



**Department of Energy**

Idaho Operations Office  
West Valley Project Office  
P.O. Box 191  
West Valley, NY 14171

February 15, 1994

Mr. Gary C. Comfort  
Headquarters  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

**SUBJECT:** Transmittal of Updated Information for the West Valley Demonstration Project  
Vitrification Facility NRC Readiness Notebook

- REFERENCE:**
- 1) Letter JJM:033:93 (1671:93:10), T. J. Rowland to G. C. Comfort, "Transmittal of the West Valley Demonstration Project (WVDP) Vitrification Facility Nuclear Regulatory Commission (NRC) Readiness Notebook, Volumes III - VI," dated September 20, 1993
  - 2) Letter JJM:022:93 (1671:93:10), T. J. Rowland to G. C. Comfort, "Transmittal of the West Valley Demonstration Project (WVDP) Vitrification Facility Nuclear Regulatory Commission (NRC) Readiness Notebook, Volumes I - II," dated August 12, 1993

Dear Mr. Comfort:

West Valley Demonstration Project (WVDP) Vitrification operational readiness activities includes the development of the Vitrification Facility NRC Readiness Notebook (Notebook) for the Nuclear Regulatory Commission (NRC). The purpose of the Notebook is ensure the NRC is provided with the necessary information to support their effort in assessing the operational readiness of radioactive vitrification operations at WVDP. References 1 and 2 delineates the overall strategy of the Notebook. Also, as discussed in the references, updates to the Notebook will be provided to the NRC periodically by the West Valley Project Office (WVPO). Enclosure B provides the revised schedule for anticipated release dates of updated information for the Notebook.

The WVPO is providing as an enclosure to this letter, updated documentation to be incorporated into the Notebook. In an effort to conserve time and resources, only the updated drawings in Volume I are being provided instead of replacing the entire two hundred drawings originally issued. Attachment A provides instructions for updating the Notebook.

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February 15, 1994

It is the WVPO's goal to ensure the NRC is provided with the necessary information in a timely manner to support their effort in assessing the operational readiness of radioactive vitrification operations at WVDP. If there are any questions regarding this matter, contact J. J. May at (716) 942-2161 or W. S. Ketola at (716) 942-4314.

Sincerely,



T. J. Rowland, Director  
West Valley Project Office

- Enclosures:
- a) Instructions for Updating the Contents of the Vitrification Facility NRC Readiness Notebook Volume I (3 copies)
  - b) Vitrification Facility NRC Readiness Notebook Schedule (3 copies)
  - c) P&ID Drawing List and Drawings (3 copies)
  - d) General Arrangement Drawing List and Drawings (3 copies)

cc: J. Furia, NRC Region I, w/enc. (3 copies)  
T. W. McIntosh, EM-343, TREV II, w/enc. (1 copy)  
W. S. Ketola, WVPO, w/o enc.  
J. A. Yeazel, WVPO, w/o enc.  
F. W. Damerow, WVNS, MS 51, w/o enc.

JJM:003:94 - 0024:94:10

JJM/smn

Instructions for Updating the Contents of the  
Vitrification Facility NRC Readiness Notebook Volume I

Attached you will find two drawing lists and two drawing packages. Please follow the instructions detailed below to update the Vitrification Facility NRC Readiness Notebook. Note that the vertical lines appearing to the left of the drawing number on the drawing list indicate the drawings to add or replace in your NRC Readiness Notebook.

In Section 1.2: P&IDs, of your NRC Notebook, replace the list of P&ID drawings, dated 1/4/94, with the attached list of drawings titled, Section 1.2: P&IDs, dated 1/25/94.

The drawings in your #1 package will go into this section behind the drawing list. Drawing numbers, names, and number of sheets per drawing are identified in the title block which appears on the bottom right corner of each drawing. Carefully match the drawing numbers (paying particular attention to the number of sheets per drawing) to the drawings in your NRC Notebook and replace each drawing with its updated version. Some drawings in this package are in addition to those issued in your original notebook and should be added in the sequence indicated on the drawing list.

In Section 1.3: General Arrangements, of your NRC Notebook, replace the list of General Arrangement drawings, dated 1/4/94, with the attached list of drawings titled, Section 1.3: General Arrangements, dated 1/25/94.

The drawing in your #2 package will go into this section behind the drawing list. Replace the drawing as described above.

After you have completed adding and replacing drawings, you may wish to compare the drawing list included in the front of Sections 1.2: P&IDs and 1.3: General Arrangements to the actual order of drawings in your NRC Notebook.

# Vitrification Facility NRC Readiness Notebook

CC-94:0009  
Attachment B

SECTION	TITLE	DATE ANTICIPATED	PREVIOUS TRANSMITTALS
1.0	Design Information		
1.1	Process Flow Diagrams		
	Cold Chemical System	07/16/93	7/16/93
	Vitrification	06/30/94	
1.2	Process & Instrumentation Diagrams	07/16/93	1/5/94
1.3	General Arrangement Drawings		
1.3.1	Vitrification Facility	07/16/93	1/5/94
1.3.2	Tank Farm	07/16/93	1/5/94
1.3.3	High Level Waste Interim Storage (CPC & EDR)	07/16/93	7/16/93
1.3.4	Ex-Cell Off-Gas Areas of the 01-14 Building	07/16/93	7/16/93
1.4	System Descriptions		
1.4.1	High-Level Waste Vitrification Facilities Description	01/16/94	
1.4.2	55 - Sludge Mobilization and Transfer	TBD	
1.4.3	63G - Waste Header	07/16/93	7/16/93
1.4.4	63H - In-Cell Off-Gas and Vessel Vent	07/16/93	7/16/93
1.4.5	63I - Vitrification Main Process	11/01/93	
1.4.6	63J - Canister Decontamination	01/16/94	8/30/93
1.4.7	63K - In-Cell Remote Handling, Maintenance and Viewing	TBD	
1.4.8	63L - Carbon Arc Welding	06/15/94	
1.4.9	63M - Vitrification Load In & Load Out	TBD	
1.4.10	63P - Vitrification Process Chemistry	TBD	
1.4.11	63CW - Vitrification Cooling Tower Water	02/28/94	
1.4.12	63DV - Vitrification Drain, Waste, Vent (Sanitary)	TBD	
1.4.13	63DW - Vitrification Demineralized Water	11/01/93	11/30/93
1.4.14	63ED - Vitrification Electric Power Distribution	04/30/94	
1.4.15	63FO - Fuel Oil	09/30/94	
1.4.16	63FP - Fire Detection and Protection	11/01/93	
1.4.17	63IA - Vitrification Instrument Air	12/01/93	
1.4.18	63PW - Vitrification Potable Water	11/01/93	
1.4.19	63SC - Vitrification Steam and Condensate	01/31/94	
1.4.20	63UA - Vitrification Utility Air	12/01/93	
1.4.21	63UW - Vitrification Utility Water	11/01/93	8/30/93
1.4.22	63VH - Vitrification Vent Header	TBD	
1.4.23	63WV - Vitrification Drains	01/31/94	
1.4.24	64 - Vitrification Ex-Cell Off-Gas	01/31/94	
1.4.25	65 - Vitrification Cold Chemical	11/01/93	
1.4.26	66 - Vitrification Closed Loop Cooling Water	11/01/93	8/30/93
1.4.27	67 - Vitrification HVAC	TBD	
1.4.28	68 - High-Level Waste Interim Storage	TBD	
1.4.29	69A - Vitrification Sampling	TBD	
1.4.30	69B - Vitrification Sample Transfer	01/16/94	
1.4.31	90 - Analytical and Environmental Laboratory	TBD	
1.4.32	200A - Instrumentation Hardware	TBD	
1.4.33	200B - Instrumentation Software	TBD	
2.0	Operational Readiness Review (ORR)		
2.1	ORR Plan	07/30/93	7/30/93
2.2	ORR Tree		
3.0	Readiness Logic		
3.1	Integrated Logic Diagram	07/30/93	7/30/93
4.0	Testing		
4.1	Test Program Plan (WVNS-TPL-63-001)	07/30/93	7/30/93
4.2	Overall Test Schedule	TBD	
4.3	Integrated Test Plan	TBD	
4.4	Performance Tests		
4.4.1	Specifications	Per Test Plan	
4.4.2	Reports	Per Test Plan	

Note: Shaded sections have been previously transmitted or are included with this transmission.



1/25/94

Section 1.2: P&IDs

Page 1

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900-D-2318 Sht:001 Rev:009 Title: Waste Mobil. Pump P&ID 8D-1-M6

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900-D-2318 Sht:002 Rev:007 Title: Waste Mobil Pump P&ID 8D-1-M4

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900-D-2318 Sht:003 Rev:006 Title: Waste Mobil Pump P&ID 8D-1-M3

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900-D-2318 Sht:004 Rev:006 Title: Waste Mobil Pump P&ID 8D-1-M2

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900-D-2318 Sht:005 Rev:006 Title: Waste Mobil Pump P&ID 8D-1-M1

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900-D-2318 Sht:006 Rev:006 Title: Waste Mobil Pump P&ID 8D-2-M6

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900-D-2318 Sht:007 Rev:006 Title: Waste Mobil Pump P&ID 8D-2-M5

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900-D-2318 Sht:008 Rev:007 Title: Waste Mobil Pump P&ID 8D-2-M3

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900-D-2318 Sht:009 Rev:006 Title: Waste Mobil Pump P&ID 8D-2-M2

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900-D-2318 Sht:010 Rev:008 Title: Waste Mobil Pump P&ID 8D-2-M1

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900-D-2731 Sht:001 Rev:002 Title: VF STACK SAMPLING SYSTEM P AND ID

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900-D-2863 Sht:001 Rev:000 Title: Cold Chemical building H&V air flow diagram and P&ID

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900-D-4072 Sht:001 Rev:000 Title: WTP INTERIM CHEM. & SLUDGE WASH WATER ADD. SYS P&ID

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900-D-4825 Sht:001 Rev:003 Title: WTP INTERIM CHEM & SLUDGE WASH WATER ADDITION SYS P&ID

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900-E-705 Sht:01A Rev:006 Title: CTS ABS & LEGEND PROCESS & INSTRUM DIA

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900-E-705 Sht:01B Rev:000 Title: JET CONTROL

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900-E-705 Sht:01C Rev:000 Title: JET CONTROL

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900-E-705	Sht:01D	Rev:000	Title: MFHT BUBBLER CONTROL
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900-E-705	Sht:01E	Rev:000	Title: CPMT BUBBLER CONTROL
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900-E-705	Sht:01F	Rev:000	Title: INDEX VIT & 01/14
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900-E-705	Sht:002	Rev:018	Title: CTS concentrator feed makeup tk. 63 v001 P&ID
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900-E-705	Sht:003	Rev:015	Title: CTS melter feed hold tk 63 v011 P&ID
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900-E-705	Sht:004	Rev:014	Title: CTS waste header V-045 vit. cell P&ID
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900-E-705	Sht:005	Rev:009	Title: CTS - AMS sample pump & P&ID
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900-E-705	Sht:006	Rev:013	Title: CTS Sht ass pump 63g011 P&ID
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900-E-705	Sht:007	Rev:011	Title: CTS INTERNAL MELTER THERMOCOUPLES
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900-E-705	Sht:008	Rev:013	Title: CTS MELTER COOLING SYSTEM
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900-E-705	Sht:009	Rev:018	Title: CTS MELTER PNEUMATIC INSTRUMENTATION
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900-E-705	Sht:010	Rev:012	Title: CTS MELTER AND HEATER POWER SUPPLY AND CONTROLS
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900-E-705	Sht:011	Rev:013	Title: SAMPLER FOR V001 & V011 PROCESS & INSTR. DIA.
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900-E-705	Sht:012	Rev:014	Title: CTS TURNTABLE
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900-E-705	Sht:014	Rev:016	Title: CTS PRIMARY SCRUBBER SCRUB SECTION
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900-E-705	Sht:015	Rev:014	Title: CTS PRIMARY SCRUBBER RECEIVER TANK
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900-E-705	Sht:016	Rev:004	Title: CTS GLASS LEVEL DETECTOR SYSTEM
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900-E-705	Sht:019	Rev:013	Title: CTS VESSEL VENT SYSTEM
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900-E-705	Sht:021	Rev:011	Title: CTS melt off gas sys preheater & hemes P&ID
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900-E-705	Sht:022	Rev:016	Title: CTS vessel off gas filters & heaters P&ID
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900-E-705	Sht:023	Rev:011	Title: canister decontamination Tank 63-V-044 P&ID
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900-E-705	Sht:024	Rev:007	Title: CTS-MAINTENANCE & CAPPING STATION P&ID
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900-E-705	Sht:025	Rev:004	Title: Ex-Cell Vent Header P&ID
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903-D-013	Sht:001	Rev:005	Title: P&ID STS UTILITY WATER SYSTEM
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903-D-014	Sht:001	Rev:016	Title: P&ID STS UTILITY & INSTRUMENT AIR
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903-D-014	Sht:002	Rev:011	Title: STS P&ID (V&S Bldg) UTILITY & INST. AIR
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903-D-016	Sht:001	Rev:015	Title: STS P&ID FILTRATION & COOLING SECTION
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903-D-017	Sht:001	Rev:011	Title: STS P&ID ION EXCHANGE SECTION SHEET 1
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903-D-018	Sht:001	Rev:011	Title: STS P&ID ION EXCHANGE SECTION SHEET 2
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903-D-019	Sht:001	Rev:013	Title: STS P&ID FINAL FILTRATION & STORAGE
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903-D-020	Sht:001	Rev:011	Title: STS P&ID ZEOLITE FILL & SLURRY SECTION
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903-D-021	Sht:001	Rev:009	Title: STS P&ID VENTING/CHILLER SECTION
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904-E-011	Sht:001	Rev:008	Title: P&ID sludge mobilization sys. 8Q-4Pit
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904-D-012	Sht:001	Rev:008	Title: P&ID Sludge mobilization system 8Q-1 pit
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904-D-013	Sht:001	Rev:009	Title: P&ID Sludge Mobilization system 8Q-2 pit
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904-D-014	Sht:001	Rev:008	Title: P&ID sludge mobilization system 8Q-5 pit
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904-D-015	Sht:001	Rev:008	Title: P&ID sludge mobilization sys utility water/chemical system and seal water systems
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904-D-016	Sht:001	Rev:004	Title: P&ID sludge mobilization system utility air system
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905-D-010	Sht:001	Rev:001	Title: VF SHIELDING GAS & ARGON GAS SYSTEM P&ID
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905-D-011	Sht:001	Rev:010	Title: P&ID Vitrification Drainage system high level
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905-D-012	Sht:001	Rev:014	Title: P&ID COLD CHEMICAL PREPARATION & FEED SYSTEM
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905-D-013	Sht:001	Rev:013	Title: P&ID COLD CHEMICAL PREPARATION & FEED SYSTEM
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905-D-017	Sht:001	Rev:015	Title: P&ID COLD CHEMICAL PREPARATION & FEED SYSTEM
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905-D-018	Sht:001	Rev:010	Title: P&ID COLD CHEMICAL PREPARATION & FEED SYSTEM
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905-D-019	Sht:001	Rev:006	Title: P&ID COLD CHEMICAL STEAM & CONDENSATE SYSTEM
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905-D-020	Sht:001	Rev:010	Title: P&ID COLD CHEMICAL UTILITY & INSTRUMENT AIR
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905-D-021	Sht:001	Rev:010	Title: P&ID COLD CHEMICAL WATER SYSTEMS
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905-D-022	Sht:001	Rev:006	Title: P&ID COLD CHEMICAL ACID & CAUSTIC SYSTEMS
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905-D-023	Sht:001	Rev:010	Title: P&ID diesel fuel oil transfer system
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905-D-024	Sht:001	Rev:005	Title: P&ID COLD CHEMICAL FIRE PROTECTION
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907-D-025	Sht:001	Rev:004	Title: P&ID secondary filter, diesel gen & crane maintenance room
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905-D-026	Sht:001	Rev:003	Title: P&ID Vitrification facility utility water system
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905-D-027	Sht:001	Rev:004	Title: P&ID Vitrification facility non rack cold chemical decon system
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905-D-028	Sht:001	Rev:004	Title: P&ID Vitrification facility steam system
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905-D-029	Sht:001	Rev:012	Title: P&ID Vitrification facility instrument & utility air sys
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905-D-044	Sht:001	Rev:002	Title: WF SPR & CMR HIGH PRESSURE AIR SYSTEM P&ID
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905-D-045	Sht:001	Rev:004	Title: P&ID Vitrification facility instrument rack 3W2-1A
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905-D-045	Sht:002	Rev:005	Title: P&ID Vitrification facility instrument rack 3E8-7A
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905-D-045	Sht:003	Rev:005	Title: P&ID Vitrification facility instrument rack 2W7-6
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905-D-045	Sht:004	Rev:004	Title: P&ID Vitrification facility instrument rack 146-5
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905-D-045	Sht:005	Rev:004	Title: P&ID Vitrification facility
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905-D-045	Sht:006	Rev:004	Title: P&ID Vitrification facility instrument rack 2E9-8
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905-D-045	Sht:007	Rev:002	Title: P&ID Vitrification Facility instrument rack 2W3-2
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905-D-045	Sht:008	Rev:003	Title: P&ID Vitrification facility instrument rack 3E9-7B
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905-D-045	Sht:009	Rev:005	Title: P&ID Vitrification facility instrument rack 3W7
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905-D-045	Sht:010	Rev:006	Title: P&ID Vitrification facility instrument rack 2N9
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905-D-045	Sht:011	Rev:007	Title: P&ID Vitrification facility instrument rack 3W4
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905-D-045	Sht:012	Rev:006	Title: P&ID Vitrification facility instrument rack 3W5 sheet 1
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905-D-045	Sht.013	Rev:006	Title: P&ID Vitrification facility instrument rack 3W6
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905-D-045	Sht.014	Rev:003	Title: P&ID Vitrification facility instrument rack 3W3
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905-D-045	Sht.015	Rev:004	Title: P&ID Vitrification facility instrument rack 3W1
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905-D-045	Sht.016	Rev:005	Title: P&ID Vitrification facility instrument rack 3W4
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905-D-045	Sht.017	Rev:003	Title: P&ID Vitrification facility instrument rack 3W5
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905-D-045	Sht.018	Rev:004	Title: P&ID Vitrification facility instrument rack 3E10
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905-D-045	Sht.019	Rev:001	Title: P&ID Vitrification facility instrument rack 2E10
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905-D-045	Sht.020	Rev:004	Title: P&ID Vitrification facility instrument rack 3W5 Sheet 2
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905-D-046	Sht.001	Rev:021	Title: P&ID vitrification facility utility air system
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905-D-046	Sht.002	Rev:009	Title: P&ID vitrification facility instrument air system
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905-D-046	Sht.003	Rev:011	Title: P&ID vitrification facility instrument air system
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905-D-046	Sht.004	Rev:001	Title: VF P&ID UTILITY AIR SYSTEM
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905-D-047	Sht.001	Rev:012	Title: P&ID vitrification facility steam system
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905-D-047	Sht.002	Rev:013	Title: P&ID vitrification facility condensate system
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905-D-047	Sht.003	Rev:011	Title: P&ID vitrification facility steam system
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905-D-048	Sht.001	Rev:008	Title: P&ID vitrification facility utility water system
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905-D-048	Sht.002	Rev:011	Title: P&ID vitrification facility demineralized water system
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905-D-049	Sht:001	Rev:003	Title: P&ID vitrification facility fire protection systems
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905-D-050	Sht:001	Rev:007	Title: P&ID vitrification drainage system low level
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905-D-051	Sht:001	Rev:009	Title: P&ID vitrification facility potable water system
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905-D-052	Sht:001	Rev:009	Title: Vitrification facility closed loop cooling water system P&ID
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905-D-052	Sht:002	Rev:012	Title: Vitrification facility closed loop cooling water system P&ID
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905-D-053	Sht:001	Rev:005	Title: P&ID vitrification facility non rack cold chem. decon & slurry system
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905-D-053	Sht:002	Rev:008	Title: P&ID vitrification facility non rack cold chem decon & slurry system
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905-D-054	Sht:001	Rev:010	Title: P&ID vitrification facility cooling tower water system
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905-D-055	Sht:001	Rev:001	Title: VOID PER EON P&ID vitrification facility off gas condensate system
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905-D-056	Sht:001	Rev:006	Title: P&ID vitrification facility vent header system
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905-D-057	Sht:001	Rev:004	Title: Vitrification Rest Rooms P&ID
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905-D-058	Sht:001	Rev:003	Title: PNEUMATIC SAMPLE TRANSFER SYSTEM P&ID
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905-D-058	Sht:002	Rev:000	Title: PNEUMATIC SAMPLE TRANSFER SYSTEM P&ID
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905-D-450	Sht:001	Rev:005	Title: HVAC air flow diagram vitrification facility
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905-D-451	Sht:001	Rev:006	Title: HVAC air flow diagram & P&ID control room
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905-D-452	Sht:001	Rev:014	Title: HVAC P&ID vitrification facility
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905-D-452	Sht:002	Rev:009	Title: HVAC P&ID vitrification facility
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905-D-452	Sht:003	Rev:004	Title: VS HVAC P&ID VITRIFICATION FACILITY
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905-D-453	Sht:001	Rev:008	Title: Vitrification facility HVAC chilled water system P&ID sh 1
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905-D-453	Sht:002	Rev:001	Title: Vitrification facility HVAC chilled water system P&ID sh 3
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905-D-454	Sht:001	Rev:005	Title: Vitrification facility HVAC chilled water P&ID sh 2
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905-E-045	Sht:001	Rev:003	Title: P&ID VITRIFICATION FACILITY INSTRUMENT RACK 3WB
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906-D-009	Sht:001	Rev:001	Title: VF EX-CELL OFF-GAS MISCELLANEOUS UTILITIES P&ID
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906-D-014	Sht:001	Rev:005	Title: VF MELTER OFF-GAS P&ID MELTER EX CELL OFF GAS SYSTEM
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906-D-015	Sht:001	Rev:005	Title: VF MELTER OFF-GAS P&ID MELTER EX CELL OFF GAS SYSTEM
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906-D-018	Sht:001	Rev:005	Title: VF MELTER OFF-GAS HVAC AIR FLOW DIAGRAM & P&ID
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906-D-019	Sht:001	Rev:001	Title: VOID P&ID FOR VF MELTER OFF-GAS HVAC AIR FLOW DIAGRAM & P&ID
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906-D-025	Sht:001	Rev:007	Title: VF MELTER OFF-GAS P&ID INSTRUMENT RACK 01
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906-D-026	Sht:001	Rev:006	Title: VF MELTER OFF-GAS P&ID INSTRUMENT RACK 02
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906-D-027	Sht:001	Rev:006	Title: VF MELTER OFF-GAS P&ID INSTRUMENT RACK 02
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906-D-028	Sht:001	Rev:006	Title: VF MELTER OFF-GAS P&ID INSTRUMENT RACK 02
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906-E-011	Sht:001	Rev:007	Title: VF MELTER OFF-GAS P&ID MELTER EX CELL OFF GAS SYSTEM
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906-E-012	Sht:001	Rev:008	Title: VF MELTER OFF-GAS P&ID MELTER EX CELL OFF GAS SYSTEM
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906-E-012	Sht:002	Rev:001	Title: VF P&ID MELTER EX-CELL OFF-GAS SYS
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906-E-013 Sht:001 Rev:008 Title: VF MELTER OFF-GAS P&ID MELTER EX CELL OFF GAS SYSTEM

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906-E-016 Sht:001 Rev:006 Title: VF MELTER OFF-GAS P&ID INSTRUMENT AIR

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906-E-017 Sht:001 Rev:001 Title: VF P&ID OFF-GAS TRENCH

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### PIPING LINE CODING

LINE CODING	DESCRIPTION
—————	MAIN SYSTEM LINES
-----	CONNECTION TO PROCESS OR INSTRUMENT SUPPLY
—•—•—•—•—	PNEUMATIC SIGNAL
-----	ELECTRICAL SIGNAL
—•—•—•—•—	CAPILLARY TUBING
—•—•—•—•—	CONFIGURABLE INSTRUMENT SOFTWARE LINE

### PIPING ACCESSORIES

SYMBOL	DESCRIPTION
	QUICK DISCONNECT HOSE CONNECTION
	HOSE CONNECTION
	MEASUREMENT REDUCE
	VALVES OR BLENDS HELD OPEN
	BLIND VALVE OPEN
	BLIND FLANGE CONNECTION
	BLIND FLANGED
	SPIND PIECE
	WORN
	LOOP SEAL
	Y-TYPE STRAINER
	TRAP
	PLATE OPENED VALVE TYPED
	FLEXIBLE CONNECTION
	WIRE CATCHER (STOP OR START OF LINE)

### VALVES AND VALVE OPERATORS

SYMBOL	DESCRIPTION
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	ANGLE VALVE
	SAFETY AND RELIEF VALVE
	BUTTERFLY
	MOBILE VALVE
	PLUG VALVE
	THREE-WAY VALVE
	FOUR-WAY VALVE
	SHUT-OFF VALVE
	BALL VALVE
	PRESSURE REGULATOR OR PRESSURE CONTROL VALVE
	VALVE OPERATOR OR VALVE RELIEF VALVE SHUT-OFF
	PISTON
	SOLENOID
	SOLENOID OPERATOR

