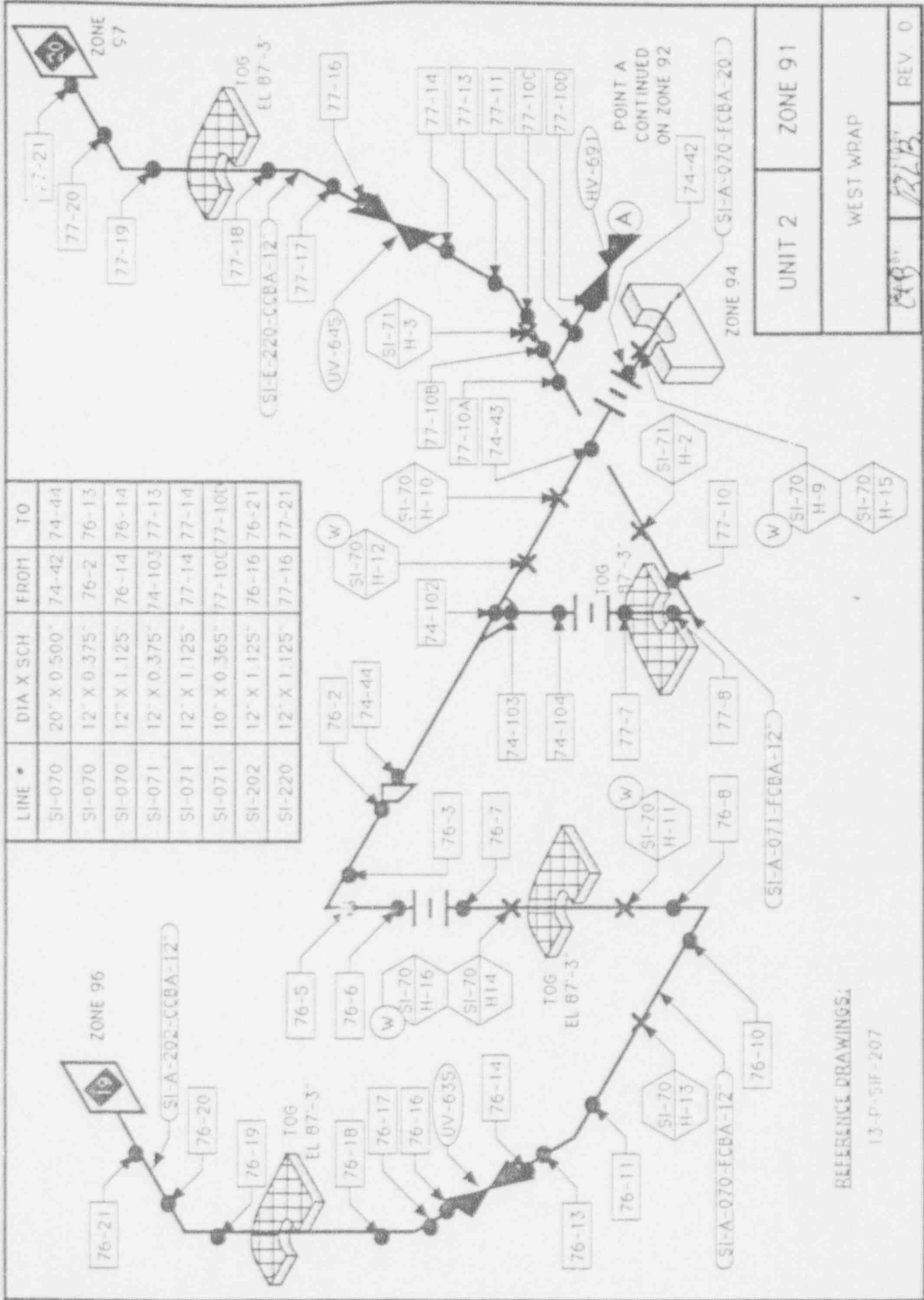


# REFERENCE DRAWINGS:

13-P-SIF-202  
13-P-SIF-208

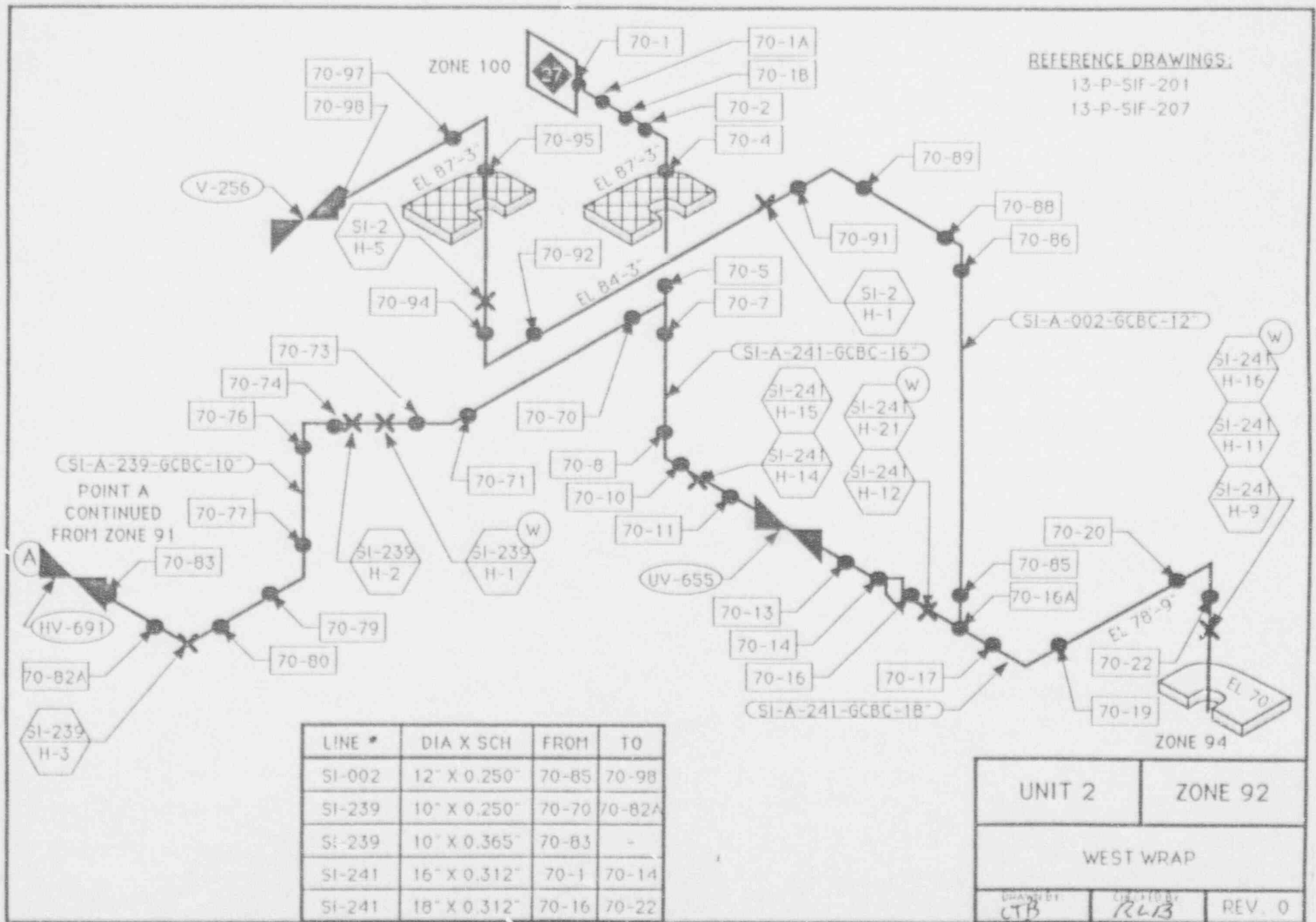
|                 |                   |
|-----------------|-------------------|
| UNIT 2          | ZONE 90           |
| EAST WRAP       |                   |
| DRAWN BY<br>CTB | CHECKED BY<br>JLB |
| REV. 0          |                   |