NOTE: ALL NORMALLY CLOSED VALVES TO BE SHOWN SHaded

### MISCELLANEOUS

SYMBOL	DESCRIPTION
	OPERATION REFERENCE NUMBER
	LINE NUMBER, LINE SIZE, PROCESS SYSTEM CATEGORY
	VALVE NUMBER, VALVE TYPE, PROCESS SYSTEM CATEGORY
	FLOW ARROW
	PIPE SPEC CHANGE
	REMOTE CONNECTION (SINGLE PIPE CONNECTION)
	REMOTE CONNECTION (THREE PIPE CONNECTIONS OF THIS)
	BALL VALVE OPERATOR (WRENCH OPERATED)
	WRENCH OPERATED OPERATOR
	AGITATOR
	SUBMERGED PUMP
	MOTOR CONTROL CENTER
	HEATING OR COOLING COIL

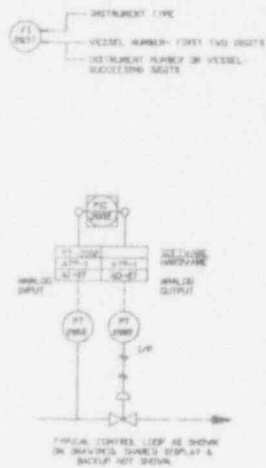
### INSTRUMENTATION SYMBOLS

SYMBOL	DESCRIPTION
	INSTRUMENT FIELD HEATER OR IN LINE
	INSTRUMENT ON FEED OF MAIN PANEL
	DCI CONTROL AND/OR DISPLAY LOOP ACCESSIBLE TO OPERATOR
	FLC CONTROL
	FLOW INDICATOR
	SELECTED VALVE (D-WAY)
	INDICATOR
	4-WAY SELECTED VALVE (PORT 14 ENERGIZED)

### INSTRUMENT SYMBOL MODIFIERS

	I/A OR I/S
	OUTPUT TO INDICATOR
	RESISTANCE TO CURRENT
	TEMPERATURE TO CURRENT
	ISOLATOR
	ELECTROMAGNETIC RELAY
	SHUNT

### INSTRUMENT SYMBOL IDENTIFICATION



### INSTRUMENTATION IDENTIFICATION

SYMBOL	DESCRIPTION
A	AMPLITUDE
C	CAPACITIVITY
D	DENSITY
E	ELONGATION
F	FLOW
G	GRAVITY
H	HEIGHT
I	CURRENT
J	POWER
K	LEVEL
L	LENGTH
M	MOISTURE
N	NOISE
O	OSCILLATION
P	PRESSURE
Q	QUALITY
R	RESISTANCE
S	TEMPERATURE
T	TENSILE
V	VISIBILITY
W	WEIGHT
X	OTHER
Y	OTHER
Z	OTHER

PER ISA 95.1 SYMBOLS CP-2-88, TABLE 3.2

TABLE I

SYMBOL LETTER DESCRIPTION

A AMPLITUDE

C CAPACITIVITY

D DENSITY

E ELONGATION

F FLOW

G GRAVITY

H HEIGHT

I CURRENT

J POWER

K LEVEL

L LENGTH

M MOISTURE

N NOISE

O OSCILLATION

P PRESSURE

Q QUALITY

R RESISTANCE

S TEMPERATURE

T TENSILE

V VISIBILITY

W WEIGHT

X OTHER

Y OTHER

Z OTHER

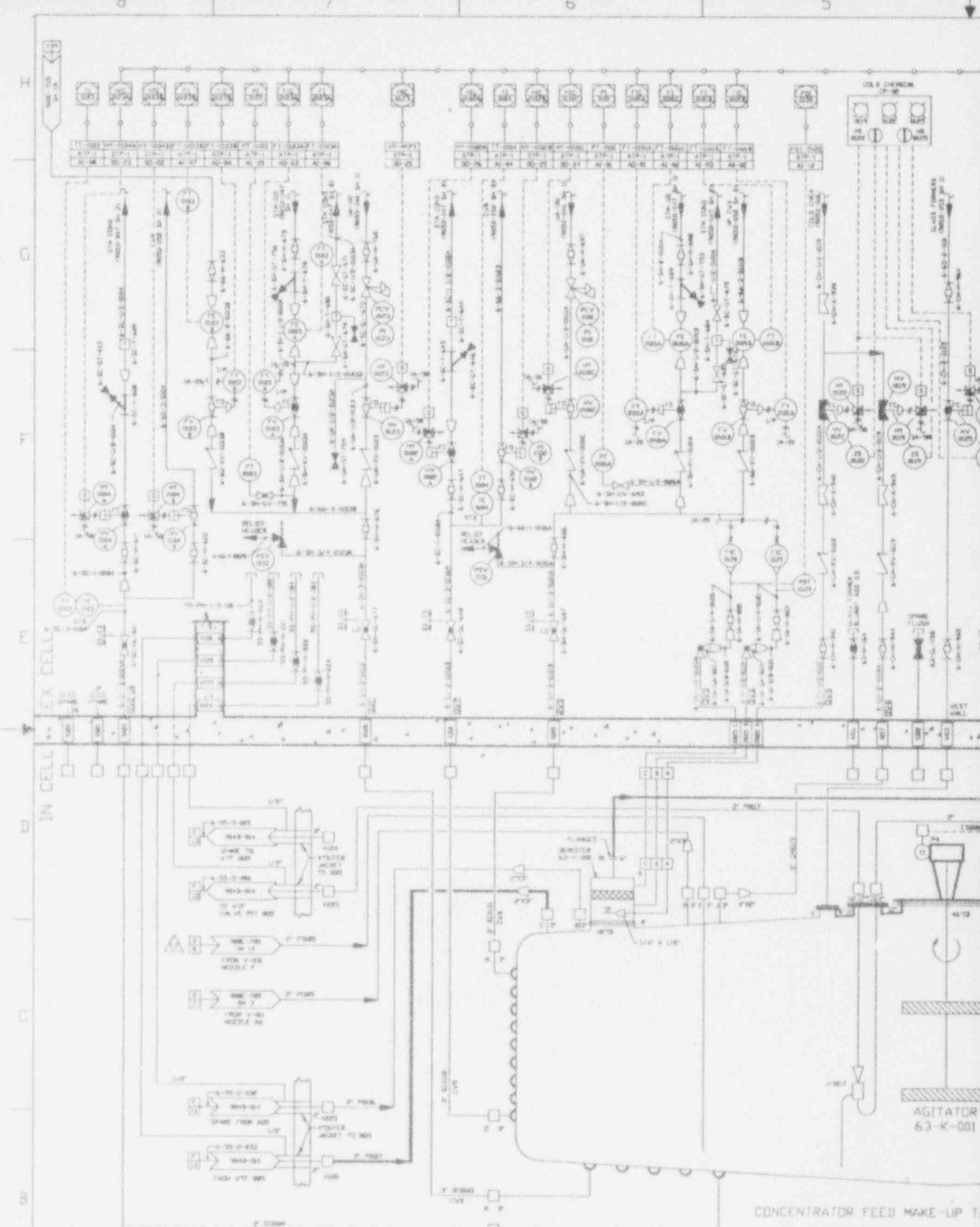
\* OTHER ABBREVIATIONS

### ABBREVIATIONS

AG	AGITATOR
AM	AMPLITUDE
AN	ANALOG
AO	ANALOG OUTPUT
AR	ANALOG READ
AS	ANALOG SIGNAL
AT	ANALOG TRANSMITTER
AV	ANALOG VOLTAGE
AW	ANALOG WEIGHT
AX	ANALOG OTHER
BA	BALANCE
BB	BALANCE BEAM
BC	BALANCE CANTILEVER
BD	BALANCE DIAL
BE	BALANCE ELECTRONIC
BF	BALANCE FURNACE
BG	BALANCE GROSS
BH	BALANCE HOOK
BI	BALANCE INDICATOR
BJ	BALANCE JOURNAL
BK	BALANCE KNOB
BL	BALANCE LEVER
BM	BALANCE MASS
BN	BALANCE NETWORK
BO	BALANCE OVEN
BP	BALANCE PLATFORM
BQ	BALANCE POINT
BR	BALANCE RANGE
BS	BALANCE SCALE
BT	BALANCE TARE
BV	BALANCE WEIGHT
BW	BALANCE WEIGHTS
BY	BALANCE YOUNG
BZ	BALANCE ZEROS







- NOTES:**
- FOR CONNECTIONS AND LEGEND SEE DRAWING 100-100-00-01
  - FOR REVISIONS SEE THE P&ID FACILITY INSTRUMENTATION DRAWINGS
  - IT WAS NOT TO BE RUN AND SHALL REMAIN
  - THIS DRAWING SUPPLIES THE EXISTING DRAWING 100-100-00-01 AND CURRENT DRAWING 100-100-00-02

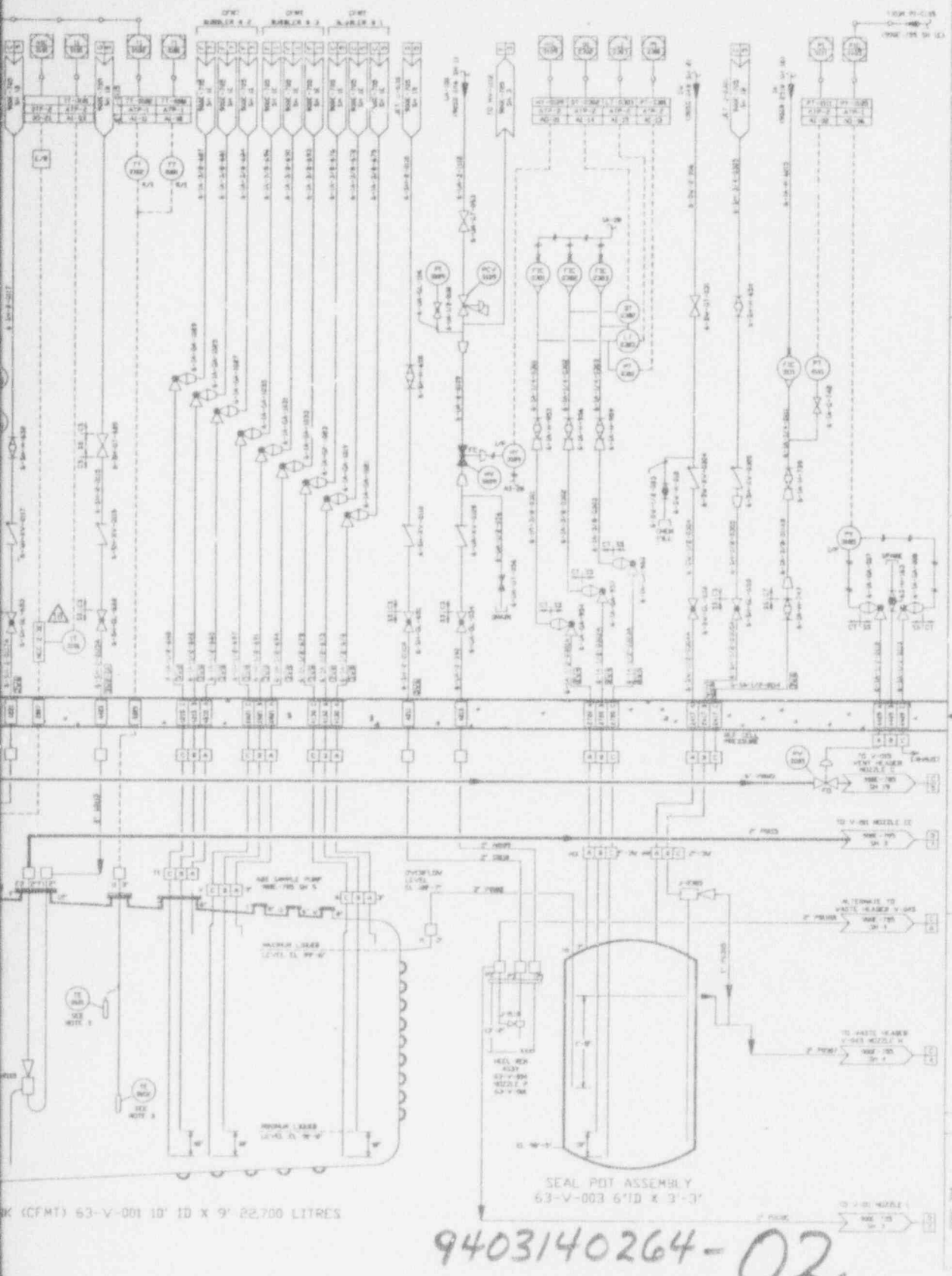
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3	10/10/58	...	...	...
4	10/10/58	...	...	...
5	10/10/58	...	...	...

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3	10/10/58	...	...	...
4	10/10/58	...	...	...
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3	10/10/58	...	...	...
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NO.	DATE	BY	CHKD.	REVISION
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JUN 2 1968

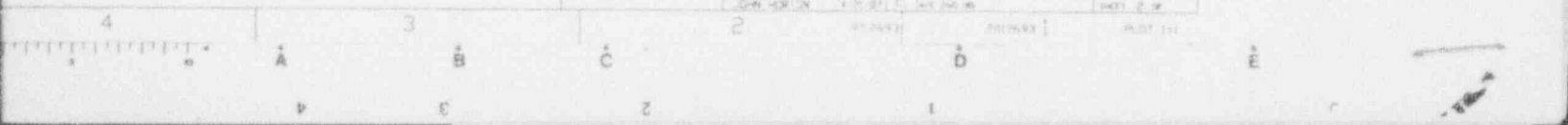
CHECK DOCUMENT CONTROL  
FOR LATEST REVISION

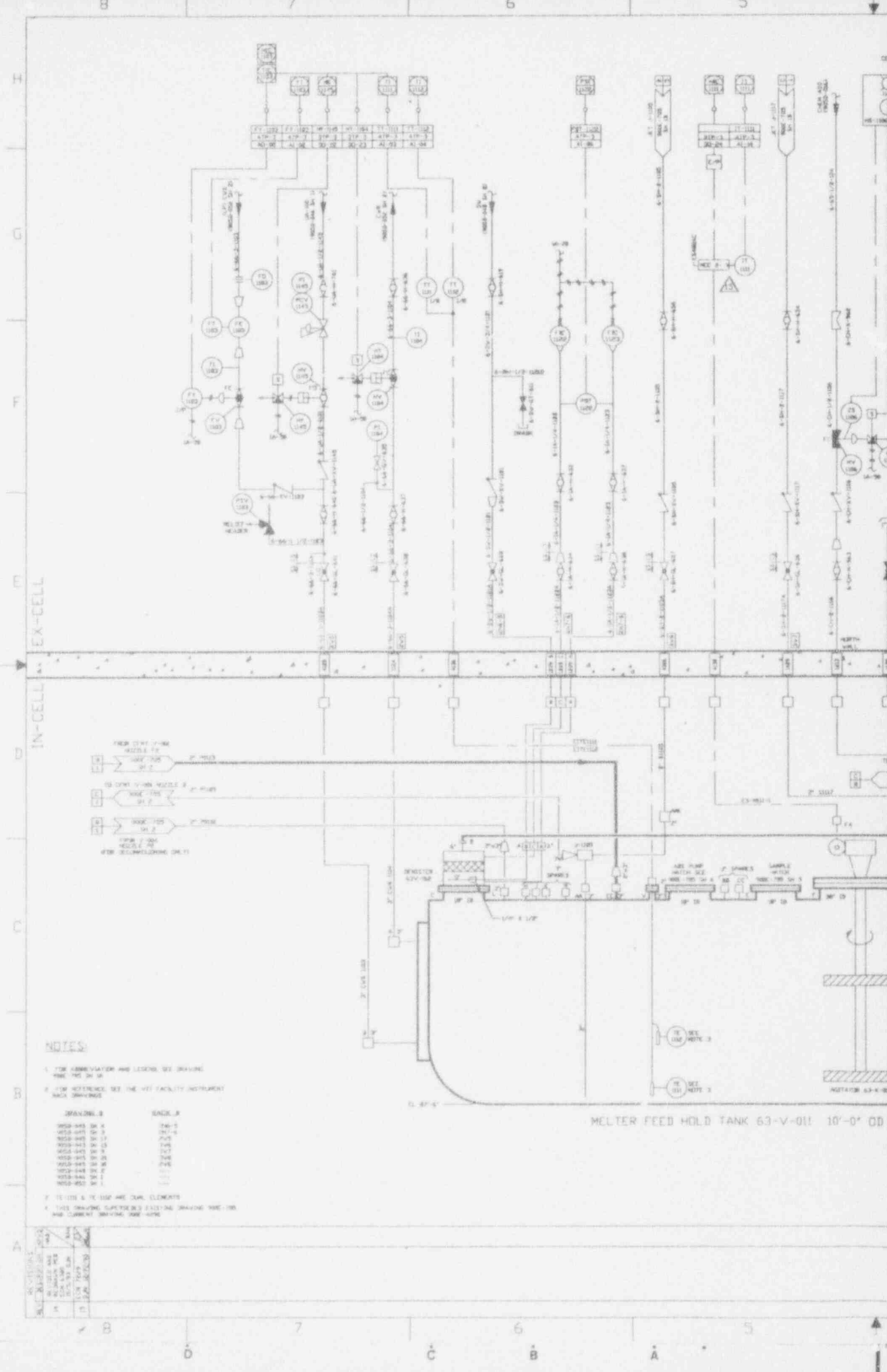
9403140264-02

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	WATER TREATMENT SYSTEM	SYSTEM	1
2	SEAL PIT ASSEMBLY	ASSEMBLY	1
3	MEDIUM WATER TANK	TANK	2
4	MIXER	MIXER	3
5	CONCENTRATOR FEED MAKE-UP TANK	TANK	1
6	VALVE	VALVE	10
7	PUMP	PUMP	5
8	PIPE	PIPE	100
9	FLANGE	FLANGE	50
10	GASKET	GASKET	100

CFMT) 63-V-001 10' 10 X 9' 22,700 LITRES

DATE DRAWN: JUN 1968



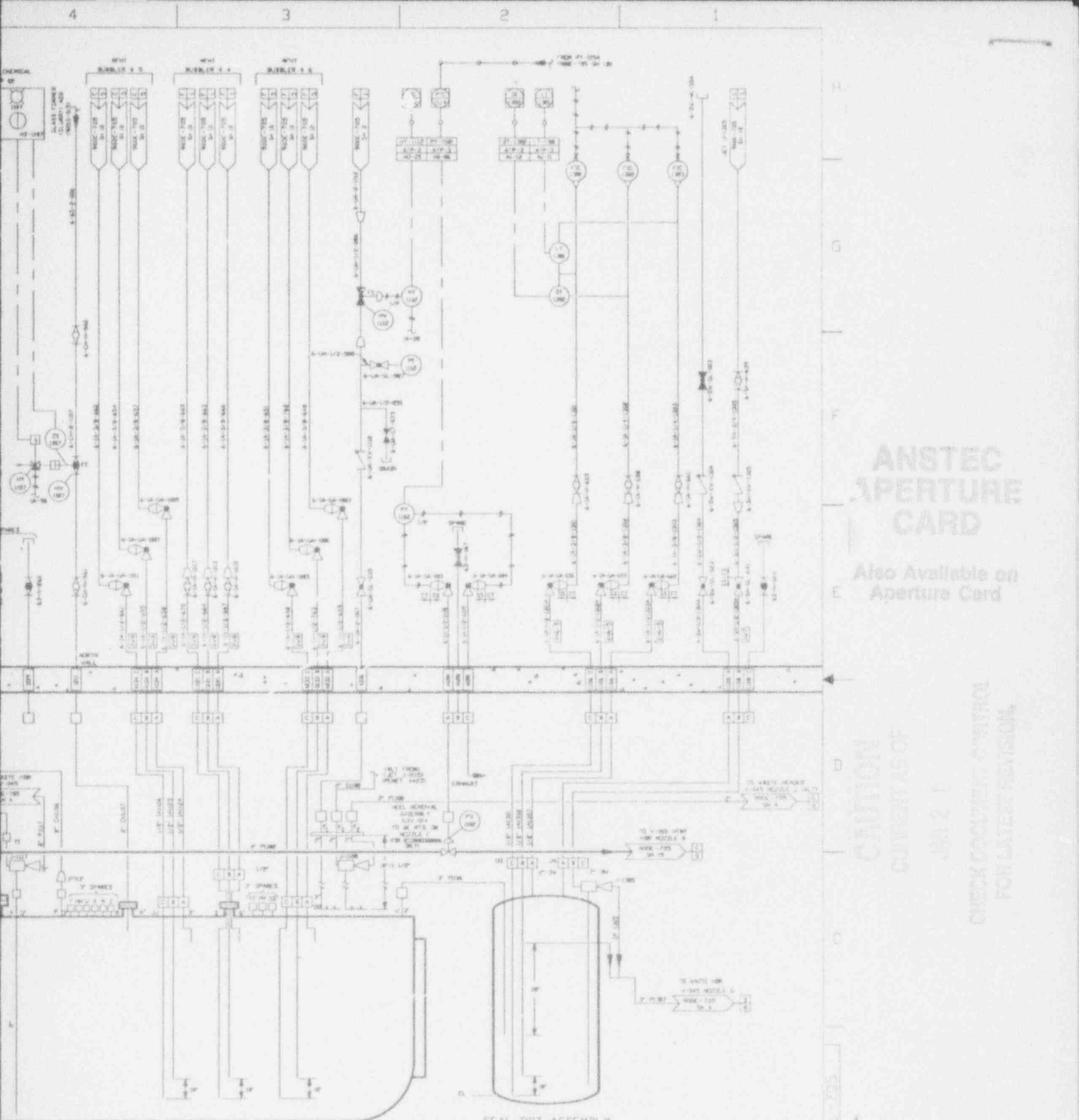


11-100	11-101	11-102	11-103	11-104	11-105	11-106	11-107	11-108
11-109	11-110	11-111	11-112	11-113	11-114	11-115	11-116	11-117
11-118	11-119	11-120	11-121	11-122	11-123	11-124	11-125	11-126

**NOTES:**

- FOR ABBREVIATION AND LEGEND, SEE DRAWING P&ID NO. 63-10
  - FOR REFERENCE, SEE THE HET FACILITY INSTRUMENT TAG DRAWINGS
- | BRAND/NO. | SIZE |
|-----------|------|
| 11-100    | 1/2" |
| 11-101    | 1/2" |
| 11-102    | 1/2" |
| 11-103    | 1/2" |
| 11-104    | 1/2" |
| 11-105    | 1/2" |
| 11-106    | 1/2" |
| 11-107    | 1/2" |
| 11-108    | 1/2" |
| 11-109    | 1/2" |
| 11-110    | 1/2" |
| 11-111    | 1/2" |
| 11-112    | 1/2" |
| 11-113    | 1/2" |
| 11-114    | 1/2" |
| 11-115    | 1/2" |
| 11-116    | 1/2" |
| 11-117    | 1/2" |
| 11-118    | 1/2" |
| 11-119    | 1/2" |
| 11-120    | 1/2" |
| 11-121    | 1/2" |
| 11-122    | 1/2" |
| 11-123    | 1/2" |
| 11-124    | 1/2" |
| 11-125    | 1/2" |
| 11-126    | 1/2" |
- 11-100 & 11-101 ARE DUAL ELEMENTS
  - THIS DRAWING SUPPLEMENTS EXISTING DRAWING 63-100 AND CURRENT DRAWING 63-100E

MELTER FEED HOLD TANK 63-V-011 10'-0" OD X 10'-0" H



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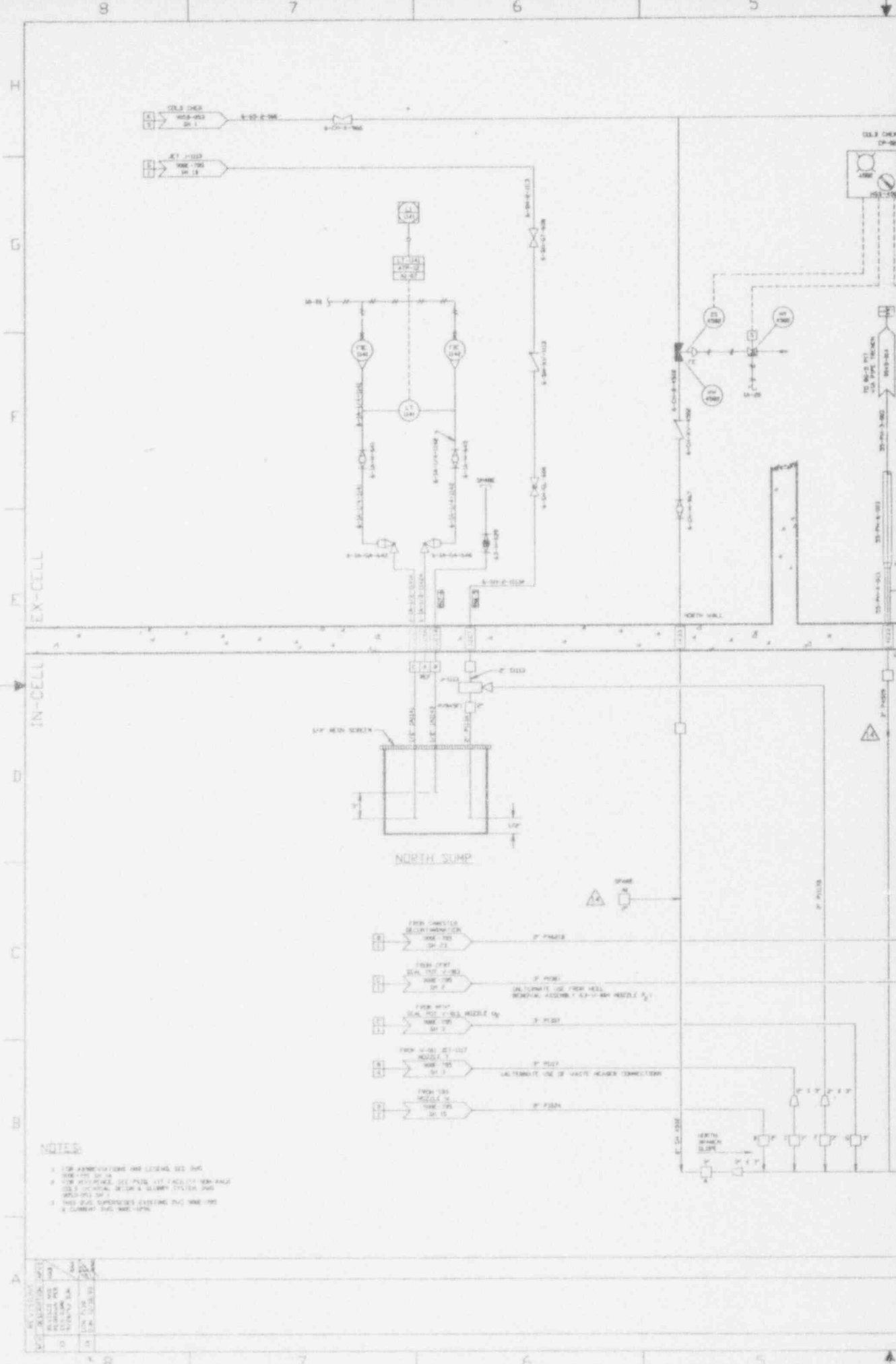
CHECK DOCUMENT CONTROL  
FOR LATEST REVISIONS

9403140264-03

SEAL POT ASSEMBLY  
63-V-013 (FOR STAND BY SERVICE)  
(SEE NOMENCLATURE INSTALLATION)

ITEM NO.	QUANTITY	DESCRIPTION	UNIT	REMARKS
1	1	SEAL POT ASSEMBLY	ASSEMBLY	
2	1	VALVE OTHER THAN SPECIFIED	VALVE	
3	1	ALL DIM IN INCHES		
4	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
5	1	MELTER FEED HOLD TANK	TANK	
6	1	SEAL POT ASSEMBLY	ASSEMBLY	
7	1	VALVE OTHER THAN SPECIFIED	VALVE	
8	1	ALL DIM IN INCHES		
9	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
10	1	MELTER FEED HOLD TANK	TANK	
11	1	SEAL POT ASSEMBLY	ASSEMBLY	
12	1	VALVE OTHER THAN SPECIFIED	VALVE	
13	1	ALL DIM IN INCHES		
14	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
15	1	MELTER FEED HOLD TANK	TANK	
16	1	SEAL POT ASSEMBLY	ASSEMBLY	
17	1	VALVE OTHER THAN SPECIFIED	VALVE	
18	1	ALL DIM IN INCHES		
19	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
20	1	MELTER FEED HOLD TANK	TANK	
21	1	SEAL POT ASSEMBLY	ASSEMBLY	
22	1	VALVE OTHER THAN SPECIFIED	VALVE	
23	1	ALL DIM IN INCHES		
24	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
25	1	MELTER FEED HOLD TANK	TANK	
26	1	SEAL POT ASSEMBLY	ASSEMBLY	
27	1	VALVE OTHER THAN SPECIFIED	VALVE	
28	1	ALL DIM IN INCHES		
29	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
30	1	MELTER FEED HOLD TANK	TANK	
31	1	SEAL POT ASSEMBLY	ASSEMBLY	
32	1	VALVE OTHER THAN SPECIFIED	VALVE	
33	1	ALL DIM IN INCHES		
34	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
35	1	MELTER FEED HOLD TANK	TANK	
36	1	SEAL POT ASSEMBLY	ASSEMBLY	
37	1	VALVE OTHER THAN SPECIFIED	VALVE	
38	1	ALL DIM IN INCHES		
39	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
40	1	MELTER FEED HOLD TANK	TANK	
41	1	SEAL POT ASSEMBLY	ASSEMBLY	
42	1	VALVE OTHER THAN SPECIFIED	VALVE	
43	1	ALL DIM IN INCHES		
44	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
45	1	MELTER FEED HOLD TANK	TANK	
46	1	SEAL POT ASSEMBLY	ASSEMBLY	
47	1	VALVE OTHER THAN SPECIFIED	VALVE	
48	1	ALL DIM IN INCHES		
49	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
50	1	MELTER FEED HOLD TANK	TANK	
51	1	SEAL POT ASSEMBLY	ASSEMBLY	
52	1	VALVE OTHER THAN SPECIFIED	VALVE	
53	1	ALL DIM IN INCHES		
54	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
55	1	MELTER FEED HOLD TANK	TANK	
56	1	SEAL POT ASSEMBLY	ASSEMBLY	
57	1	VALVE OTHER THAN SPECIFIED	VALVE	
58	1	ALL DIM IN INCHES		
59	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
60	1	MELTER FEED HOLD TANK	TANK	
61	1	SEAL POT ASSEMBLY	ASSEMBLY	
62	1	VALVE OTHER THAN SPECIFIED	VALVE	
63	1	ALL DIM IN INCHES		
64	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
65	1	MELTER FEED HOLD TANK	TANK	
66	1	SEAL POT ASSEMBLY	ASSEMBLY	
67	1	VALVE OTHER THAN SPECIFIED	VALVE	
68	1	ALL DIM IN INCHES		
69	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
70	1	MELTER FEED HOLD TANK	TANK	
71	1	SEAL POT ASSEMBLY	ASSEMBLY	
72	1	VALVE OTHER THAN SPECIFIED	VALVE	
73	1	ALL DIM IN INCHES		
74	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
75	1	MELTER FEED HOLD TANK	TANK	
76	1	SEAL POT ASSEMBLY	ASSEMBLY	
77	1	VALVE OTHER THAN SPECIFIED	VALVE	
78	1	ALL DIM IN INCHES		
79	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
80	1	MELTER FEED HOLD TANK	TANK	
81	1	SEAL POT ASSEMBLY	ASSEMBLY	
82	1	VALVE OTHER THAN SPECIFIED	VALVE	
83	1	ALL DIM IN INCHES		
84	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
85	1	MELTER FEED HOLD TANK	TANK	
86	1	SEAL POT ASSEMBLY	ASSEMBLY	
87	1	VALVE OTHER THAN SPECIFIED	VALVE	
88	1	ALL DIM IN INCHES		
89	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
90	1	MELTER FEED HOLD TANK	TANK	
91	1	SEAL POT ASSEMBLY	ASSEMBLY	
92	1	VALVE OTHER THAN SPECIFIED	VALVE	
93	1	ALL DIM IN INCHES		
94	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
95	1	MELTER FEED HOLD TANK	TANK	
96	1	SEAL POT ASSEMBLY	ASSEMBLY	
97	1	VALVE OTHER THAN SPECIFIED	VALVE	
98	1	ALL DIM IN INCHES		
99	1	TELEGRAPHIC BY WIRE SCALE	SCALE	
100	1	MELTER FEED HOLD TANK	TANK	

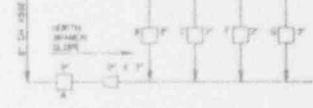


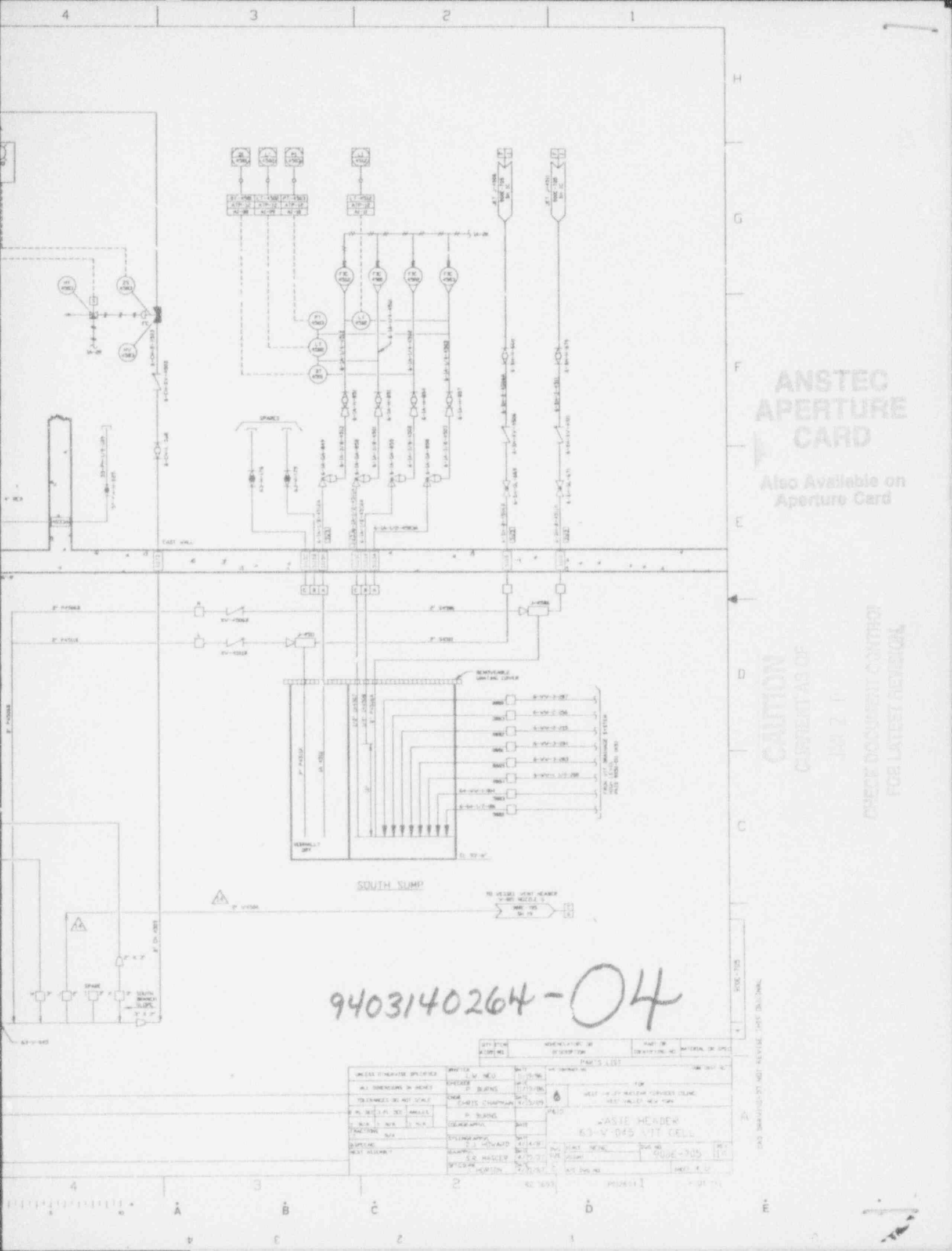


REV	DATE	DESCRIPTION
1	12/15/78	ISSUED FOR CONSTRUCTION
2	12/15/78	REVISIONS TO ELECTRICAL SYMBOLS
3	12/15/78	REVISIONS TO PIPING SYMBOLS
4	12/15/78	REVISIONS TO LEGEND

- NOTES**
- FOR AMPLIFICATIONS AND LEGENDS SEE SHEET 8-1000-100-100
  - FOR AMPLIFICATIONS SEE PAGE 100 FACILITY NON-PAGE 100.5 (CONTAINS A BLOWBY SYSTEM AND WASTEWATER)
  - THIS DIAGRAM SUPERSEDES EXISTING AND WAREHOUSE DRAWING 8-1000-100-100

- FROM CHEMICAL REAGENT STORAGE (WATER) 2" PIPING
- FROM CHPT (WATER) 2" PIPING (ALTERNATE USE FROM WELL MONITORING ASSEMBLY 4.5" PIPING NEEDLE VALVE)
- FROM WWT (WATER) 2" PIPING
- FROM 100 (WATER) 2" PIPING (ALTERNATE USE OF WASTE REAGENT CONNECTION)
- FROM 100 (WATER) 2" PIPING





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**CAUTION**  
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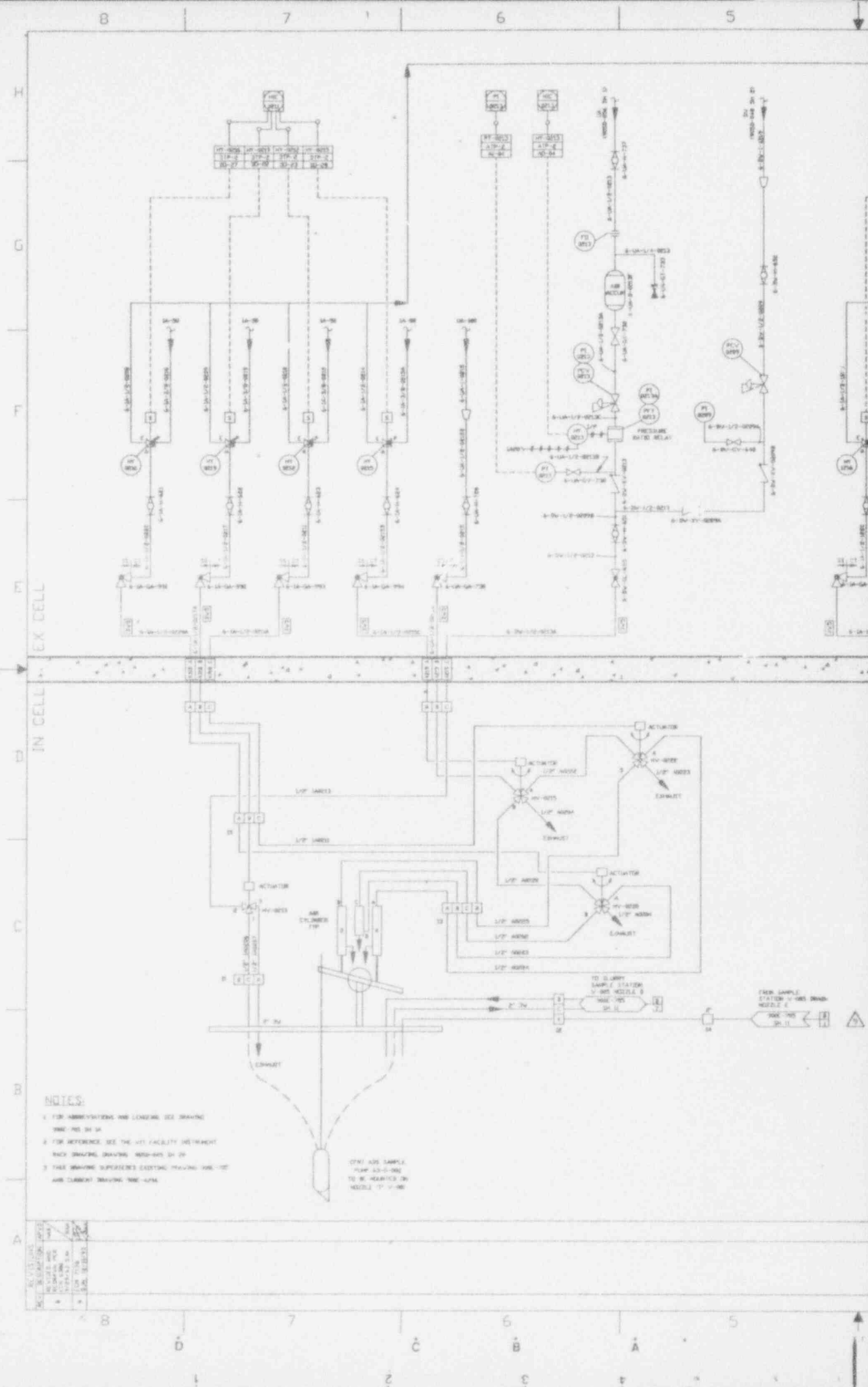
9403140264-04

REV	BY	DATE	DESCRIPTION
1	W. H. HALL	12/15/63	ISSUED FOR FAB
2	J. J. BURNS	1/13/64	REVISED FOR WASTE HEADER SERVICE CLAMP
3	C. R. HANCOCK	1/13/64	REVISED FOR WASTE HEADER NEW TYPE

QTY	DESCRIPTION	PART NO.	MATERIAL OR SPEC.
1	WASTE HEADER	63-V-045	WIT CELL
1	WASTE HEADER	63-V-045	WIT CELL
1	WASTE HEADER	63-V-045	WIT CELL

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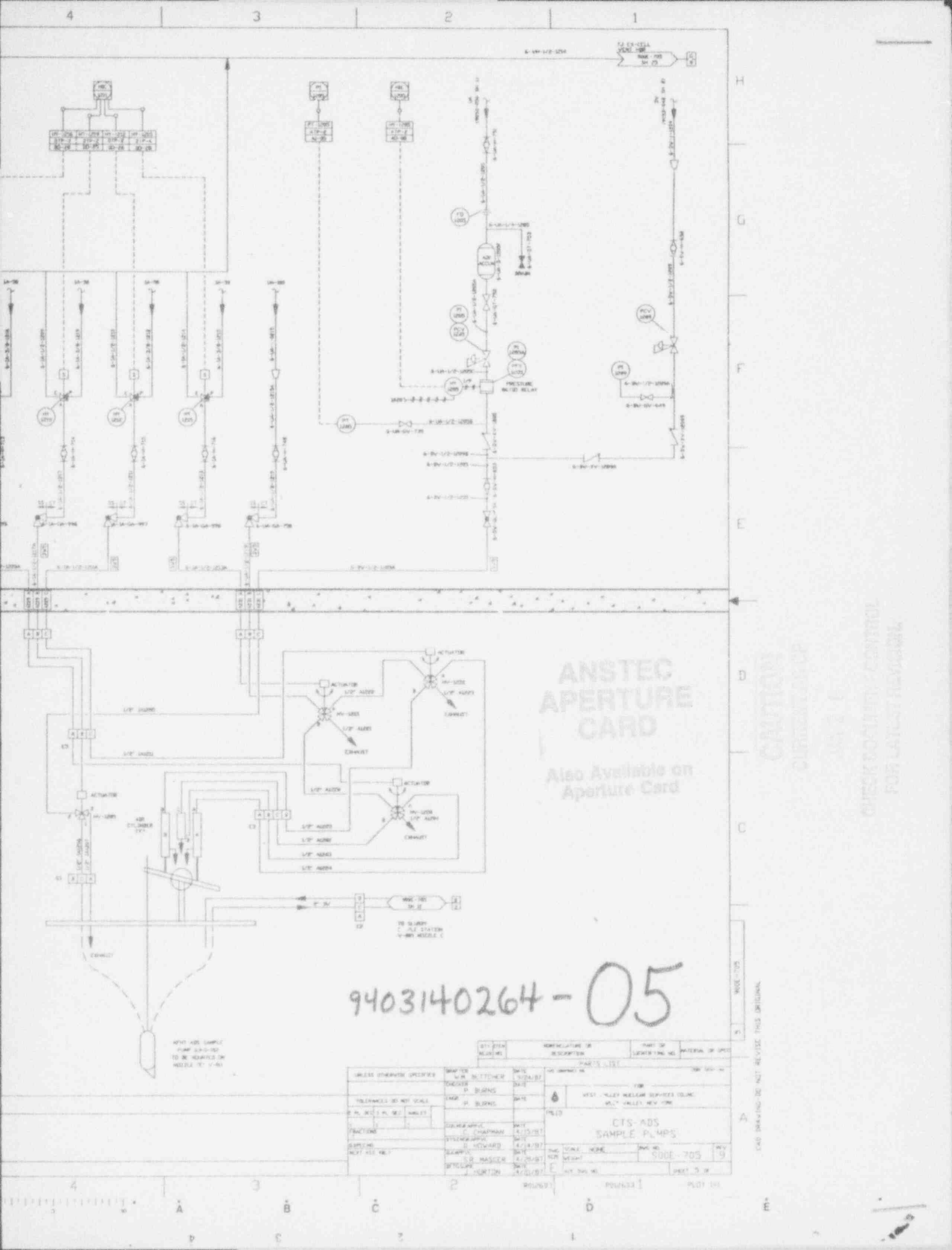


**NOTES:**

1. FOR ABBREVIATIONS AND LEGENDS SEE DRAWING 1000-100-01-04
2. FOR REFERENCE, SEE THE LIT FACILITY INSTRUMENT RACK DRAWING, DRAWING 1000-001-01-01
3. THIS DRAWING SUPERSEDES EXISTING DRAWING 1000-100-01-02 AND CURRENT DRAWING 1000-100-01-04

NOTE: ADD SAMPLE FLUX AS SHOWN TO BE HEAVY IN NEEDLE 'F' - 100

REV.	DESCRIPTION	DATE	BY	CHKD.
1	ISSUED FOR CONSTRUCTION	10/1/68	J. W. BROWN	J. W. BROWN
2	REVISED TO SHOW LATEST REVISIONS	10/1/68	J. W. BROWN	J. W. BROWN
3	REVISED TO SHOW LATEST REVISIONS	10/1/68	J. W. BROWN	J. W. BROWN



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CARD**

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Aperture Card

CAUTION  
CLIMATE CONTROL

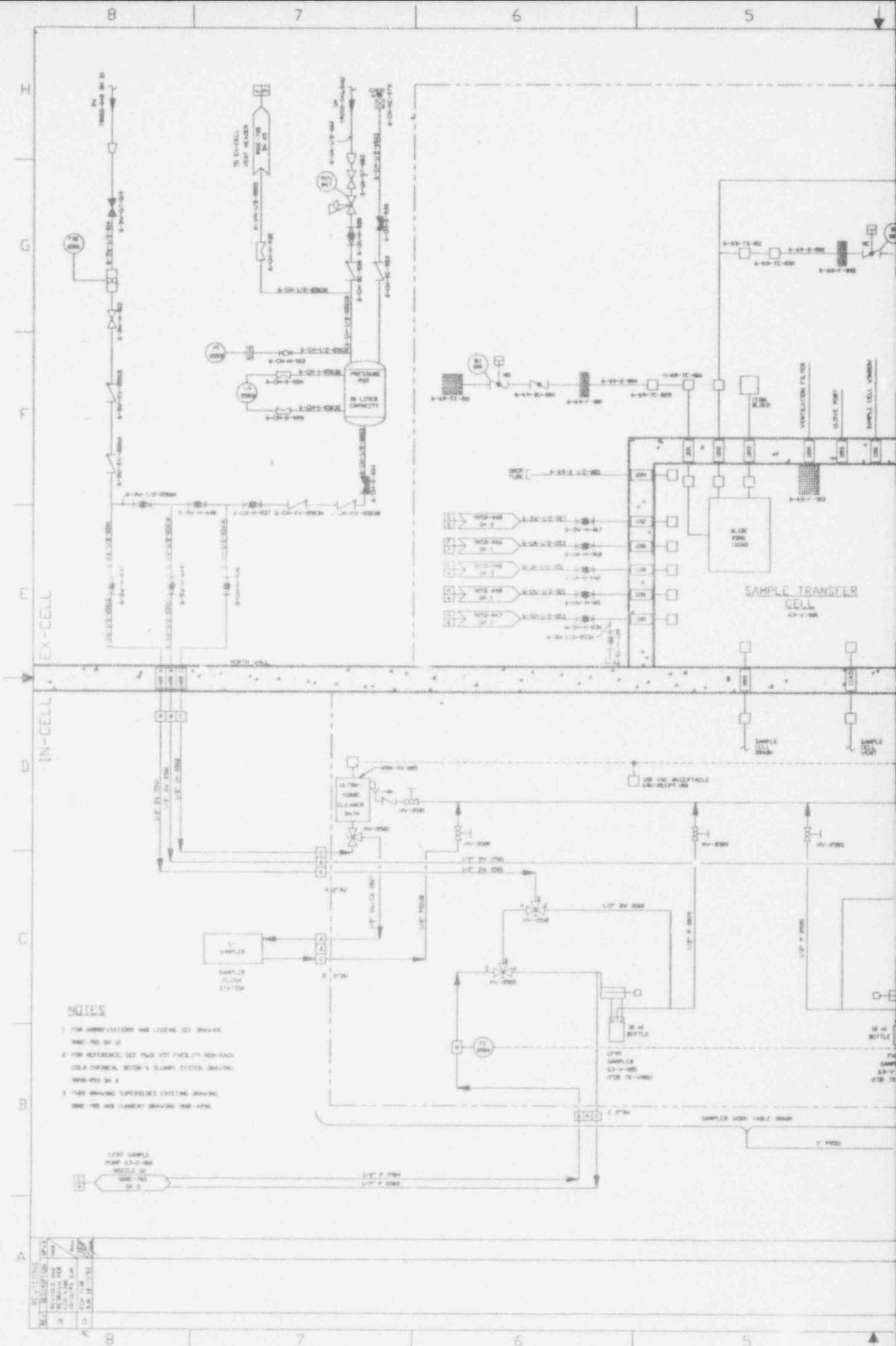
CHECK ROOMS CONTROL  
FOR LATEST REVISIONS