REFERENCE DRAWINGS:  
13-P-SIF-207

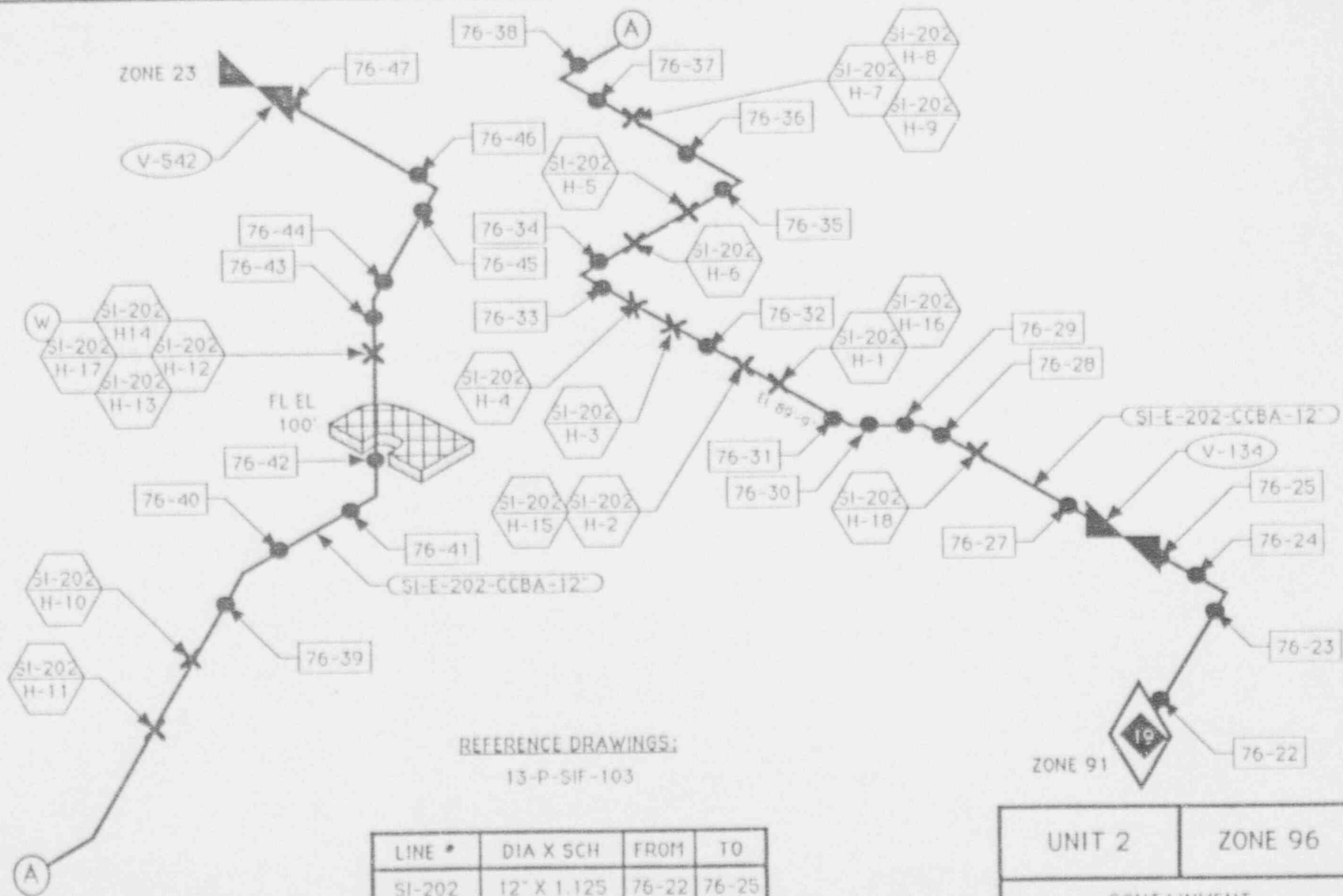
|           |         |
|-----------|---------|
| UNIT 2    | ZONE 91 |
| WEST WRAP |         |
| REV 0     | REV 0   |