9403140264-05

NOTE: ADD SAMPLE PLUMP AND JET TO BE REARDED ON NEEDLE NO. 1-401

REV.	DATE	DESCRIPTION	BY	CHKD.
1	1/15/67	ISSUED	W. BURNS	
2	2/15/67	REVISED	W. BURNS	
3	4/15/67	REVISED	W. BURNS	
4	4/15/67	REVISED	W. BURNS	
5	4/15/67	REVISED	W. BURNS	
6	4/15/67	REVISED	W. BURNS	
7	4/15/67	REVISED	W. BURNS	
8	4/15/67	REVISED	W. BURNS	
9	4/15/67	REVISED	W. BURNS	

CARD DRAWING DO NOT REVISE THIS ORIGINAL



**NOTES**

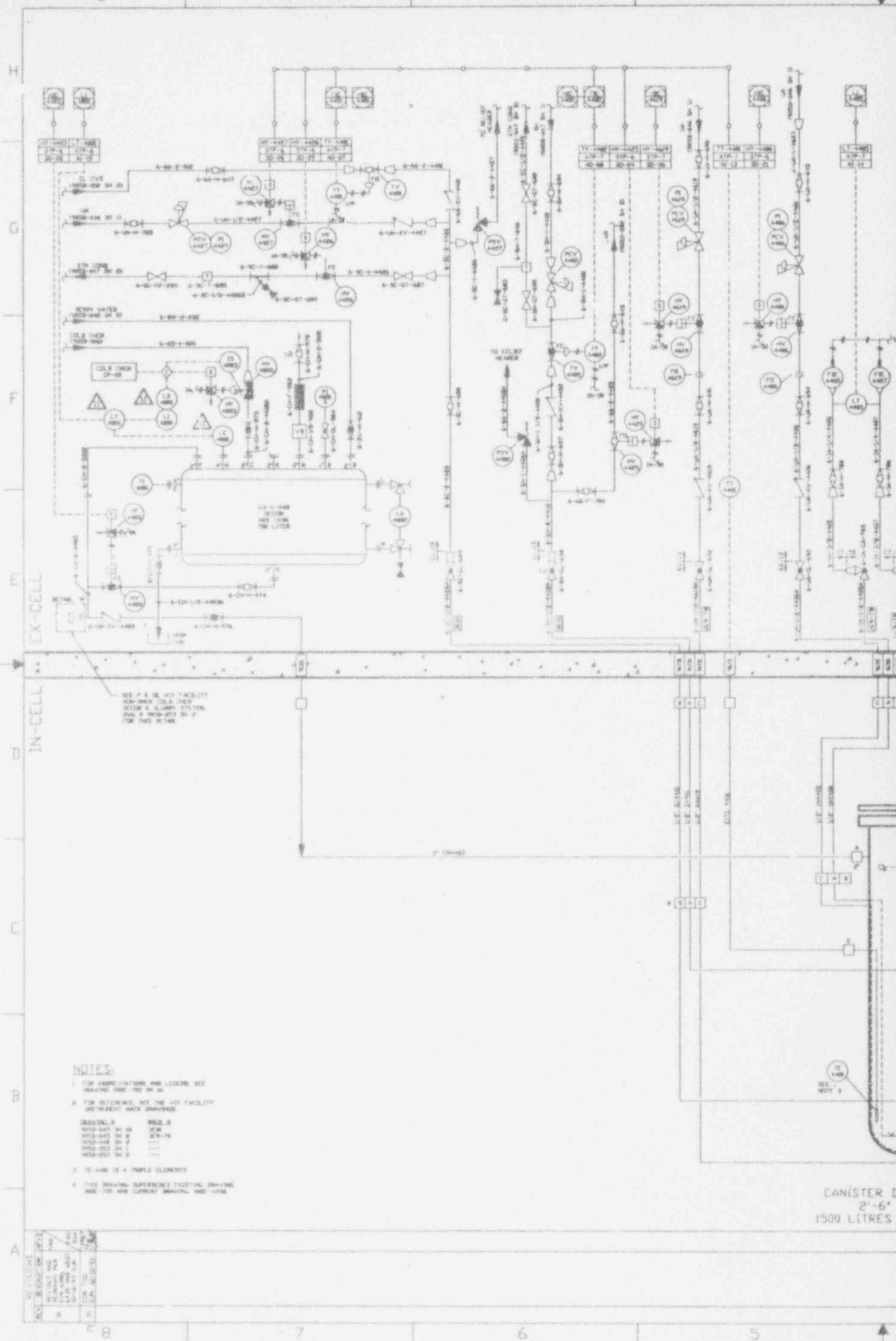
- 1 FOR ABBREVIATIONS AND LEGEND, SEE DRAWING WMS-705 SH 14
- 2 FOR REFERENCE, SEE THIS VED FACILITY NON-BACK COLOR CHEMICAL SECTION & QUARTZ DISTILL DRAWING WMS-705 SH 2
- 3 THIS DRAWING SUPERSEDES EXISTING DRAWING WMS-705 AND CURRENT DRAWING WMS-4796

LEFT SAMPLE PUMP 6-20-1-1000  
NOZZLE SH 5  
LEFT P-1000  
LEFT P-1000

REV.	DATE	BY	CHKD.	DESCRIPTION
1	10/15/54	J.M.	J.M.	ISSUED FOR CONSTRUCTION
2	11/15/54	J.M.	J.M.	REVISED TO SHOW CHANGES
3	12/15/54	J.M.	J.M.	REVISED TO SHOW CHANGES







EX-CELL

IN-CELL

SEE P. 6 IN VIT FACILITY  
FOR NEW WORK TANK AND  
SCUM & SLUMP SYSTEM  
AND 2 INCH DIA. P  
FOR THIS TANK.

- NOTES**
- 1 FOR ASSOCIATIONS AND LEGEND SEE DRAWING SHEET P-6 IN 24
  - 2 FOR REFERENCES SEE THE VIT FACILITY INSTRUMENT WORK DRAWINGS
- | BRAND/NO.      | SIZE |
|----------------|------|
| W-10-101 IN 10 | 1/2" |
| W-10-102 IN 8  | 3/8" |
| W-10-103 IN 4  | 1/4" |
| W-10-104 IN 2  | 1/8" |
- 3 TE-446 IS A PUMP ELEMENT
  - 4 THE DRAWING REPRESENTS IDEAL DRAWING AND IS NOT AN ELECTRICAL DRAWING

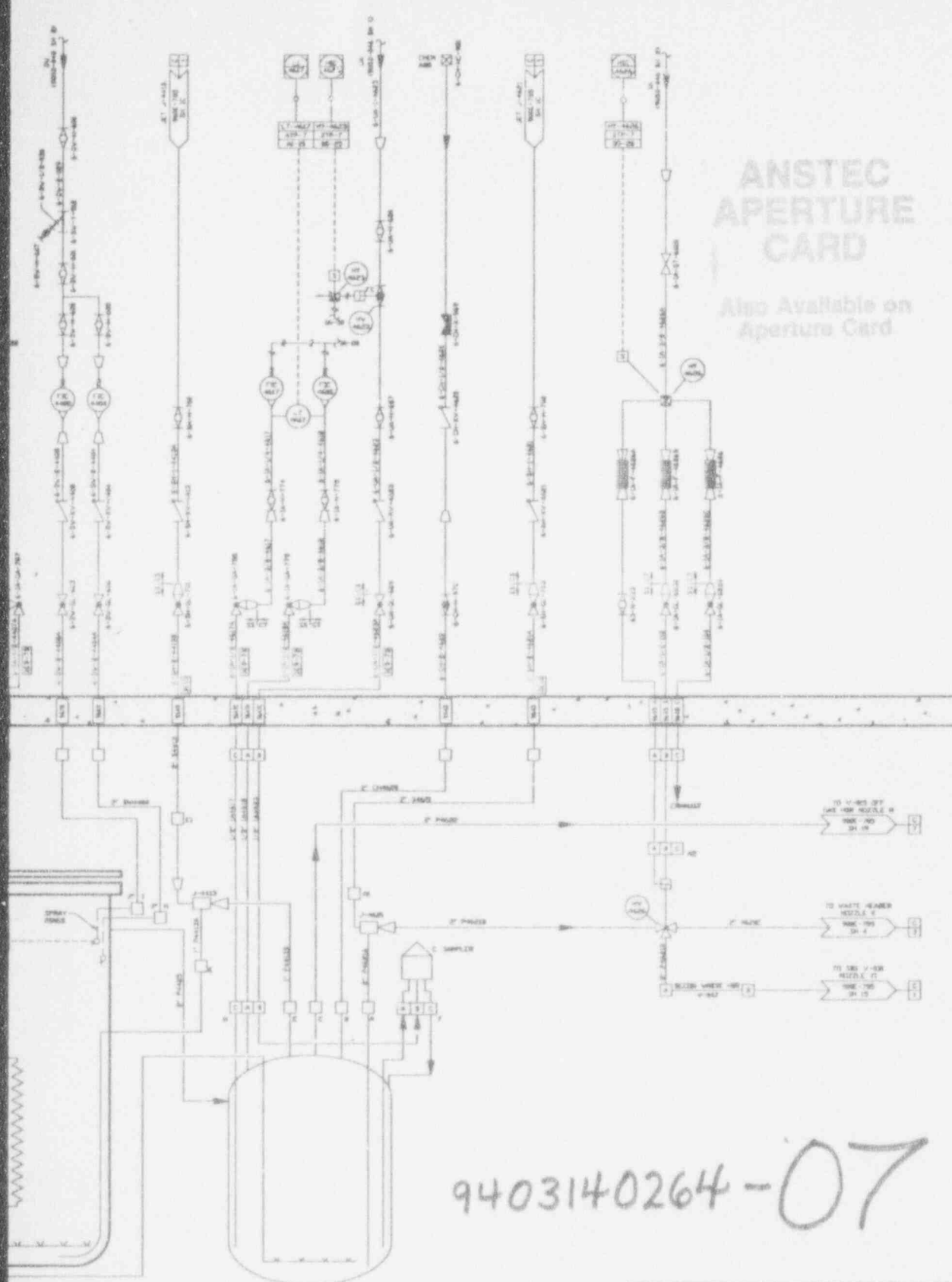
**REVISIONS**

NO.	DATE	DESCRIPTION
1	10/1/58	ISSUED FOR CONSTRUCTION
2	11/1/58	REVISED TO SHOW TANK AND PUMP
3	12/1/58	REVISED TO SHOW TANK AND PUMP
4	1/1/59	REVISED TO SHOW TANK AND PUMP
5	2/1/59	REVISED TO SHOW TANK AND PUMP
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98	11/1/66	REVISED TO SHOW TANK AND PUMP
99	12/1/66	REVISED TO SHOW TANK AND PUMP
100	1/1/67	REVISED TO SHOW TANK AND PUMP

CANISTER DE  
2'-6"  
1500 LITRES

# ANSTEC APERTURE CARD

Also Available on Aperture Card



63-V-044  
CONTAMINATION TANK  
D X 11'-0" HIGH  
GROSS 621 LITRES NET

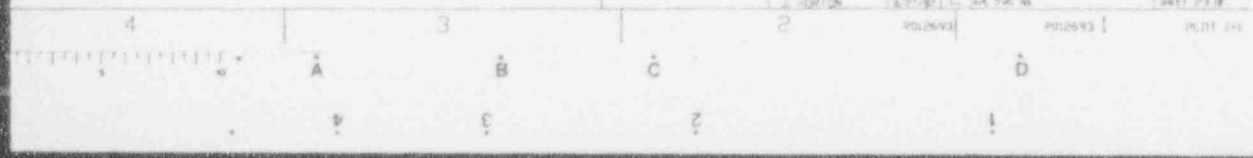
63-V-046  
NEUTRALIZER TANK  
2'-6" ID X 10'-10" HIGH  
1500 LITRES

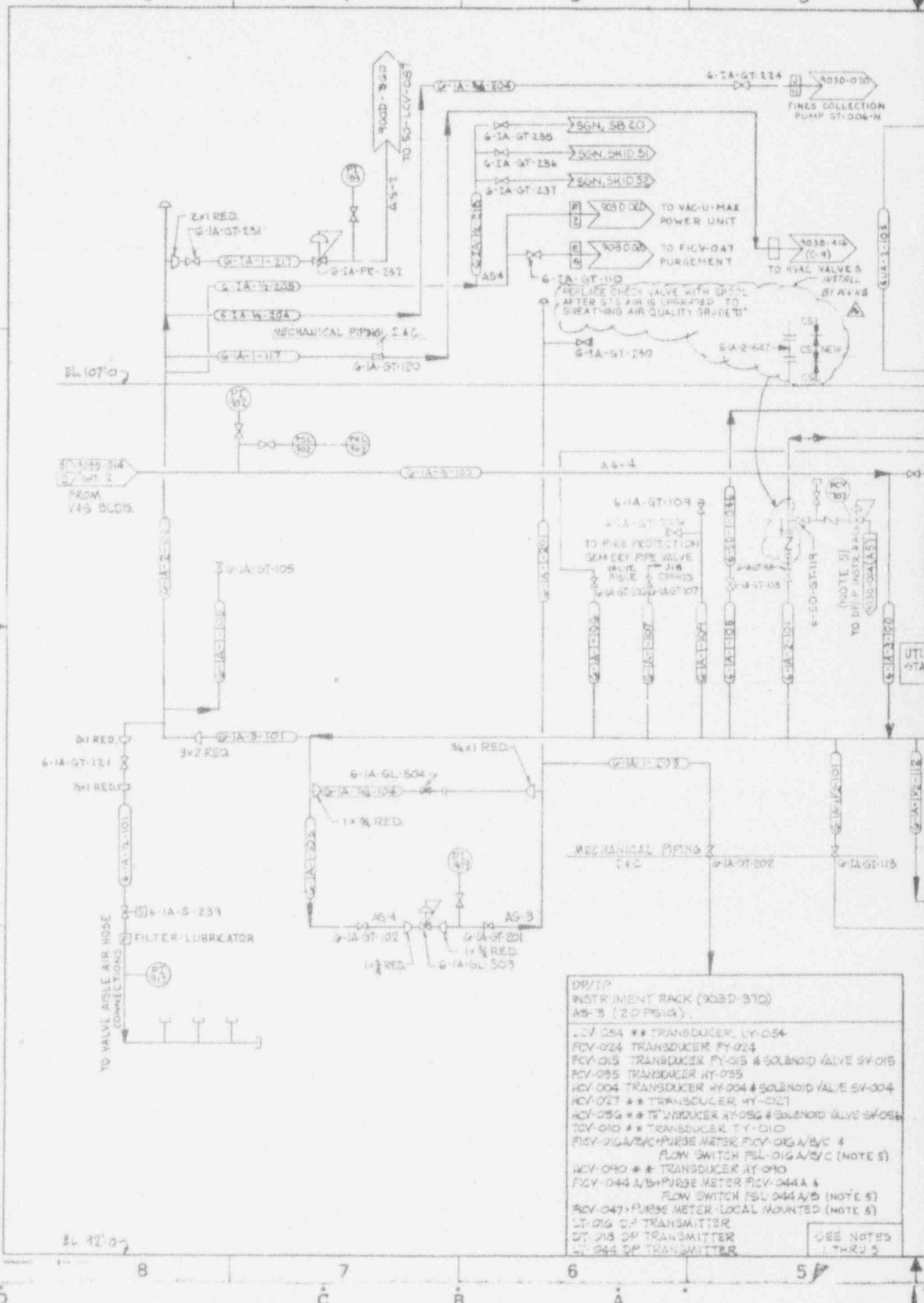
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REV	BY	DATE	DESCRIPTION
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3	P. BURTON	10/1/62	REVISED
4	D. KING	10/1/62	REVISED
5	D. KING	10/1/62	REVISED
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99	D. KING	10/1/62	REVISED
100	D. KING	10/1/62	REVISED

CAUTION  
 CONTAMINATION  
 CHECK TO BE CONTROL  
 FOR LATEST REVISION

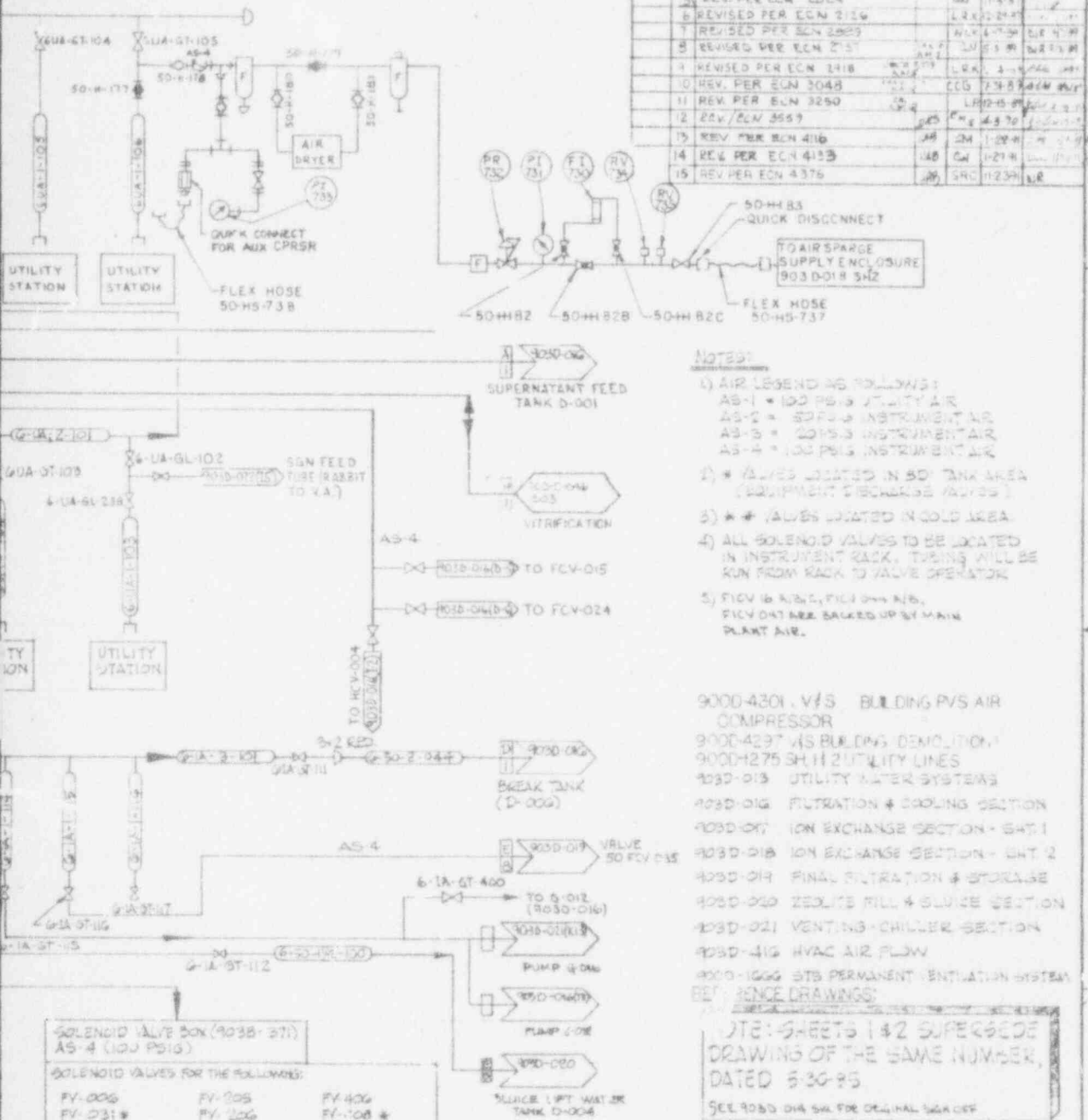
THIS DRAWING IS NOT TO BE REVISED WITHOUT THE APPROVAL OF THE ORIGINAL DESIGNER





- DP/TP INSTRUMENT RACK (903D-370) AS-3 (20 PAGES)
- LY-054 \*\* TRANSDUCER LY-054
  - FY-024 TRANSDUCER FY-024
  - FY-025 TRANSDUCER FY-025 & SOLENOID VALVE SV-015
  - FY-027 TRANSDUCER FY-027
  - FY-028 \*\* TRANSDUCER FY-028 & SOLENOID VALVE SV-004
  - FY-029 \*\* TRANSDUCER FY-029 & SOLENOID VALVE SV-005
  - FY-044 A/B PURGE METER FICV-044 A/B/C (NOTE 5)
  - FY-047 PURGE METER FICV-047 (NOTE 5)
  - FY-048 A/B PURGE METER FICV-048 A/B (NOTE 5)
  - FY-049 PURGE METER FICV-049 (NOTE 5)
  - FY-050 DP TRANSMITTER
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  - FY-100 DP TRANSMITTER
- SEE NOTES THRU 5

DATE	REV	DESCRIPTION	BY	DATE	APPROVED
	1	REVISED & REDRAWN PER ECN 1443 ADD'D SHEET 2		7/27/81	FOC
	2	REV/ECN 2023	JPS	7/27/81	HAJ
	3	REV PER ECN 1736	WJ	10/21/81	
	4	REV PER ECN 1859	WJ	11/23/81	
	5	REV PER ECN 2024	WJ	11/23/81	
	6	REVISED PER ECN 2126	LRA	12/24/81	
	7	REVISED PER ECN 2023	WJ	1/27/82	
	8	REVISED PER ECN 2127	WJ	2/25/82	
	9	REVISED PER ECN 2418	LRA	3/1/82	
	10	REV PER ECN 2048	WJ	7/28/82	
	11	REV PER ECN 2250	WJ	11/25/82	
	12	REV/ECN 3559	WJ	4/3/83	
	13	REV PER ECN 4110	WJ	1/22/84	
	14	REV PER ECN 4123	WJ	1/27/84	
	15	REV PER ECN 4375	WJ	11/23/84	



**NOTES:**

- AIR LEGENDING AS FOLLOWS:  
AS-1 = 100 PSIG UTILITY AIR  
AS-2 = 50 PSIG INSTRUMENT AIR  
AS-3 = 20 PSIG INSTRUMENT AIR  
AS-4 = 100 PSIG INSTRUMENT AIR
- \* VALVES LOCATED IN SDI TANK AREA (EQUIPMENT DISCHARGE VALVES)
- \* VALVES LOCATED IN COLD AREA
- ALL SOLENOID VALVES TO BE LOCATED IN INSTRUMENT RACK. TUBING WILL BE RUN FROM RACK TO VALVE OPERATOR
- FICV 16 & 16B, FICV 044 & 16B, FICV 044 ARE BACKED UP BY MAIN PLANT AIR.

- 9000-4301 VFS BUILDING PVS AIR COMPRESSOR  
 9000-4297 VAS BUILDING DEMOLITION  
 9000-1275 SH H 2 UTILITY LINES  
 9030-013 UTILITY WATER SYSTEMS  
 9030-016 FILTRATION & COOLING SECTION  
 9030-017 ION EXCHANGE SECTION - SHT. 1  
 9030-018 ION EXCHANGE SECTION - SHT. 2  
 9030-019 FINAL FILTRATION & STORAGE  
 9030-020 ZEOLITE MILL & SLURRY SECTION  
 9030-021 VENTING-CHILLER SECTION  
 9030-416 HVAC AIR FLOW  
 9030-1006 STS PERMANENT VENTILATION SYSTEM  
 SEE REFERENCE DRAWINGS:

NOTE: SHEETS 1 & 2 SUPERSEDE DRAWING OF THE SAME NUMBER, DATED 5-30-85.  
SEE 9030-DIA-SHA FOR ORIGINAL SHEET

SOLENOID VALVE BOX (9038-371)  
AS-4 (100 PSIG)

SOLENOID VALVES FOR THE FOLLOWING:

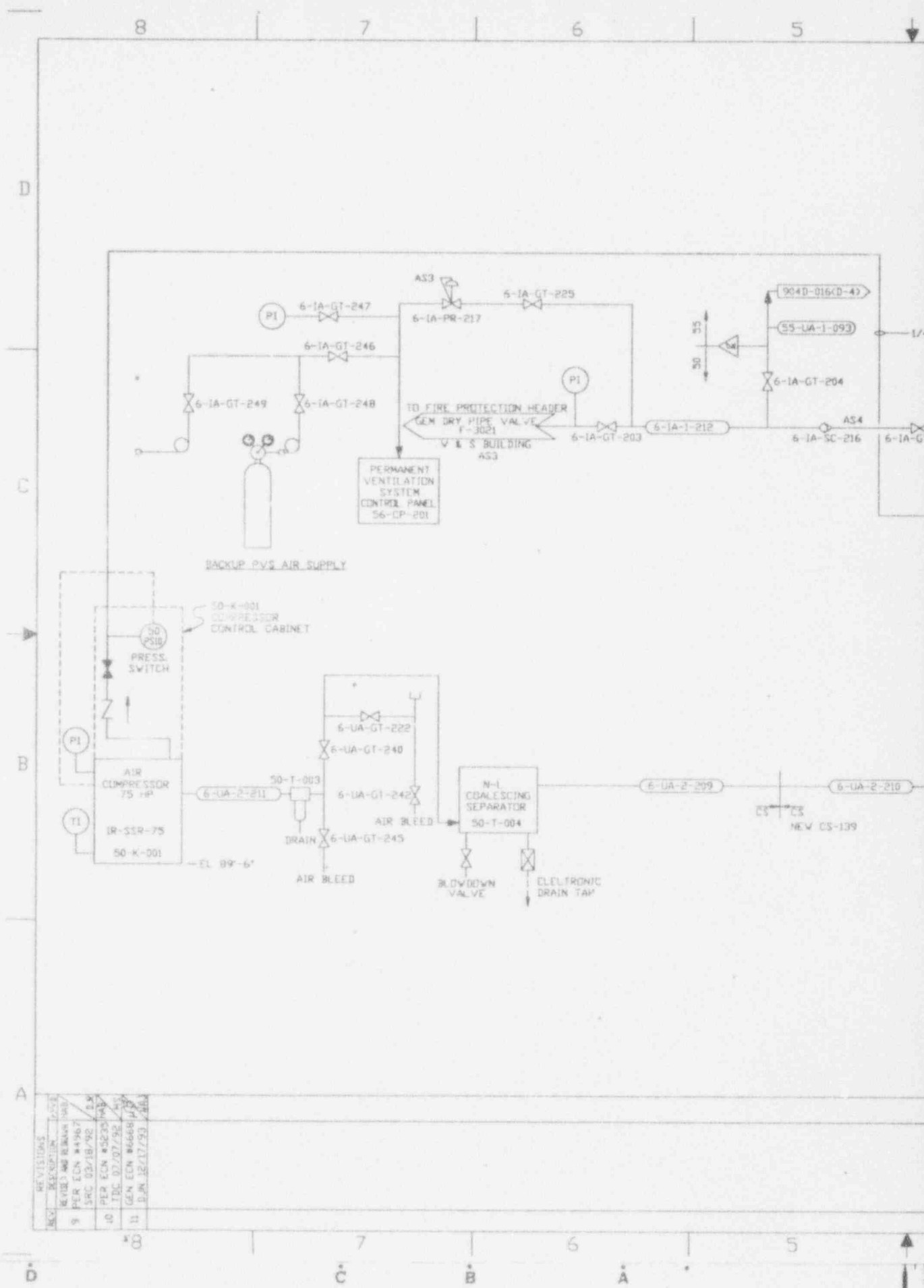
FV-006	FV-305	FV-406
FV-031*	FV-306	FV-108*
FV-042	FV-308*	FV-421
FV-064	FV-315	FV-422
FV-067	FV-320	FV-520
FV-068	FV-321	FV-521
FV-077	FV-304A	
FV-104A	FV-304B	
FV-104B	FV-305	
FV-105	FV-306	
FV-106	FV-308*	
FV-108*	FV-318	
FV-118	FV-320	
FV-120	FV-321	
FV-121	FV-404A	
FV-204A	FV-404B	
FV-204B	FV-405	

QTY	ITEM	NOMENCLATURE OR DESCRIPTION	PART OR IDENTIFYING NO.	MATERIAL OR SPEC.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED		QUANTITY	DATE	BY CONTRACT NO.
DRAWN BY		DATE	FOR	
CHECKED BY		DATE	West Valley Nuclear Services Co., Inc.	
TOLERANCES - DO NOT SCALE		ENGR	DATE	West Valley, New York
± PL DEC	± PL DEC	± ANGLES		
±	±	±		
FRACTIONS		COLORS	DATE	
D. SPEC. NO.		OR DR. SPEC.	DATE	
BY T. ASSEMBLY		D.A. APPL.	DATE	
		BY T. SUPPL.	DATE	
		BY T. SUPPL.	DATE	

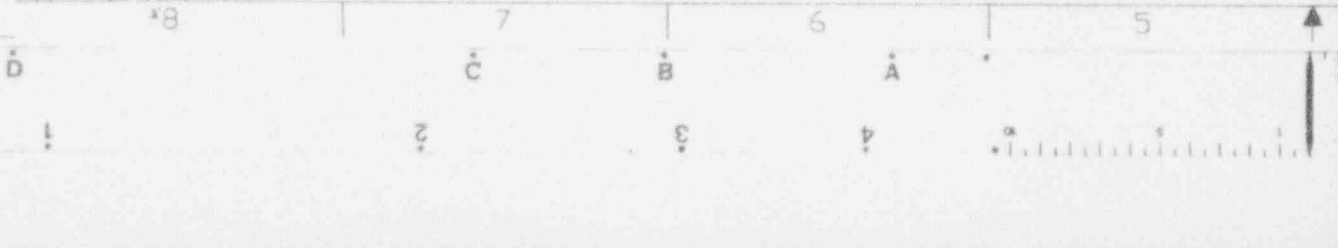
**ANSTEC APERTURE CARD**  
Also Available on Aperture Card

CAUTION  
CLIENT AS OF

CHECK DIMENSIONS CAREFULLY FOR LATEST REVISION



NO.	REVISIONS	DATE
1	REVISION	10/25/92
2	REVISION	11/10/92
3	REVISION	11/10/92
4	REVISION	11/10/92
5	REVISION	11/10/92
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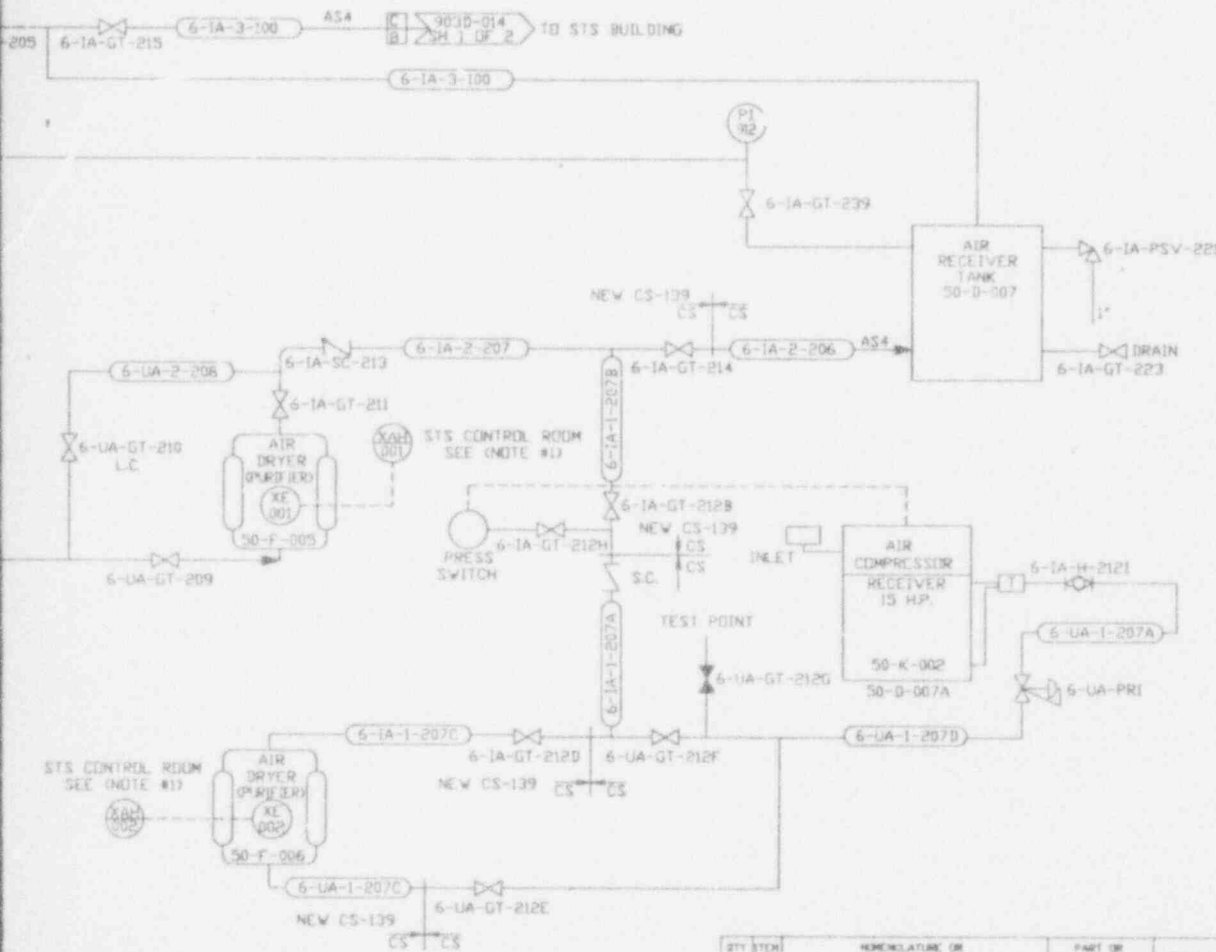
# ANSTEC APERTURE CARD

Also Available on Aperture Card

### NOTES:

1 XAH CARBON MONOXIDE ALARM HIGH

SENSING LINE



CAUTION  
CURRENT USE

JAN 2 1987

CHECK DOCUMENT CONTROL  
FOR LATEST REVISION

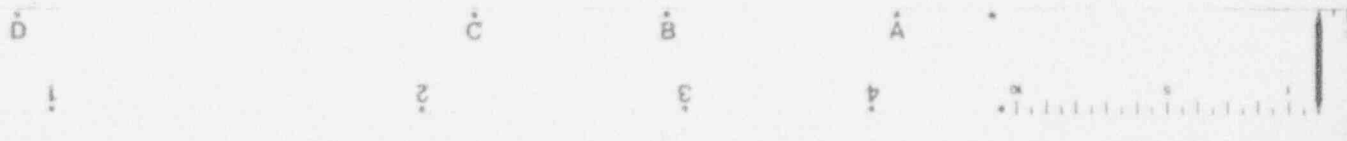
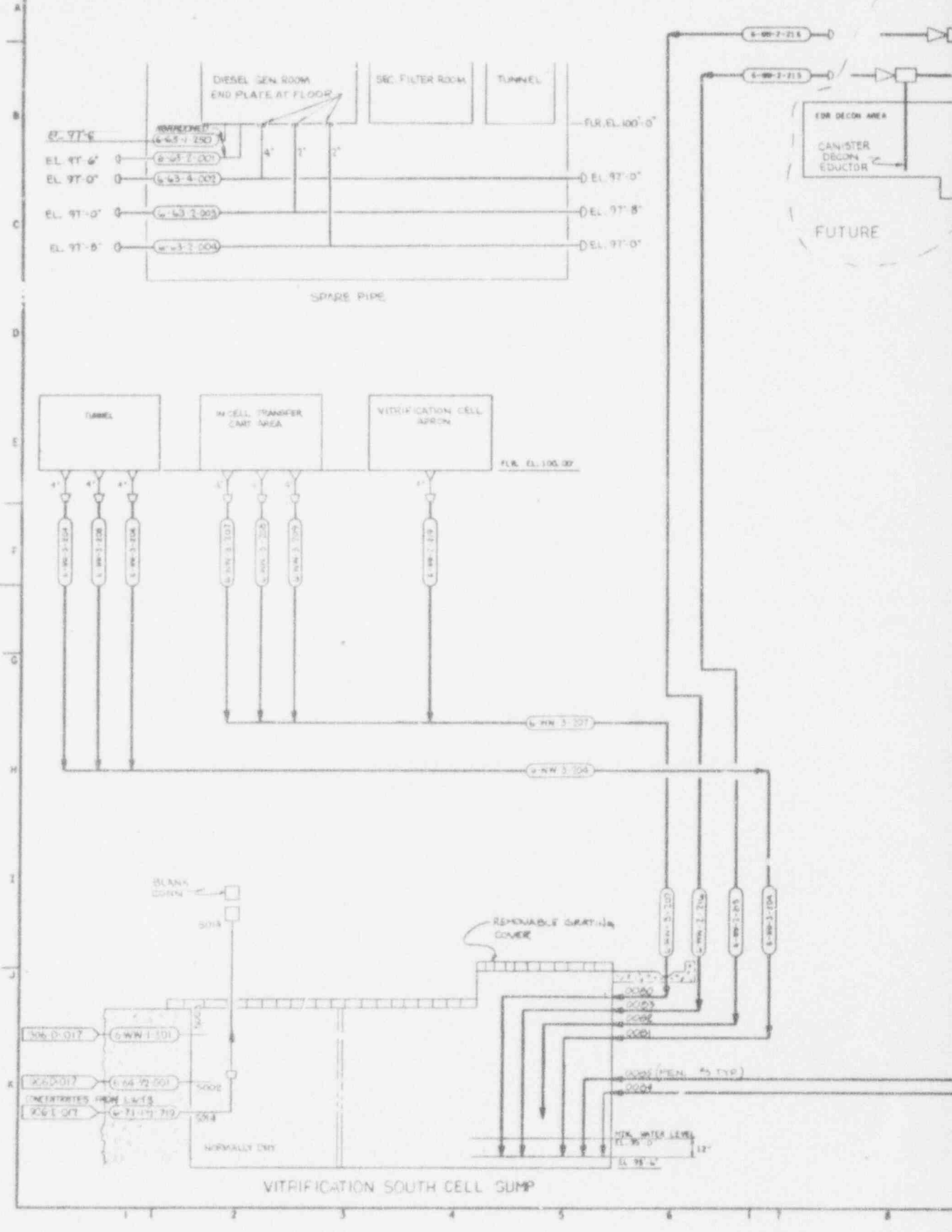
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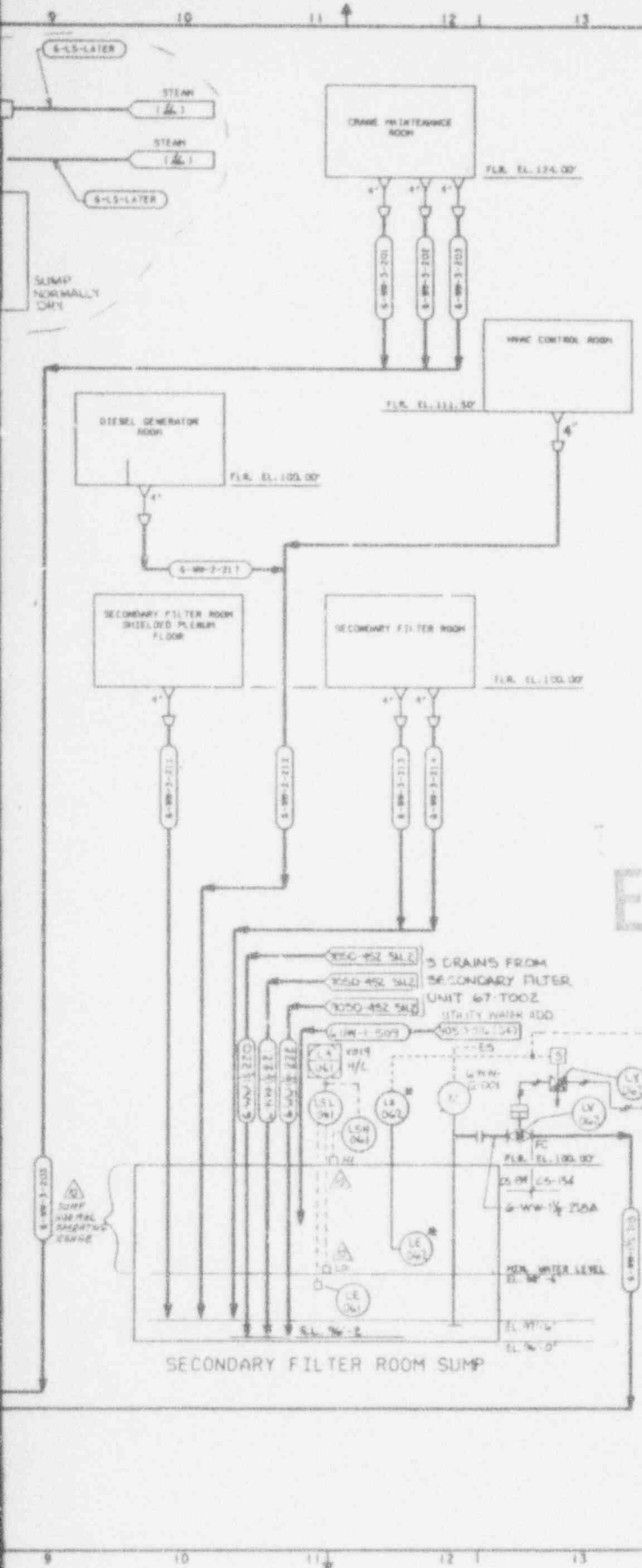
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9403140264-09



905-D-011 C





NO.	DATE	REVISION	DR	CH	APPROVED
0	10-12-88		R/L	F/J	R/L FEA 400
GENERAL REVISION					
1	11-1-88		R/L	F/J	R/L FEA 400
GENERAL REVISION					
2	3/5/89	REV. 1567			
1	3/73/89	REVISED PER ECN 2819	E+B		
2	12/4/89	REV. PER ECN 3287	CGR	AKS	EPY
3	5-8-90	REV. PER ECN 3631	GM	F.L.	D.R.
4	7-4-90	REV. PER ECN 3773	BJR	D.R.	D.R.
5	11-17-92	REV. PER ECN 5684	PD	WB	W.F.D.
6	12-31-92	REV. PER ECN 5738	PD	WB	W.F.D.
7	5-5-93	REV. PER ECN 6301	PD	WB	W.F.D.
8	5-13-93	REV. PER ECN 5745	PAK	AKS	EPY
9	8-31-93	REV. PER ECN 6636	JH	KMS	
10	12-17-93	REV. PER ECN 7552	AKS	HB	BJ

**NOTES**

- # INDICATES INSTRUMENTS TO BE SUPPLIED BY SLUMP PUMP VENDOR.
- ALL INSTRUMENT TAG NUMBERS ARE PRECEDED BY SYSTEM DESIGNATOR 63.
- ALL DRAIN LINES TO SLOPE TOWARD SLUMP 1/8" PER FOOT MINIMUM.
- DRAINAGE PIPING IN SLUMP SHALL BE 12 INCHES BELOW MINIMUM WATER LEVEL AT ALL TIMES.

**REFERENCE DRAWINGS**

PAID VITRIFICATION DRAINAGE SYSTEM LOW LEVEL WASTE 905-0-050

ECN(S) PENDING

#17324

**WVNS APPROVAL**

COS MGR \_\_\_\_\_  
 COS ENGR \_\_\_\_\_  
 CRT SUPR \_\_\_\_\_  
 O & A MGR \_\_\_\_\_  
 P & S MGR \_\_\_\_\_  
 PROJ MGR \_\_\_\_\_

FOR DRAWING INDEX SEE DRAWING NO.

APPROV: WWS CH P.E. 11/50 S.D. 12/84 SENSITIVE COPY LEAD TECH DRAW DESIGN S. J. LEWIS CHECKER L. A. PIAZZA DRAWN R. L. LEWIS	<b>EBASCO SERVICES INCORPORATED</b> 416 S. 7th St. W. 2388 TOWN OF WISCONSIN  <b>WEST VALLEY NUCLEAR SERVICES COMPANY, INC</b> WEST VALLEY, NEW YORK <b>WEST VALLEY DEMONSTRATION PROJECT</b> <b>P &amp; ID</b> <b>VITRIFICATION DRAINAGE SYSTEM</b> <b>HIGH LEVEL</b> SCALE: 1/8" = 1'-0" SHEET NO. 905D-011 OF 10 DATE: 12-15-93 SCALE: NONE SHEET NO. 905-0-011
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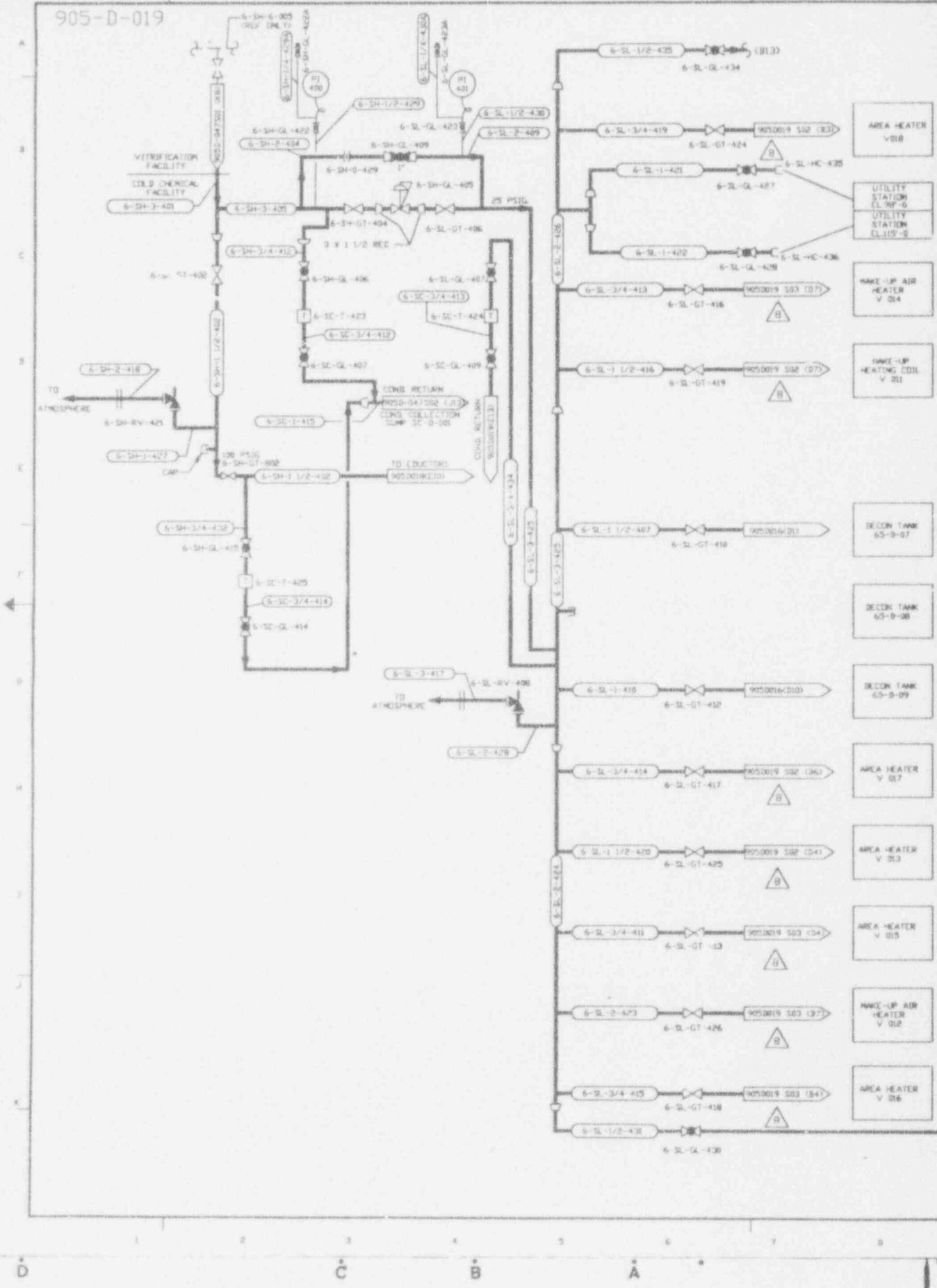
ANSTEC APERTURE CARD

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CAUTION: CHECK DRAWING CONTROL FOR LATEST REVISION

9403140264-10

905-D-019



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B	6-19-87		TJK	R.A.	R.A. TSK MDV
GENERAL REVISION					
C	09-14-87		TJK	ECS	ECS R.A. TSK MDV
REVISION PER EBAR 9439					
D	10-29-87		TJK	TV	R.A. TSK MDV
REVISION PER EBAR 9439					
E	10-3-90	CR 1448			JMT
F	11-10-90	REV'S PER ECR 2678	A	S	RD 11/14/90
G	02-01-90	REV'S PER ECR 3429	B	W	RD 4/25/90
H	7-13/90	REV'S PER ECR 3862	AVM	DRS	DR 5/27/90
I	3/3/93	REV'S PER ECR 5974	SKD	DRS	DD 3/15/93
J	9/25/93	REV'S PER ECR 6703	LAK	DRS	HAI
K	10/20/93	REV'S PER ECR 6129	H.A.	HAB	D.B.
L	11/5/93	REV'S PER ECR 6844	SKD	DRS	D.B.
M	12/14/93	REV'S PER ECR 7090	MAN	DRS	DRG.

**NOTES**

- FOR GENERAL NOTES SEE DWG 905-D-015.
- TRAPS ARE TO BE SUPPLIED WITH INTEGRAL STRAINERS.