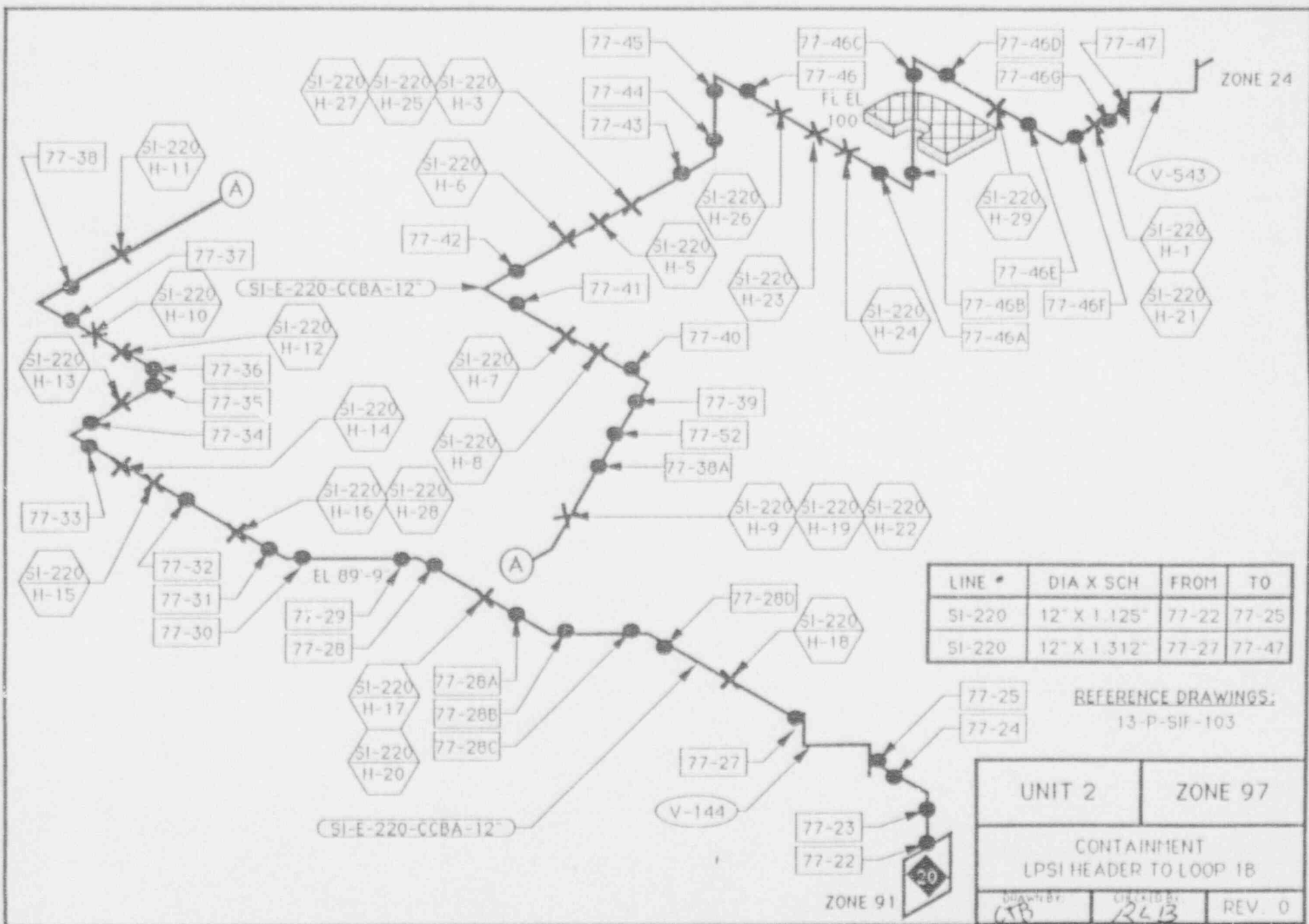




| LINE # | DIA X SCH   | FROM  | TO    |
|--------|-------------|-------|-------|
| SI-202 | 12" X 1.125 | 76-22 | 76-25 |
| SI-202 | 12" X 1.312 | 76-27 | 76-47 |

|                                       |         |
|---------------------------------------|---------|
| UNIT 2                                | ZONE 96 |
| CONTAINMENT<br>LPSI HEADER TO LOOP 1A |         |
| DESIGNED BY<br>CTB                    | REV. 0  |