**REFERENCE DRAWINGS**

COLD CHEMICAL PREP AND FEED SYSTEM P&ID'S	905-D-015
	905-D-016
	905-D-017
	905-D-018

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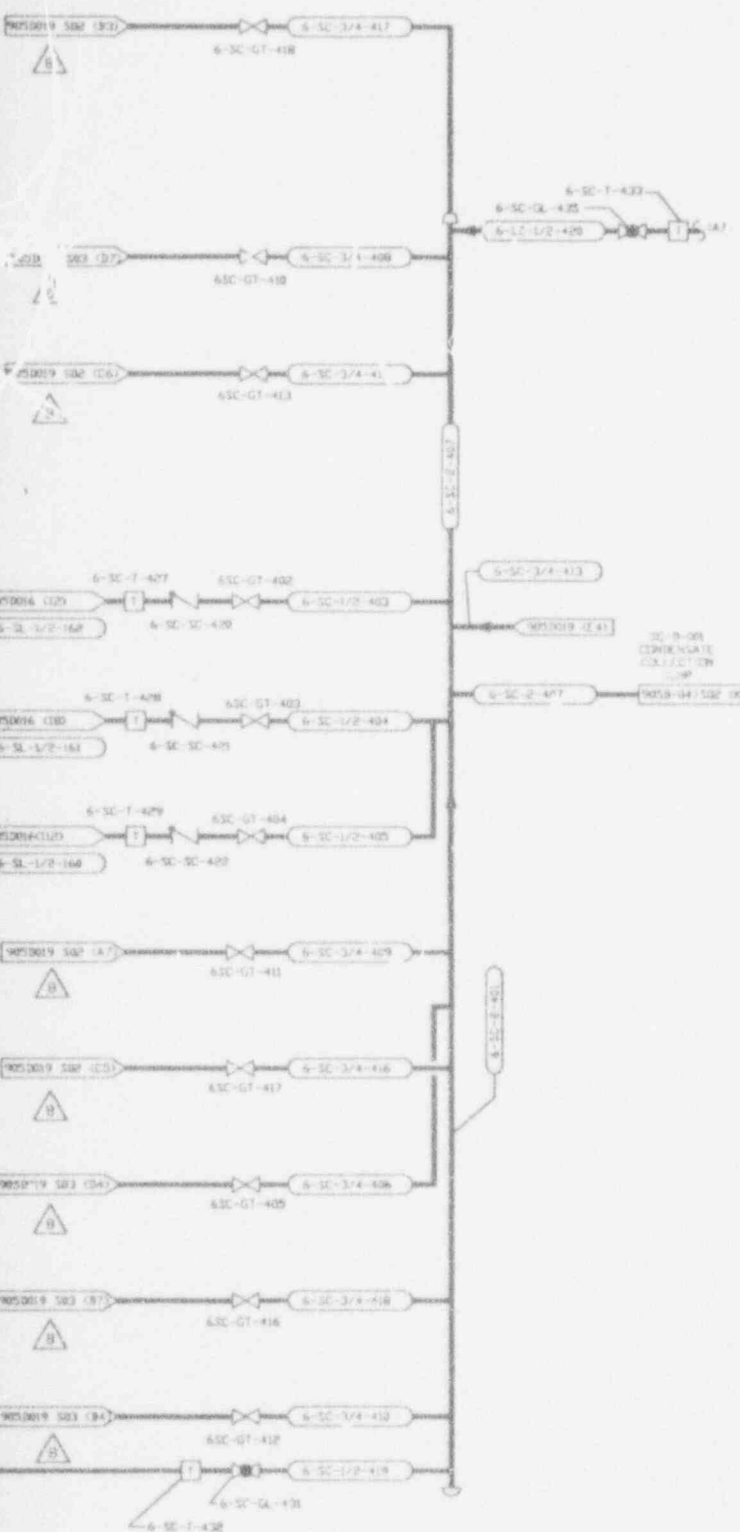
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CAUTION

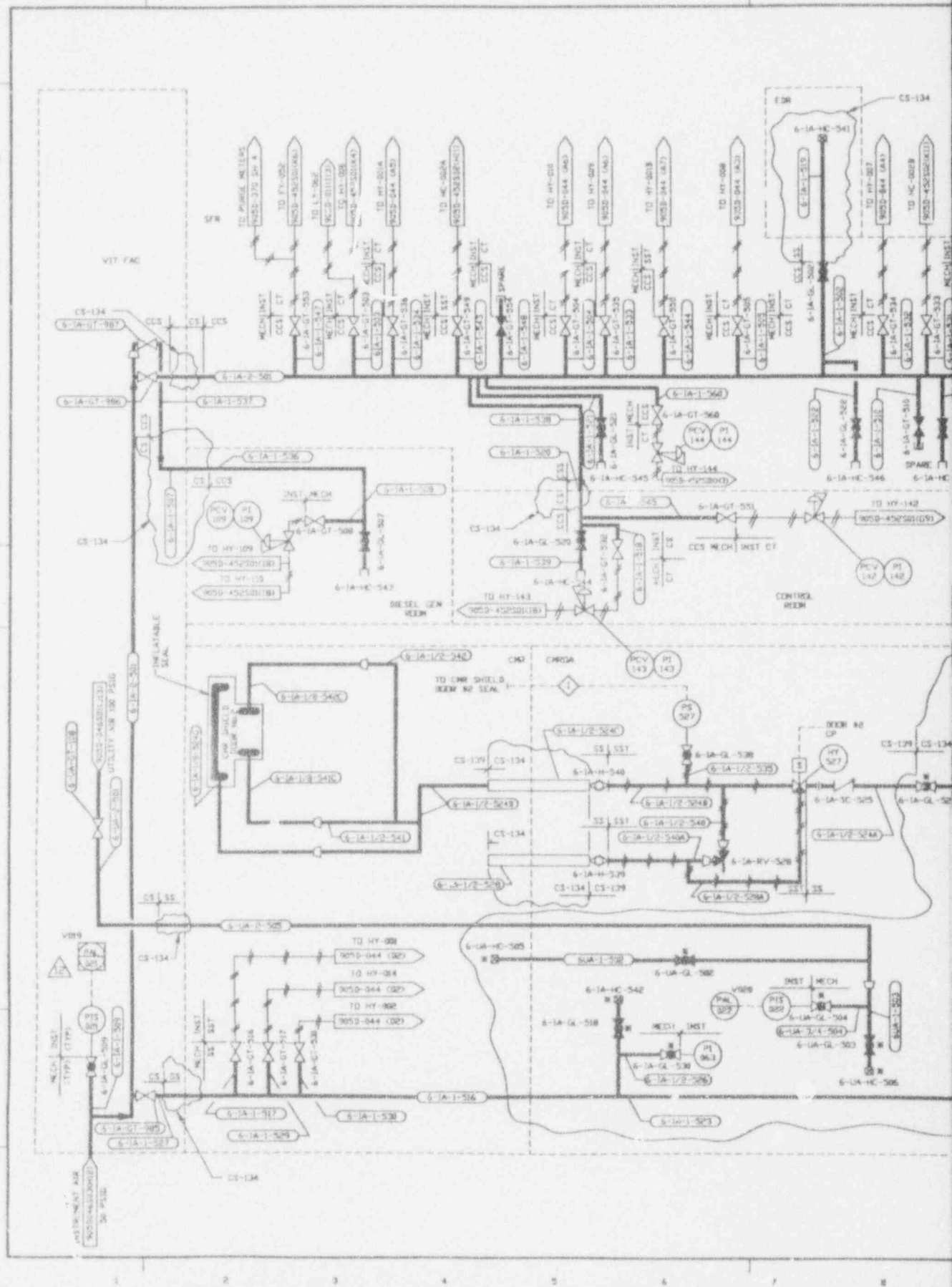
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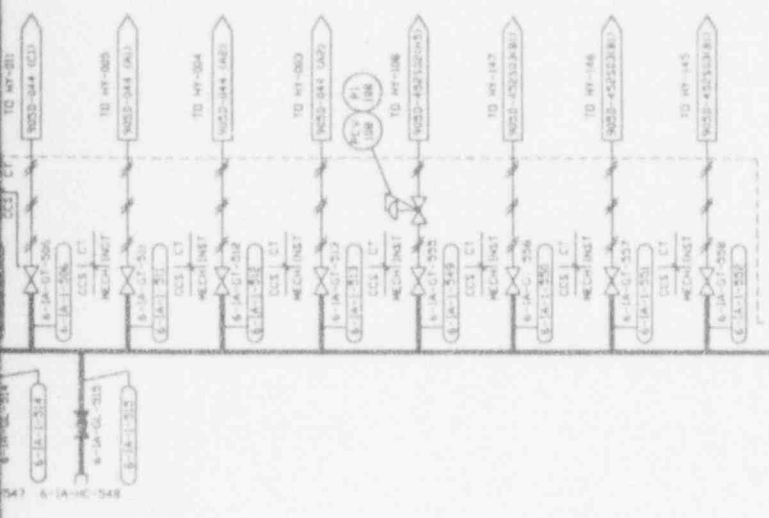
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PROJECT NO.	04-86-87	AVE 57 & W. 2000	1400 BRICK SQ.
DESIGNER SURV.	04-86-87	WEST VALLEY NUCLEAR SERVICES COMPANY, INC. WEST VALLEY, NEW YORK	
CLEAR DRG. WORK	04-86-87		
P.S. ADVISORY	04-86-87	WEST VALLEY DEMONSTRATION PROJECT P & ID COLD CHEMICAL STEAM & CONDENSATE SYSTEM	
REVISION	04-86-87		
DATE	04-86-87	DRAWING NO.	
NO. OF SHEETS	04-86-87	905D-019-8	
PROJECT NO.	04-86-87	SHEET NO.	
CONTRACT NO.		905-D-019	
DATE FOR CONSTRUCTION		SHEET NO.	



9403140264-11



NO.	DATE	REVISION	DR	BY	APPROVED
0	7-15-89	CR 1649			JRW
1	10-12-89	REV'D PER ECN 3165	JAV	KRO	DJR
2	3-15-90	REV'D PER ECN 3363	PES	DRS	DJR
3	4-05-90	REV'D PER ECN 3521	PES	DRS	DJR
4	5-05-90	REV'D PER ECN 3669	CTC	DRS	DJR
5	5-9-91	REV'D PER ECN 4071	AVN	HAB	DJR
6	7-16-91	REV'D PER ECN 4398	AVN	HAB	DJR
7	7-2-92	REV'D PER ECN 4491	DAK	HAB	DJR
8	8-11-92	REV'D PER ECN 5005	VCK	HAB	DJR
9	02-24-93	REV'D PER ECN 5605	DRS	DRS	PAM
10	10-28-93	REV'D PER ECN 7017	KSG	DRS	JRY
11	11-16-93	REV'D PER ECN 7580	HXL	DRS	JRY
12	10-22-93	REV'D PER ECN 7161	PAM	JRY	JRY



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#7444

REFERENCE DRAWINGS:

- P & ID VITRIFICATION FACILITY UTILITY AIR SYSTEM 905-D-046 501
- P & ID VITRIFICATION FACILITY INSTRUMENT AIR SUPPLY 905-D-046 503
- INSTRUMENT LOCATION ARRANGEMENT DRAWINGS-HVAC SYSTEM 905-D-370 SH 1-7
- INSTRUMENT LOCATION ARRANGEMENT DRAWINGS-VITRIFICATION FACILITY 905-D-370 SH 1-4

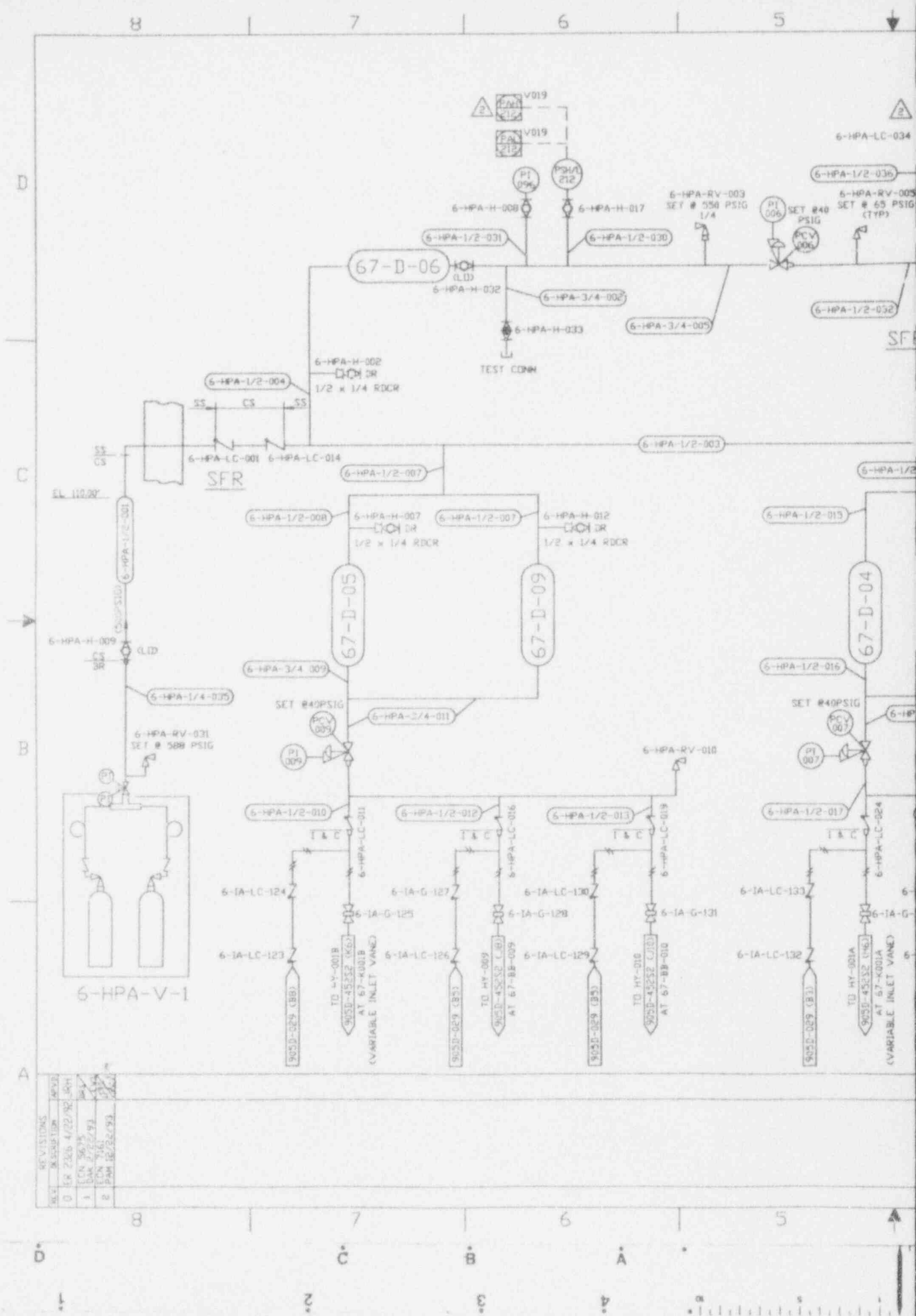
L \* DESIGNATES EXISTING EQUIPMENT

NOTES:

FOR DRAWING INDEX SEE DRAWING NO.	
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PROJECT MGR R.D. WEINERT 6/30/87	BY SPS: M. JONES FOR: [Signature]
DESIGNER P.S. KOVA 12/06/80/87	WEST VALLEY NUCLEAR SERVICES COMPANY, INC WEST VALLEY, NEW YORK
CHECKED BY P.S. KOVA 12/06/80/87	WEST VALLEY DEMONSTRATION PROJECT
DATE R.J. LEVET 6/30/87	P & ID VITRIFICATION FACILITY INSTRUMENT & UTILITY AIR SYS
DATE R.J. LEVET 6/30/87	
DATE J.J. KITZ 6/30/87	
DATE R.D. WEINERT 6/30/87	
DATE P.S. KOVA 12/06/80/87	
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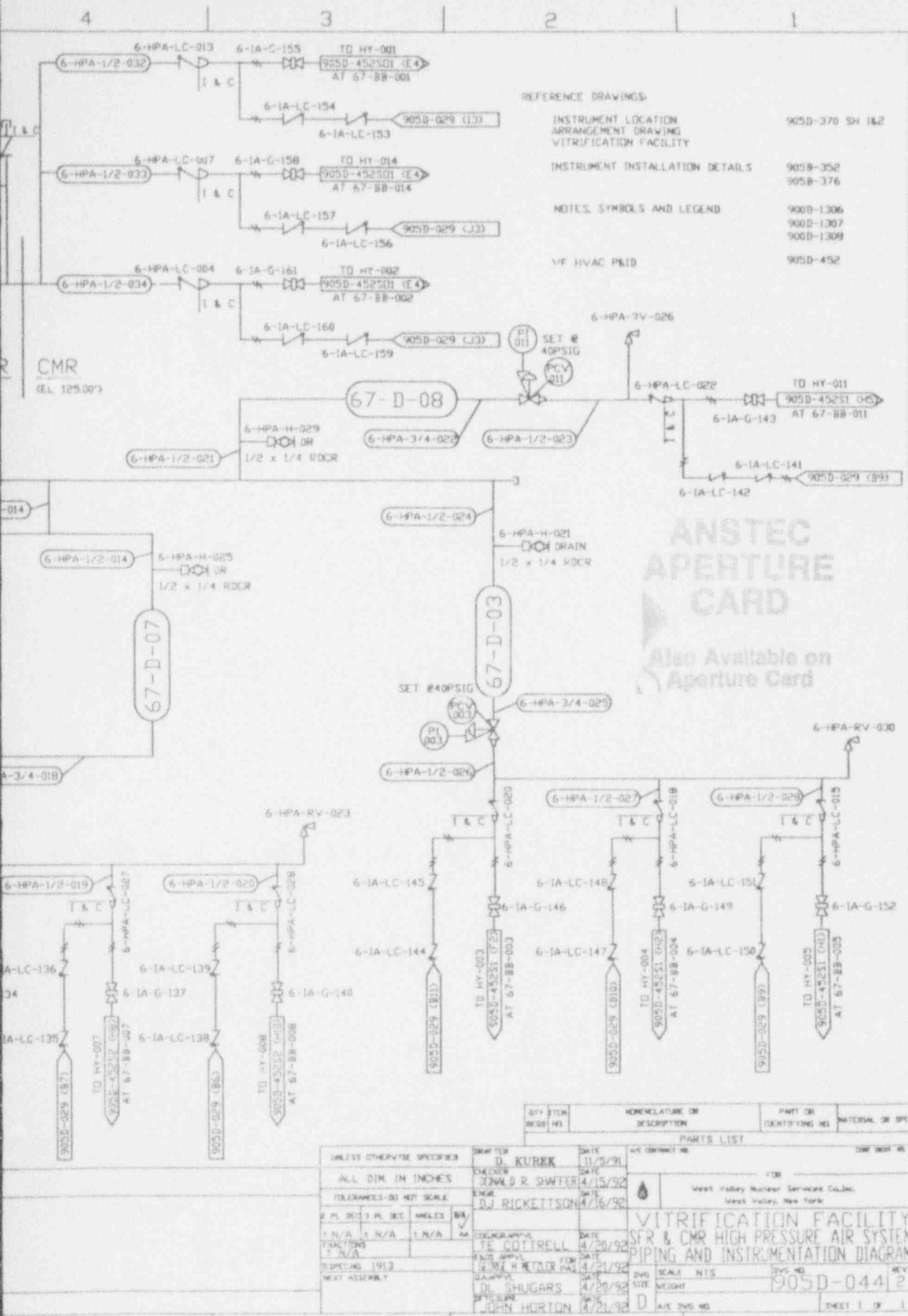
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94031402-64-12



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8	EN 9075	5/1/93	SKH	





REFERENCE DRAWINGS:

INSTRUMENT LOCATION ARRANGEMENT DRAWING	905D-370 SH 1&2
INSTRUMENT INSTALLATION DETAILS	905B-352 905B-376
NOTES, SYMBOLS AND LEGEND	900D-1306 900D-1307 900D-1309
VF HVAC P&ID	905D-452

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CURRENT AS SHOWN

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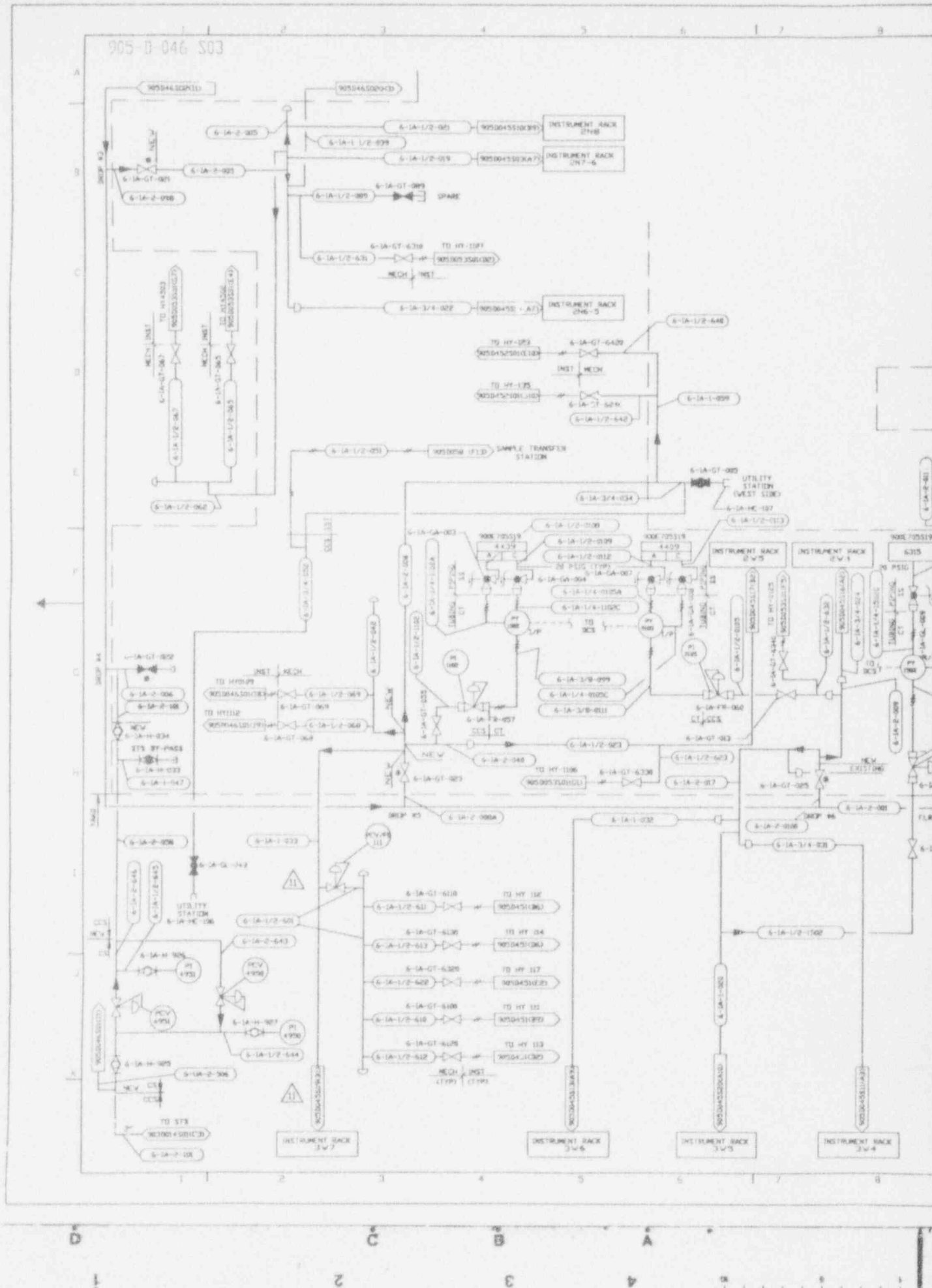
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UNLESS OTHERWISE SPECIFIED		DRAWN BY: D. KUREK	DATE: 11/5/91	REV: 000000
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TOLERANCES-NO UNIT SCALE		ENGR: DJ RICKETTSON	DATE: 4/16/92	
West Valley Nuclear Services Co., Inc. West Valley, New York				
<b>VITRIFICATION FACILITY</b>				
<b>SFR &amp; CMR HIGH PRESSURE AIR SYSTEM</b>				
<b>PIPING AND INSTRUMENTATION DIAGRAM</b>				
DESIGNED BY: T. COITRELL	DATE: 4/20/92	DWG NO: 905D-044	REV: 2	SHEET 1 OF 1
PLANNED BY: LAURENCE H. WEAVER	DATE: 4/21/92	SCALE: NTS	DWG NO: 905D-044	
DRAWN BY: DL SHUGARS	DATE: 4/20/92	SIZE: D		
CHECKED BY: JOHN HORTON	DATE: 4/21/92	AUTOMATIC NO		