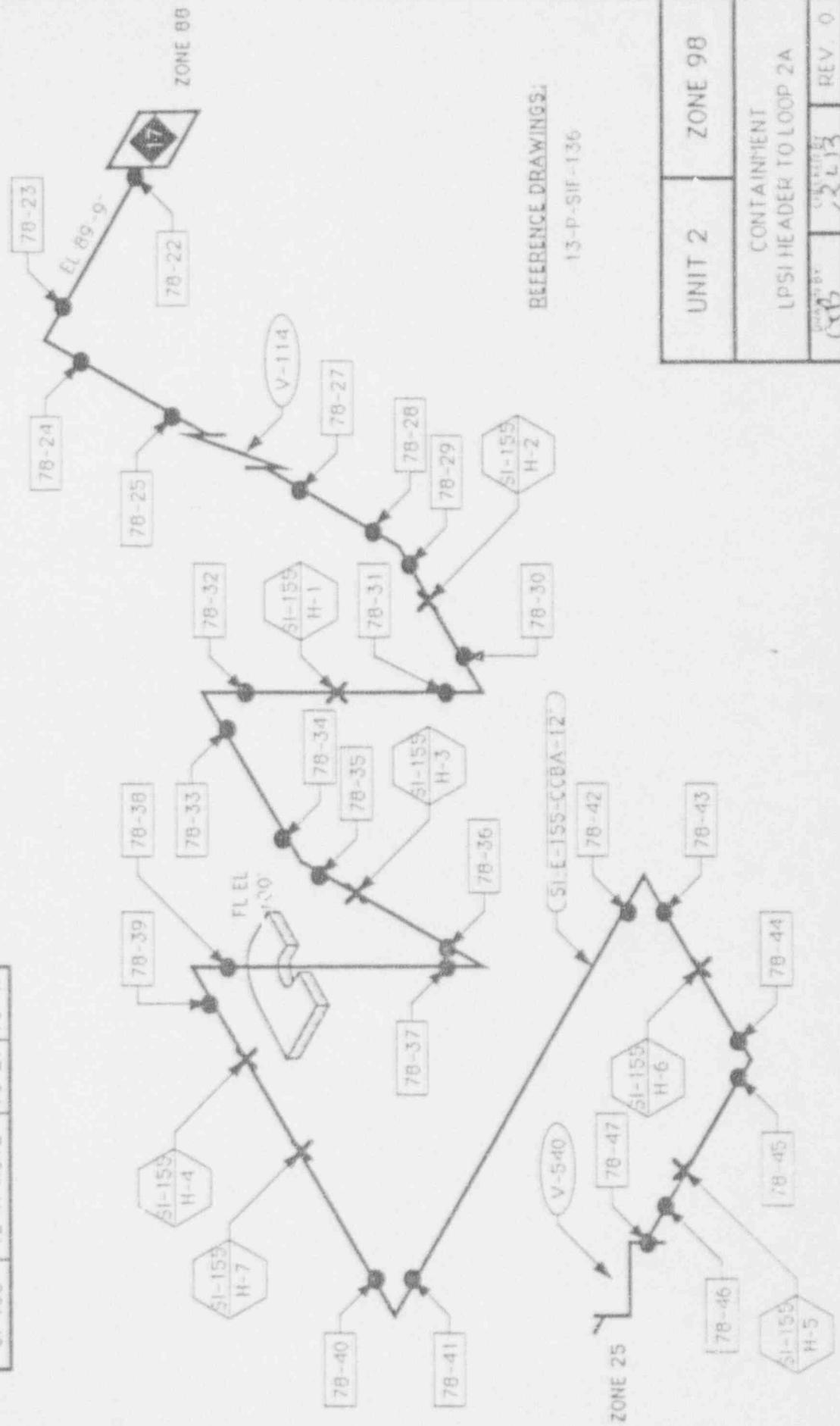


| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-220 | 12" X 1.125" | 77-22 | 77-25 |
| SI-220 | 12" X 1.312" | 77-27 | 77-47 |

REFERENCE DRAWINGS:  
13-P-SIF-103

|                                       |         |
|---------------------------------------|---------|
| UNIT 2                                | ZONE 97 |
| CONTAINMENT<br>LPSI HEADER TO LOOP 1B |         |
| DRAWN BY:<br>CJB                      | REV. 0  |

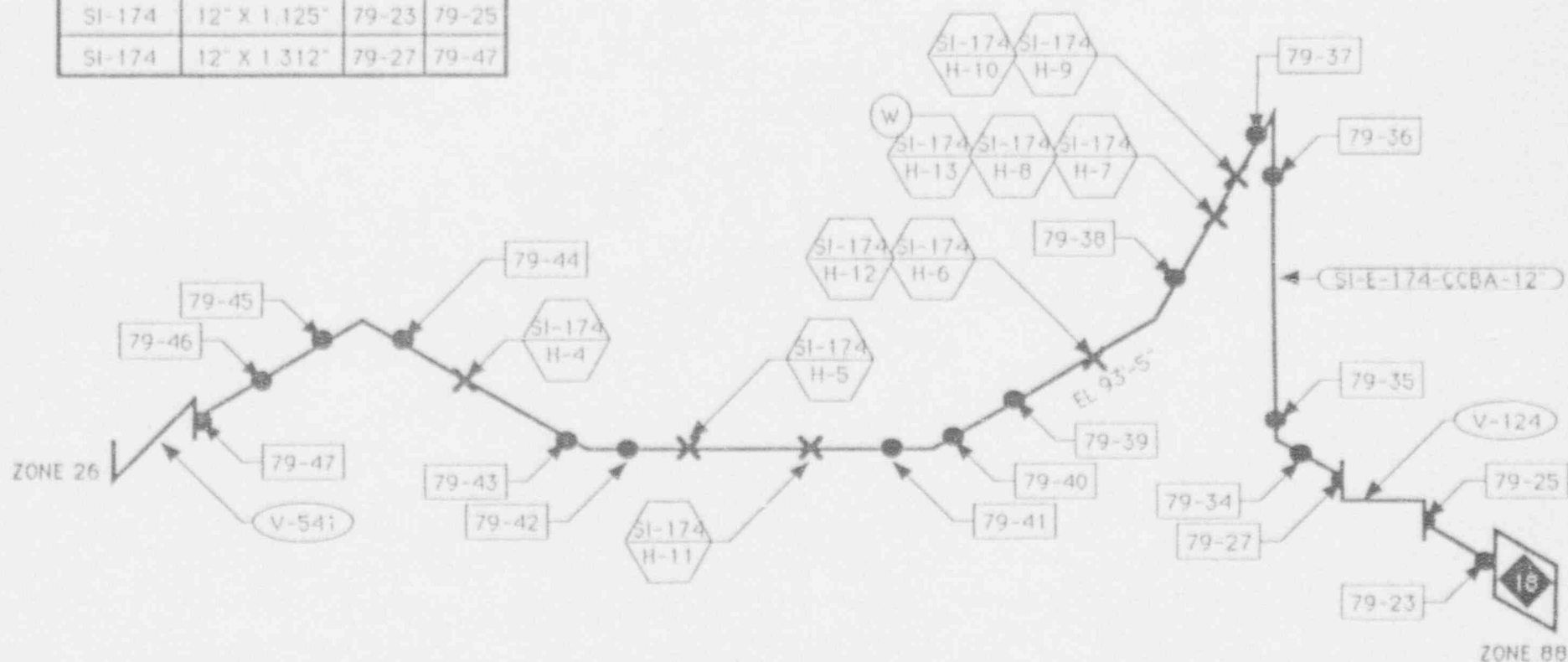
| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-155 | 12" X 1.125" | 78-22 | 78-25 |
| SI-155 | 12" X 1.312" | 78-27 | 78-47 |



|                        |            |
|------------------------|------------|
| UNIT 2                 | ZONE 98    |
| CONTAINMENT            |            |
| LPSI HEADER TO LOOP 2A |            |
| DESIGNED BY            | CHECKED BY |
| DATE                   | REV 0      |



| LINE # | DIA X SCH    | FROM  | TO    |
|--------|--------------|-------|-------|
| SI-174 | 12" X 1.125" | 79-23 | 79-25 |
| SI-174 | 12" X 1.312" | 79-27 | 79-47 |