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905-D-046-S03



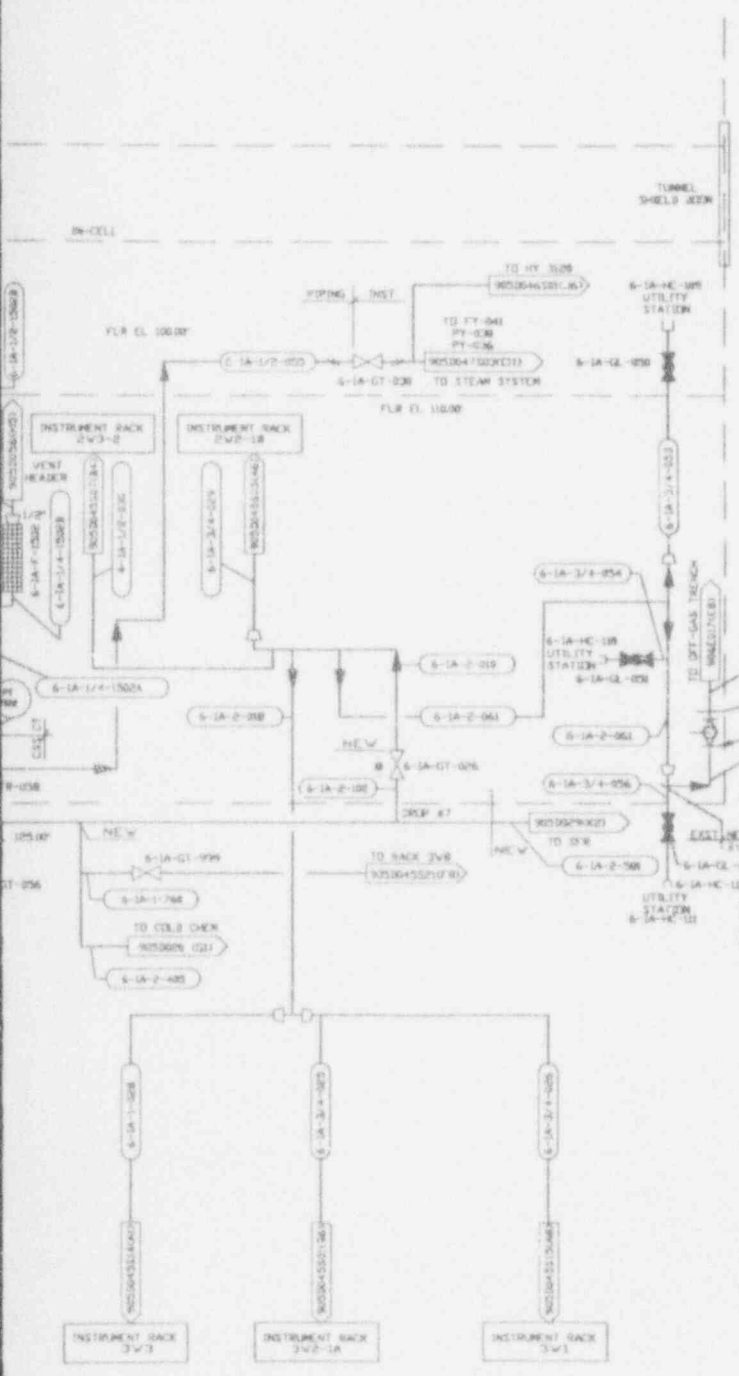
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11	12/23/93	REV PER ECN 7135	AJD	KL	SAJ
7	4/23/92	REV PER ECN 5083	DAK	HAB	DJR
8	9/29/92	REV PER ECN 5259	SRD	HAB	ZB
9	3/9/93	REV PER ECN 5986	SRC	HAB	PAN

REFERENCE DRAWINGS:

SYMBOLS, NOTES & LEGEND	900-D-1306
SYMBOLS, NOTES & LEGEND	900-D-1307
SYMBOLS, NOTES & LEGEND	900-D-1308
P & ID VERIFICATION FACILITY	905-D-029
UTILITY & INSTRUMENT AIR SYS	905-D-029
VIT FAC UA/IA PCV STATION	905-D-094

NOTES:

1. A SINGLE ASTERISK (\*) INDICATES EXISTING VALVES AND EQUIPMENT TO BE RETAINED.



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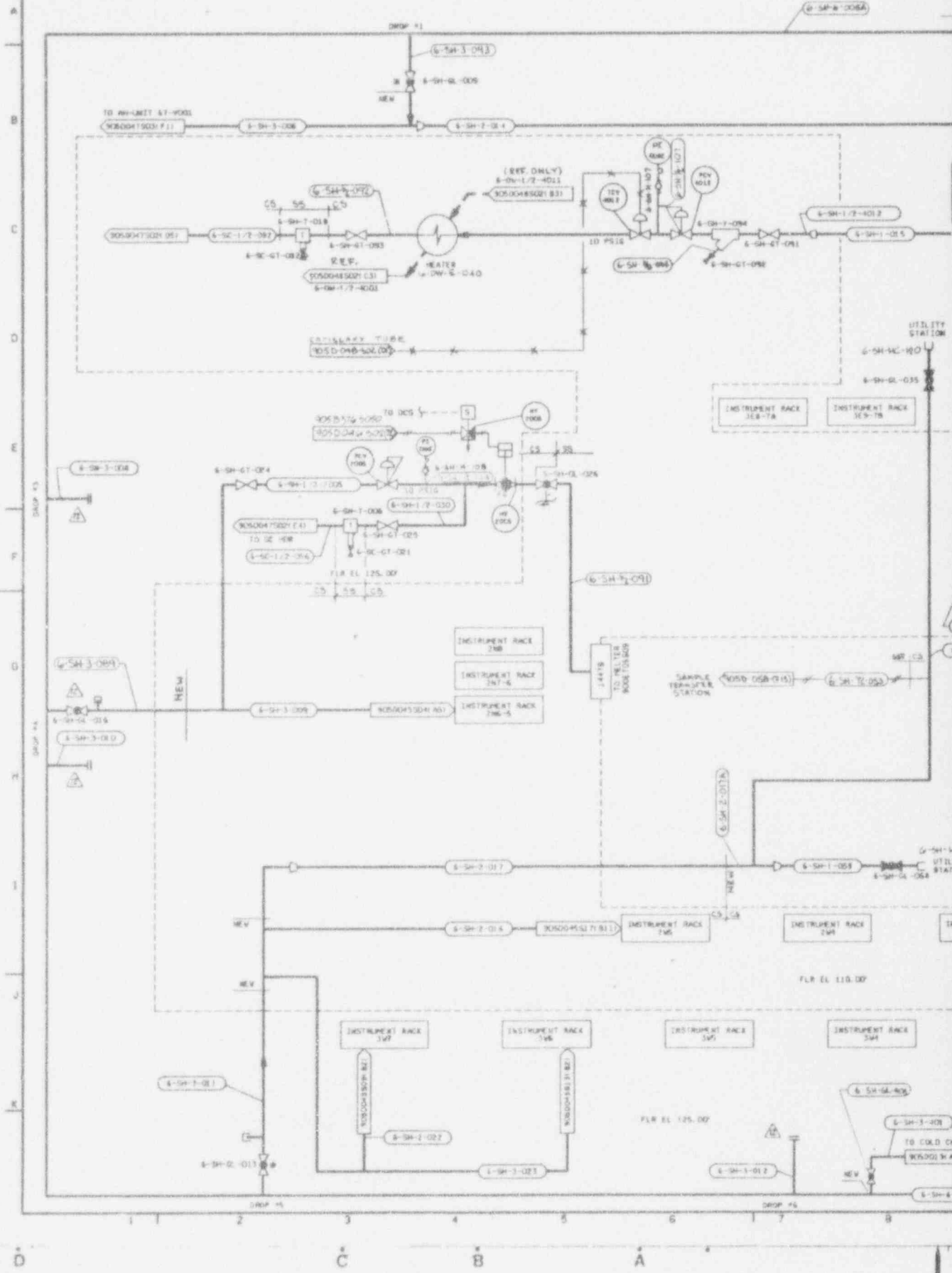
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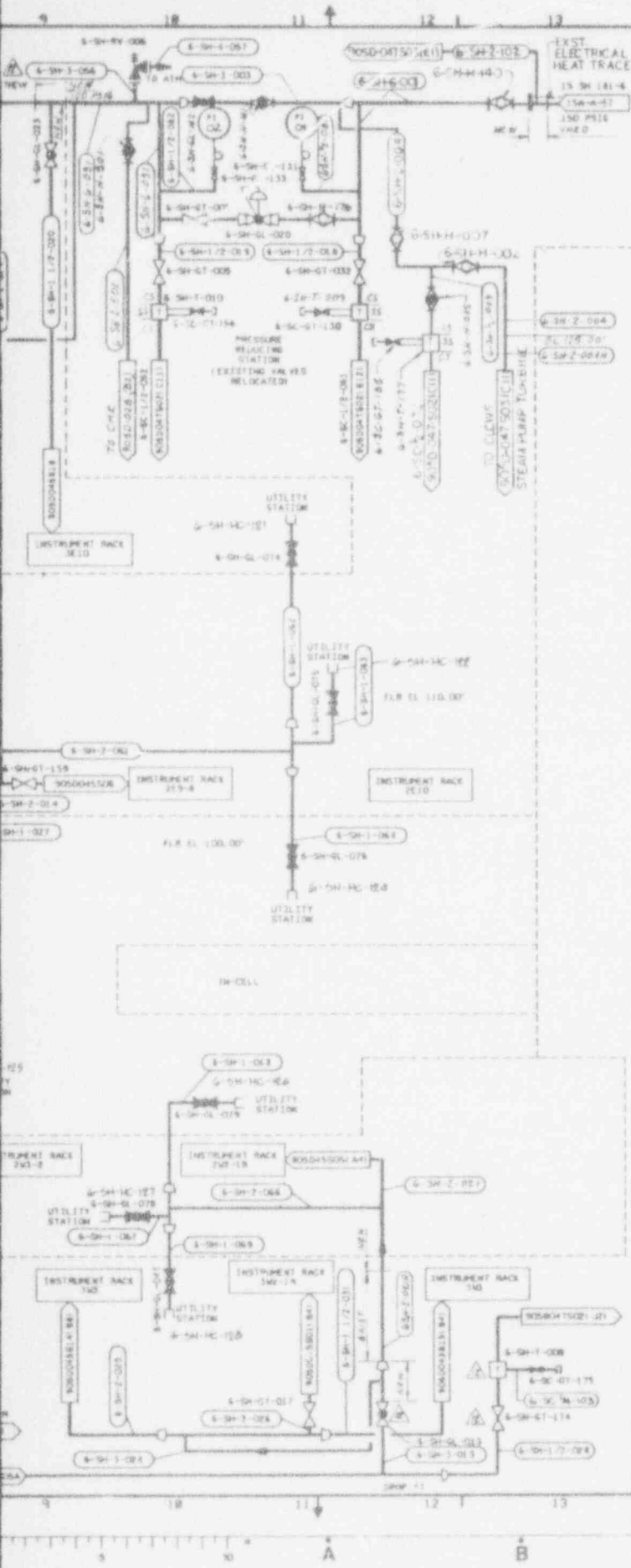
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905-0-047 S01





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1	6-2-89		ALL	ML	RFL
GENERAL REVISION					
2	7-11-89	REV 10 3/4			
12	12-31-93	REV PER ECH 7367	BP	OKS	HAJ
2	3-15-90	GEN REV ECH 3518	GM	HAJ	DJR
3	6-5-90	GEN REV ECH 3602	GM	HAJ	BJR
4	7-12-90	ECH 3750	BP	HAJ	HAJ
5	10-15-90	REV PER ECH 3905	GM	OKS	BJR
6	1-23-91	REV PER ECH 4101	GM	OKS	BJR
7	7-15-92	REV/ECH 5256	HAJ	OKS	BJR

**REFERENCE DRAWINGS:**  
 NOTES, SYMBOLS & LEGEND 900-0-1306  
 NOTES, SYMBOLS & LEGEND 900-0-1307  
 NOTES, SYMBOLS & LEGEND 900-0-1308  
 P & ID VITRIFICATION FACILITY STEAM SYSTEM 905-0-028  
 INSTRUMENT INSTALLATION DETAILS 905-0-516

**NOTES:**  
 1. A SINGLE ASTERISK (\*) INDICATES EXISTING VALVES AND EQUIPMENT TO BE RETAINED.  
 2. OMITTED

8	9-25-92	REV PER ECH 5259	HAJ	OKS	HAJ
9	1-14-93	REV PER ECH 5445	HAJ	OKS	HAJ
10	6-11-93	REV PER ECH 5479	HAJ	OKS	HAJ
11	8-4-93	REV/ECH 5474	HAJ	OKS	HAJ

**ANSTEC APERTURE CARD**

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 CURRENT AS OF  
 JAN 2 1993  
 CHECK DRAWING CONTROL FOR LATEST REVISION

**WVNS APPROVAL**

DRG. DES. *[Signature]*  
 DRG. CHG. *[Signature]*  
 INSTR. DES. *[Signature]*  
 QA. DES. *[Signature]*  
 P&ID. *[Signature]*

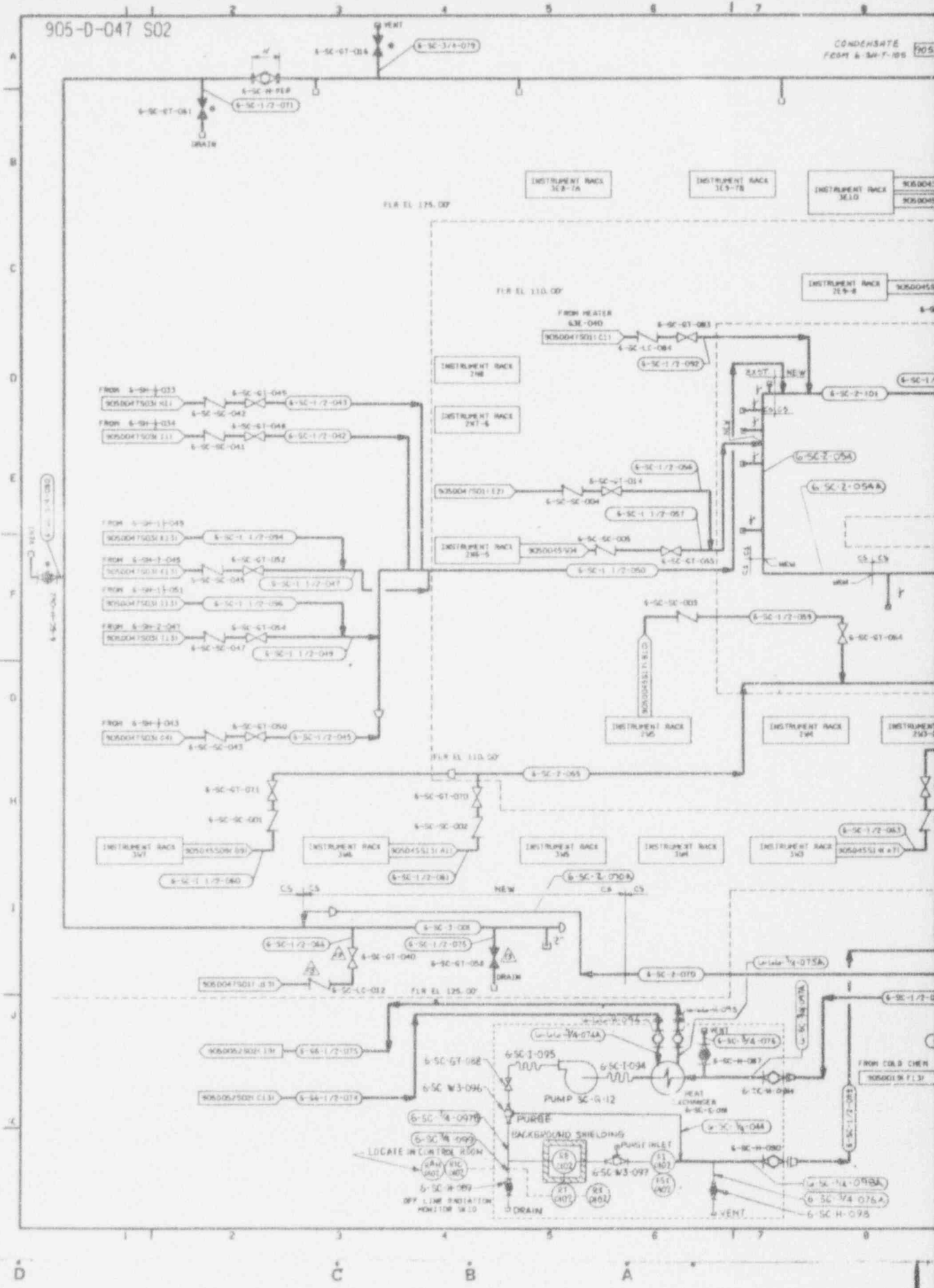
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APPROVED WVNS CO.	EBASCO SERVICES INCORPORATED
PROJECT NO. 81-22-0047	AVE. R.F.S. NO. 2288
ENGINEER: RAY F. J. MALONEY	TASK ORDER 528
LEAD DING ENGR. P. J. HARRIS	WEST VALLEY NUCLEAR SERVICES COMPANY, INC.
CHECKED: E. J. LEBLANC	WEST VALLEY, NEW YORK
DRAWN: L. J. LEBLANC	WEST VALLEY DEMONSTRATION PROJECT
DATE: 02-28-88	
DRAWING NO. 905D-047	
SHEET NO. 12	
DATE FOR CONSTRUCTION: 01-11-93	
SCALE: AS SHOWN	

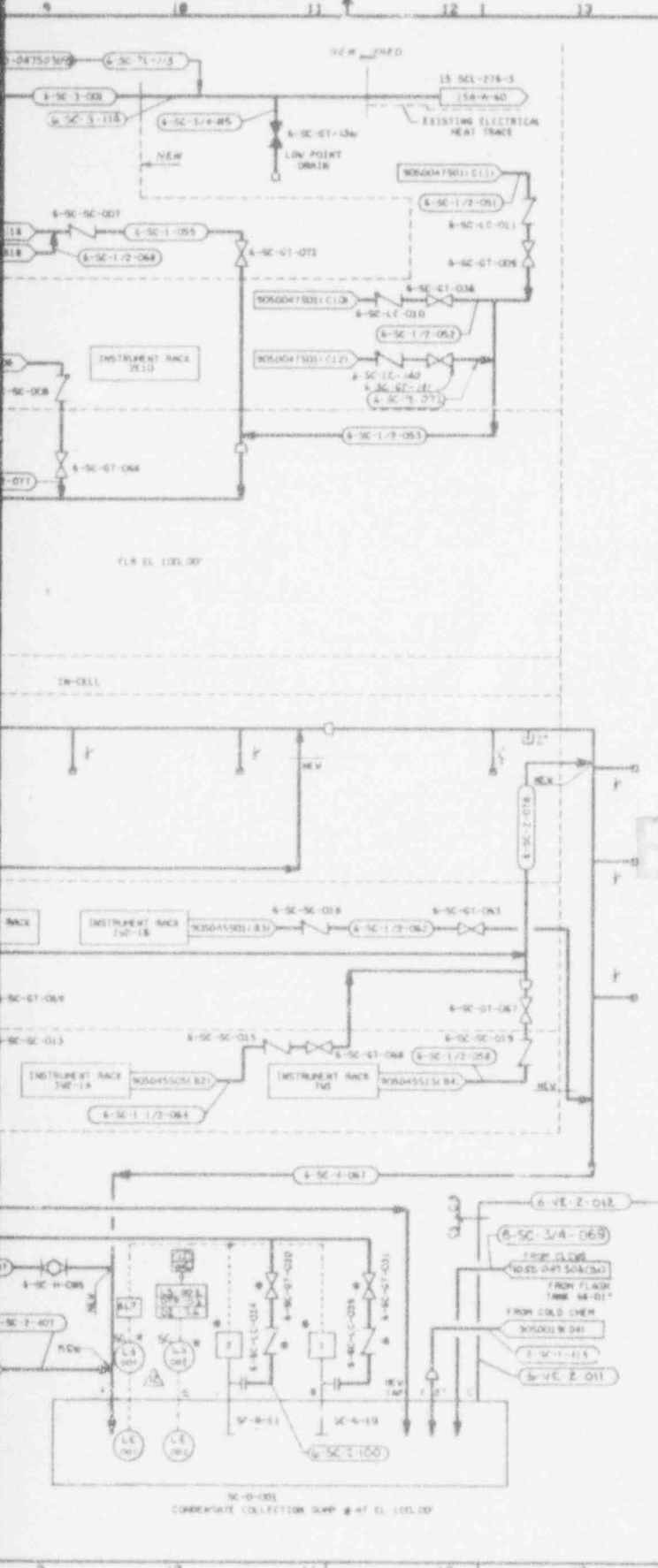
9403140264 - 15

905-D-047 S02

CONDENSATE FROM 6-SH-7-105







NO.	DATE	REVISION	DR	CH	APPROVED
8	06-11-88		APR	KIL	FST
GENERAL REVISION					
9	6-27-89				
GENERAL REVISION					
10	7-15-89	REV PER ECN 466			
10	2-25-93	REV PER ECN 5967	OW	HR	
11	11-0-93	REV PER ECN 6161	PD	HFS	
12	2-18-93	REV PER ECN 7162	OW	LEB	
13	2-31-93	REV PER ECN 7367	BP	HAJ	
5	7-12-90	ECN 3780	BP		
6	10-15-90	REV PER ECN 3976	CGR	HAS	S/E
7	1-30-91	REV PER ECN 4102	FBH	HAS	S/E
8	6-24-91	REV PER ECN 4340	OW	HAS	S/E
9	9-23-92	REV PER ECN 5249	APR	HAS	S/E

NOTES, SYMBOLS & LEGEND 900-D-1306  
 NOTES, SYMBOLS & LEGEND 900-D-1307  
 NOTES, SYMBOLS & LEGEND 900-D-1308

REFERENCE DRAWINGS:

- NOTES:
1. A SINGLE ASTERISK (\*) INDICATES EXISTING VALVES AND EQUIPMENT TO BE RETAINED.
  2. FOR COND. SUMP PUMP CWD, SEE DRAWING 905B-305 SH 136

ANSTEC APERTURE CARD

Also Available on Aperture Card

ECN(S) PENDING

#7380  
#7357

CAUTION  
CURRENT AC OF

JAN 7

CHECK DOCUMENT CONTROL FOR LATEST REVISION

WVNS APPROVAL

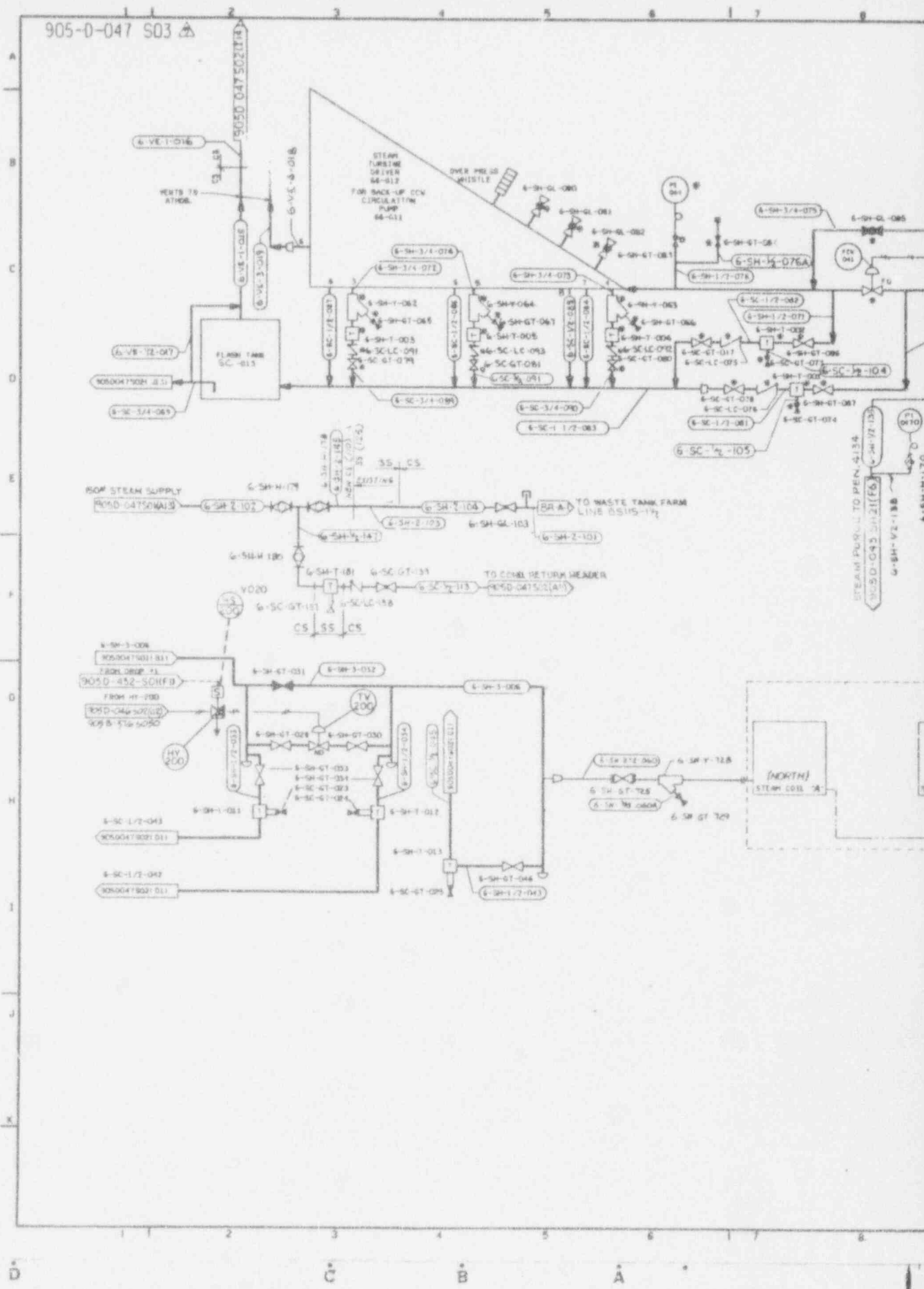
DESIGNER: V. DeLano  
 CHECKED: [Signature]  
 INSTR. SUPP: [Signature]  
 QA MGR: [Signature]  
 PLS W/ [Signature]

FOR DRAWING INDEX SEE DRAWING NO.