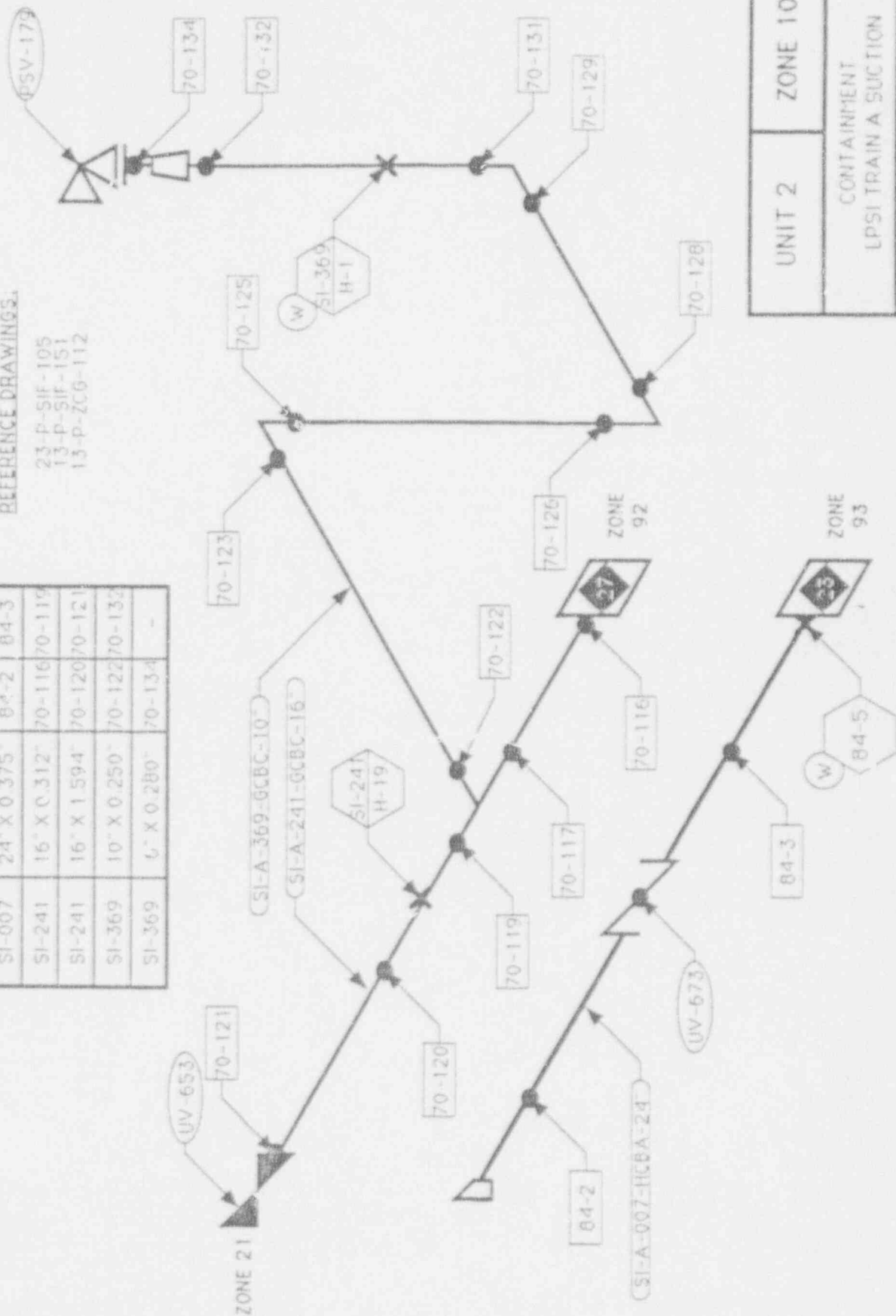
REFERENCE DRAWINGS:  
13-P-SIF-136

|                                       |                   |
|---------------------------------------|-------------------|
| UNIT 2                                | ZONE 99           |
| CONTAINMENT<br>LPSI HEADER TO LOOP 2B |                   |
| DESIGNED BY<br>CIB                    | CREATED BY<br>RLB |
| REV 0                                 |                   |

| LINE # | DIA X SCH    | FROM   | TO     |
|--------|--------------|--------|--------|
| SI-007 | 24" X 0.375" | 84-2   | 84-3   |
| SI-241 | 16" X 0.312" | 70-116 | 70-119 |
| SI-241 | 16" X 1.594" | 70-120 | 70-121 |
| SI-369 | 10" X 0.250" | 70-122 | 70-132 |
| SI-369 | 6" X 0.280"  | 70-134 | -      |

REFERENCE DRAWINGS:

23-P-SIF-105  
13-P-SIF-151  
13-P-ZCG-112



|                                     |                    |
|-------------------------------------|--------------------|
| UNIT 2                              | ZONE 100           |
| CONTAINMENT<br>LPSI TRAIN A SUCTION |                    |
| DESIGNED BY<br>LTP                  | CHANGED BY<br>2213 |
| REV. 0                              |                    |