APPROVED: [Signature]	EGASCO SERVICES INCORPORATED
PROJECT NO. 905D-047	AVE. & Y.S. NO. 2388 TASK ORDER 202
ENGINEER: [Signature]	WEST VALLEY NUCLEAR SERVICES COMPANY, INC.
LEAD DSGN ENGR: [Signature]	WEST VALLEY, NEW YORK
DESIGN: [Signature]	WEST VALLEY DEMONSTRATION PROJECT
CHECKED: [Signature]	P & ID
DRAWN: [Signature]	VITRIFICATION FACILITY
	CONDENSATE SYSTEM
PROJECT NO. 905D-047	DRAWING NO. 905D-047-13
SCALE: NONE	DATE: 06-11-88

9403140264-16

905-0-047 S03



STEAM TURBINE DRIVER 64-012 FOR BACK-UP COV CIRCULATION PUMP 64-012

FLASH TANK SC-013

ROF STEAM SUPPLY 905D-04750A13

TO WASTE TANK FARM LINE 8515-17

TO COND RETURN HEADER 905D-04750(A)

NORTH STEAM COIL

A B C D E F G H I J K

1 2 3 4 5 6 7 8



NO.	DATE	REVISION	DR	CH	APPROVED
0	7/1/79	ER 1240			
10	2-25-93	GEN REV PER ECN 5967	GW	BS	
11	12-31-93	REV PER ECN 7367	BP	GRS HAJ	
3	5-3-90	REV D PER ECN 3604	AGC	045 LR	
4	5-5-90	GEN REV PER ECN 3604	DM	11 LR	
5	7-12-90	ECN 3780	BP	WMS JB	
6	10-18-90	REV PER ECN 3918	CGR	WMS LR	
7	5-24-91	REV PER ECN 4340	GW	WMS LR	
8	1-7-92	GEN REV PER ECN 4647	PD	WMS LR	
9	9-23-92	REV/ECN 5259	AS	WMS LR	

REFERENCE DRAWINGS:  
 NOTES, SYMBOLS & LEGEND 900-0-1306  
 NOTES, SYMBOLS & LEGEND 900-0-1307  
 NOTES, SYMBOLS & LEGEND 900-0-1308  
 INSTRUMENT INSTALLATION DETAILS 905-2-574

NOTES:  
 1. A SINGLE ASTERISK (\*) INDICATES EXISTING VALVES AND EQUIPMENT TO BE RETAINED.

ANSTEC APERTURE CARD

Also Available on Aperture Card

ECN(S) PENDING

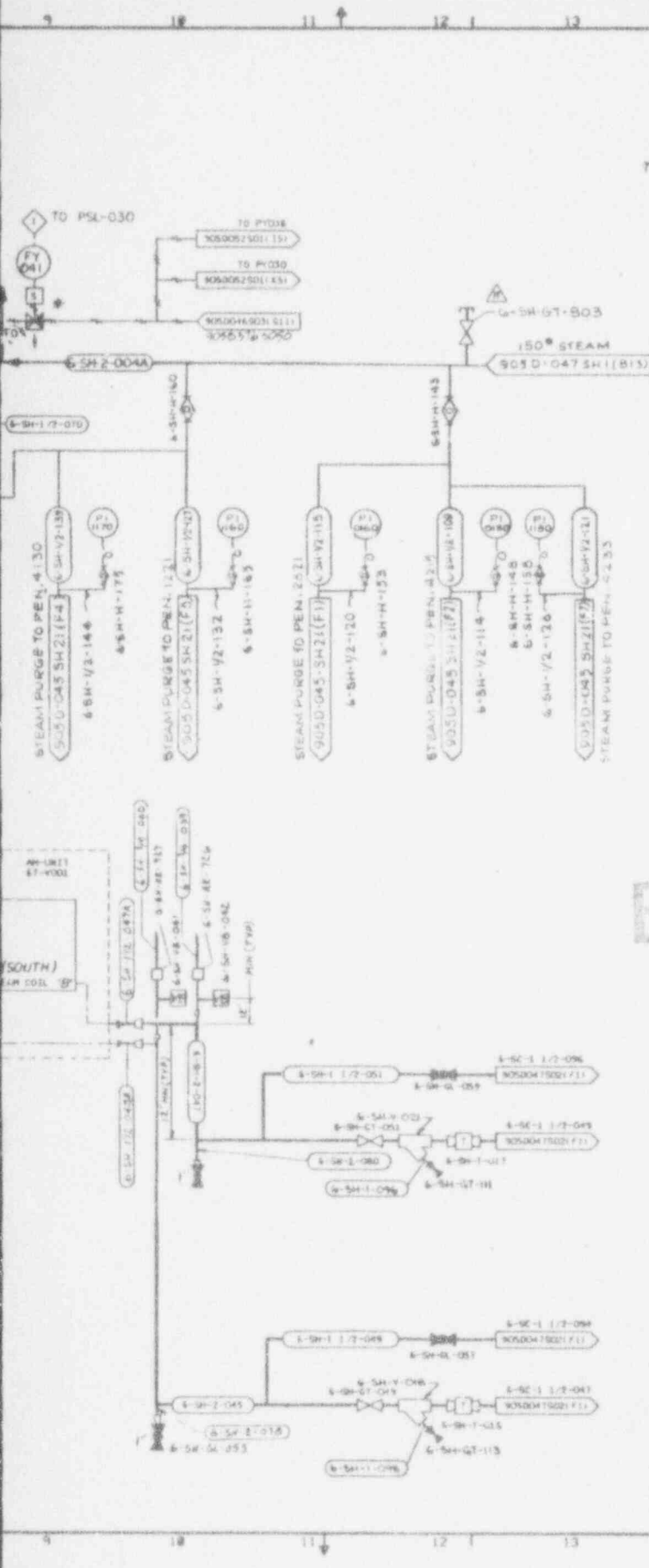
#7357

CAUTION  
 CURRENT IS OF  
 JAN 2 1991  
 CHECK DRAWING CONTROL FOR LATEST REVISION

WVNS APPROVAL  
 DRG. DES. [Signature]  
 DRG. ENG. [Signature]  
 WFT. SUP. [Signature]  
 QA. WDR. [Signature]  
 TRS. WDR. [Signature]

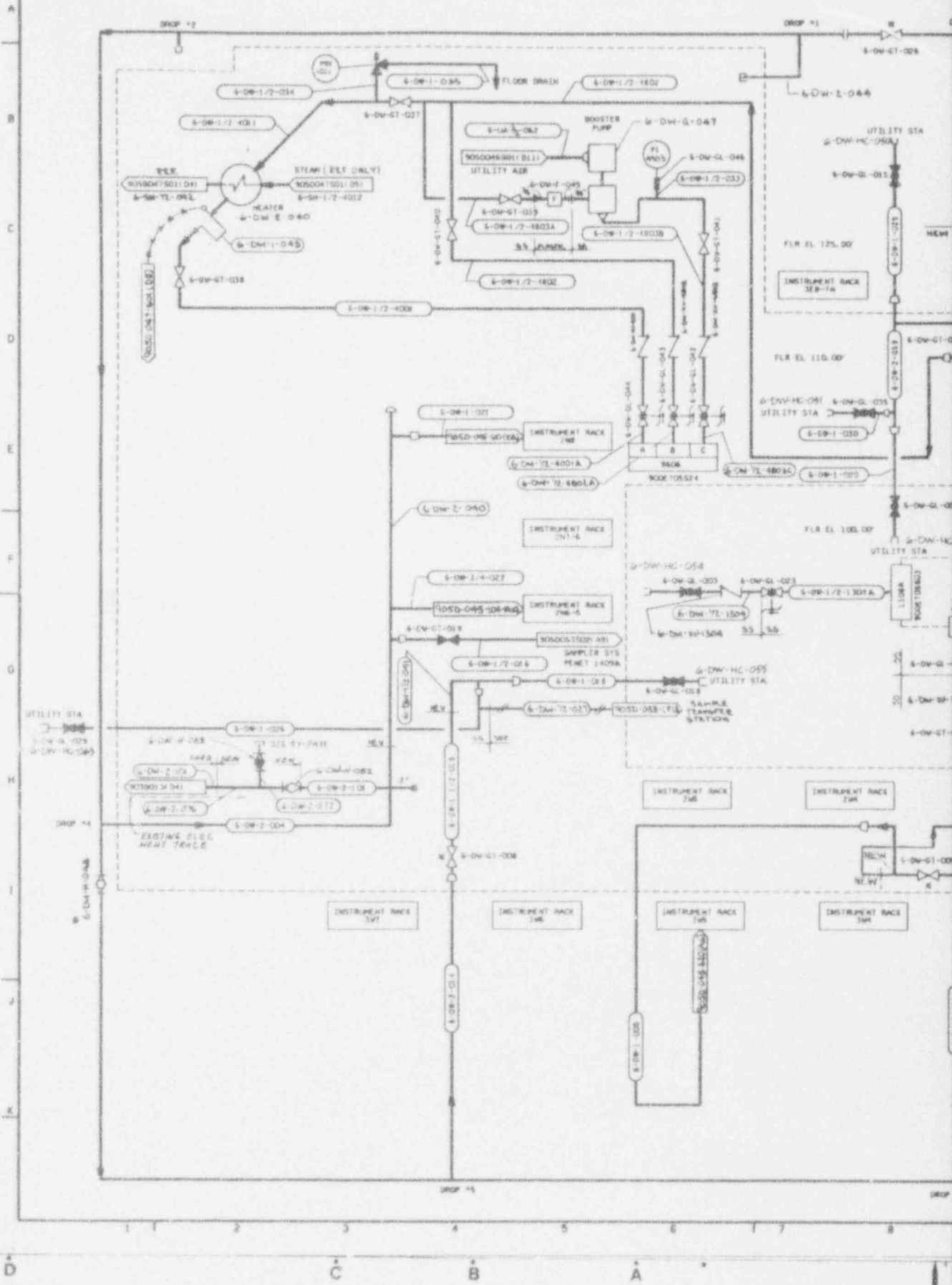
FOR DRAWING INDEX SEE DRAWING NO.

APPROV. WVNS CO.	EBASCO SERVICES INCORPORATED		
PROJECT NO.	DATE	REV.	TASK ORDER NO.
ENGINEER	DATE	REV.	
DESIGNER	DATE	REV.	
CHECKED	DATE	REV.	
DRAWN	DATE	REV.	
P. WARD	DATE	REV.	
BY ACCT	SCALE	INDEX CODE NUMBER	DRAWING NO.
PROJECT NO.	SCALE	INDEX CODE NUMBER	905 D-047 II
ISSUED FOR CONSTRUCTION	SCALE	SPEC. CODE	REV.
			905 D-047 S03 A



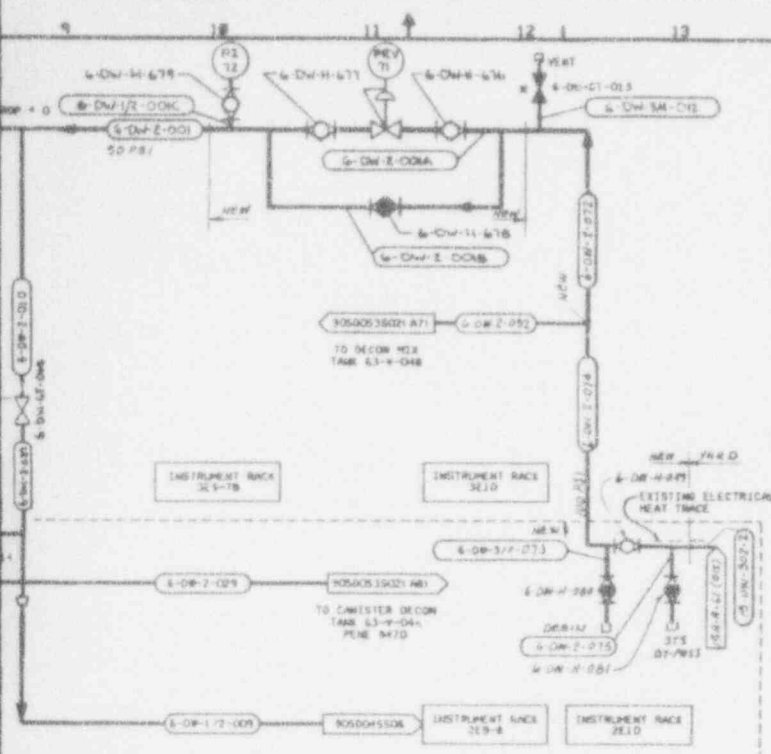
9403140264-17

905-D-048 S02



A B C D

1 2 3 4



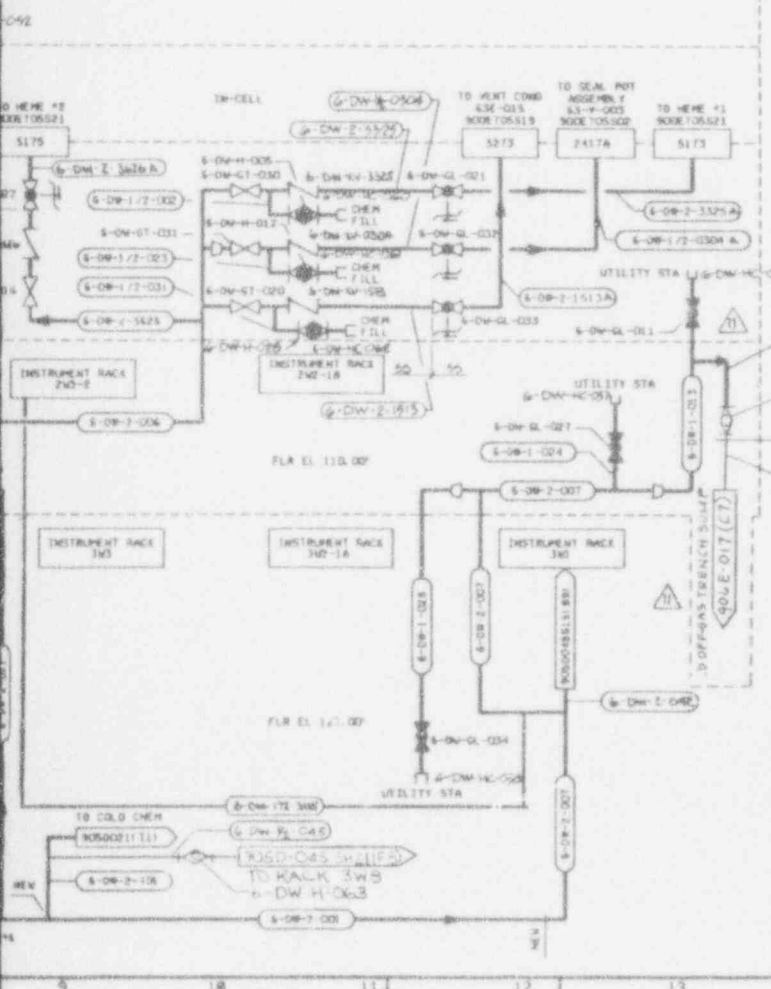
NO.	DATE	REVISION	DR	CH	APPROVED
2	08-23-88		WJ	KL	FJE
GENERAL REVISION					
GENERAL REVISION					
0	7-1-89	REV PER ECH			
9	3-9-93	REV PER ECH 7124	JH	MS	
10	7-21-93	REV PER ECH 6516	FD	MS	
11	12-10-93	REV PER ECH 7157	JH	MS	
4	7-8-90	REV PER ECH 3771	CW	MS	
5	1-30-91	REV PER ECH 4102	RDH	MS	
6	3/27/91	REV PER ECH 4197	FL	MS	
7	9-24-92	REV PER ECH 5259	"S"	MS	
8	1-8-93	REV PER ECH 5391	DM	MS	

REFERENCE DRAWINGS:  
 SYMBOLS, NOTES & LEGEND 900-0-1306  
 SYMBOLS, NOTES & LEGEND 900-0-1307  
 SYMBOLS, NOTES & LEGEND 900-0-1308

NOTES:  
 1. THIS DWG. SUPERSEDES 900-0-1106.  
 2. A SINGLE ASTERISK (\*) INDICATES EXISTING VALVES AND EQUIPMENT TO BE RETAINED.

ANSTEC APERTURE CARD

Also Available on Aperture Card



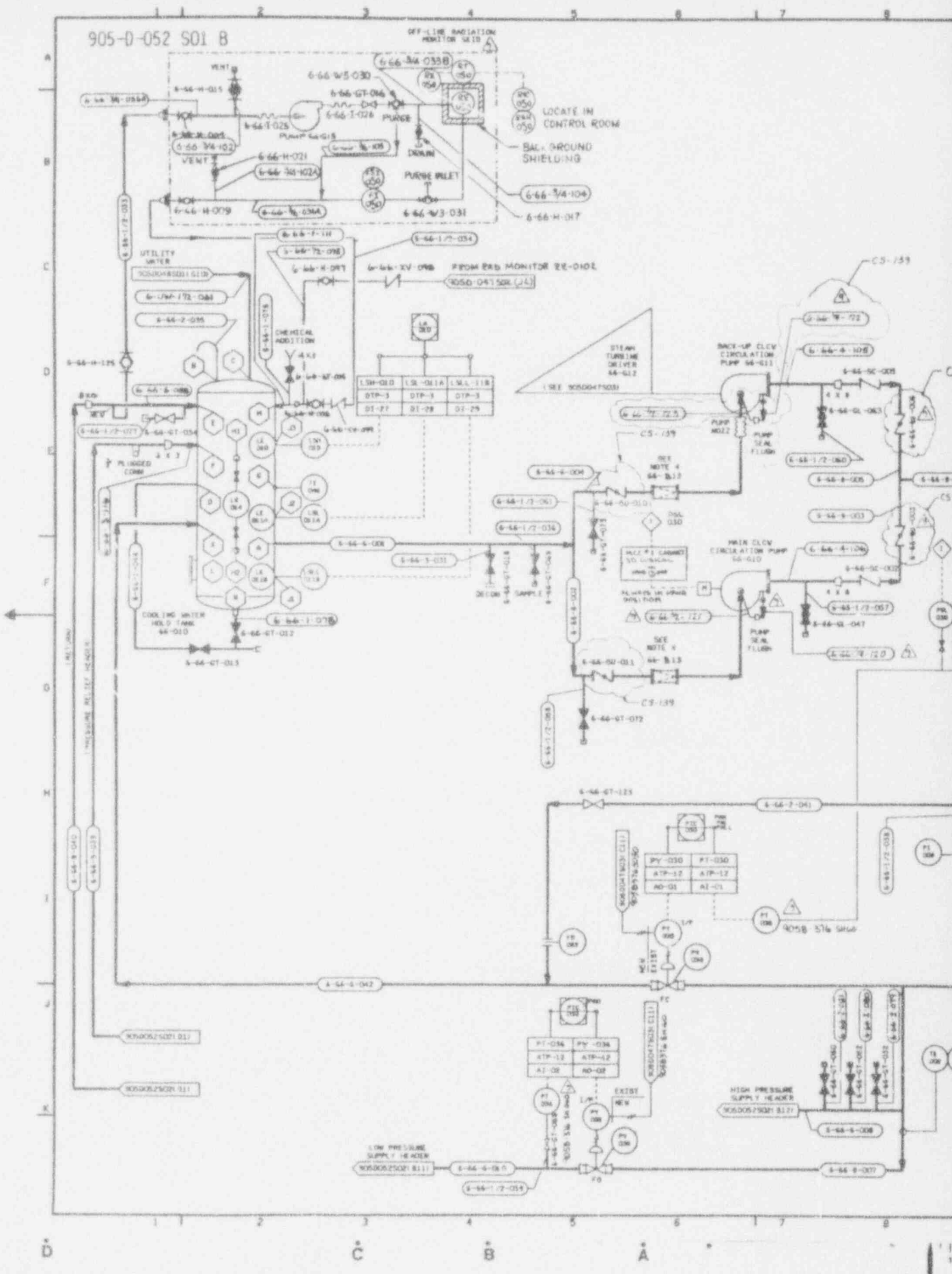
ECN(S) PENDING

#7122  
#7288

WVNS APPROVAL  
 CEC. MGR. [Signature]  
 CEC. ENR. [Signature]  
 SFT. SUPR. [Signature]  
 C.A. MGR. [Signature]  
 T&S MGR. [Signature]

FOR DRAWING INDEX SEE DRAWING NO.

APPROVED WVNS 10/1/88	EBASCO SERVICES INCORPORATED
PROJECT MGR. [Signature]	W. V. S. NO. 2288
ENGINEER SUPR. [Signature]	TASK ORDER 001
DESIGNER [Signature]	WEST VALLEY NUCLEAR SERVICES COMPANY INC
LEAD DISTR. ENGR. [Signature]	WEST VALLEY, NEW YORK
DESIGNER [Signature]	WEST VALLEY DEMONSTRATION PROJECT
CHECKED [Signature]	P & ID
ISSUED FOR CONSTRUCTION	VITRIFICATION FACILITY
	DEMINEALIZED WATER SYSTEM
	DRAWING NO. 905-D-048
	SCALE: AS SHOWN



# ANSTEC APERTURE CARD

Also Available on Aperture Card

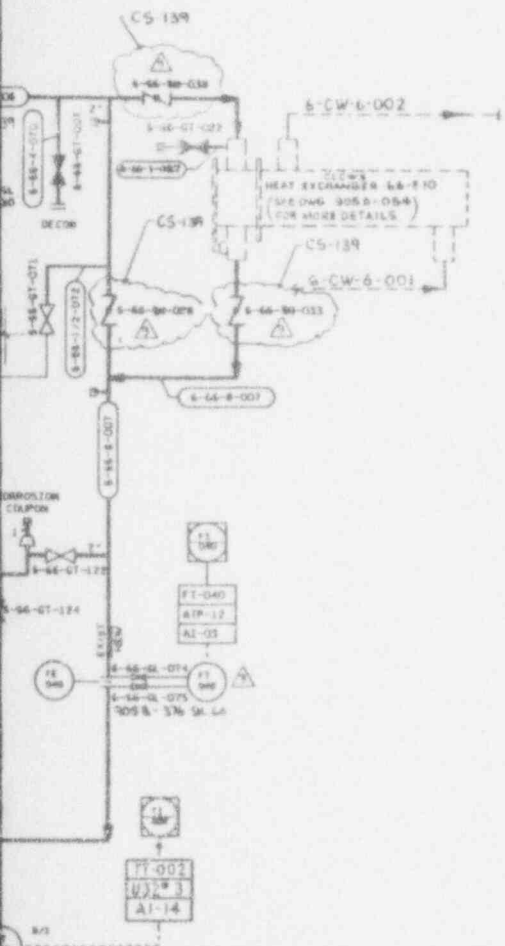
NO.	DATE	REVISION	DR	LH	APPROVED
0	8-7-90	GENERAL REVISION			
1	7/7/84	ERRATA			
1	3-19-90	GEN REV ECN 3515	GW	CM	DIR
2	6-4-90	GEN REV ECN 3608	CM	CM	DIR
3	7-13-90	GEN REV ECN 3779	GW	CM	DIR
4	7-2-92	REV PER ECN 5230	GW	JB	DIR
5	9-16-92	REV/ECN 5493	MS	UB	DIR
6	8-31-93	REV/PER ECN 6599	PD	KD	DIR
7	9-3-93	REV/ECN 6699	PD	AB	DIR
8	11-9-93	REV/ECN 6111	PD	MS	DIR
9	12-14-93	REV/ECN 6908	MS	MS	DIR

### REFERENCE DRAWINGS

P & ID VITRIFICATION FACILITY COOLING TOWER WATER SYSTEM	905-0-054
P & ID VITRIFICATION FACILITY UTILITY WATER	905-0-048501
P & ID V.F. INSTRUMENT RACK 3W7-1A	905-0-045 501
P & ID V.F. INSTRUMENT RACK 2W2-1B	905-0-045 505
P & ID V.F. INSTRUMENT RACK 2E3-R	905-0-045 506
P & ID V.F. INSTRUMENT RACK 3W7	905-0-045 509
P & ID V.F. INSTRUMENT RACK 3W1	905-0-045 515
P & ID V.F. INSTRUMENT RACK 2W5	905-0-045 517
P & ID V.F. INSTRUMENT RACK 3E1D	905-0-045 518
P & ID V.F. INSTRUMENT RACK 2E1D	905-0-045 519
INSTRUMENT INSTALLATION DETAILS	905-0-516

### NOTES

1. THE SYSTEM DESIGNATOR FOR ALL PIPING COMPONENTS ON THIS SHEET IS 6-66-TY-XXX UNLESS OTHERWISE NOTED.
2. <sup>NEW</sup> EXIST THIS SYMBOL IDENTIFIES THE SCOPE OF PIPING WORK TO BE UNDERTAKEN TO CONVERT THE EXISTING CLW SYSTEM TO ITS FINAL HOT CONFIGURATION.
- 3.
4. BASKET STRAINERS 66-B-12 & 13 ARE START-UP STRAINERS. REMOVE STRAINERS PRIOR TO HOT OPS.



ECN(S) PENDING

#7386

WVNS APPROVAL	
DESIGN	<i>[Signature]</i>
CONSTR	<i>[Signature]</i>
QA	<i>[Signature]</i>
INS	<i>[Signature]</i>

FOR DRAWING INDEX SEE DRAWING NO.	
APPROVED BY	EBASCO SERVICES INCORPORATED
PROJECT NO.	AVE G.P. & NO. 1286 TANK ORDER 022
ENGINEER	WEST VALLEY NUCLEAR SERVICES COMPANY, INC
LEAD ENGINEER	WEST VALLEY, NEW YORK
DESIGN	WEST VALLEY DEMONSTRATION PROJECT
CHECKED	VITRIFICATION FACILITY
DRAWN	CLOSING LOOP COOLING
SCALE	WATER SYSTEM P&ID
PROJECT NO.	905-0-052
ISSUED FOR CONSTRUCTION	SCALE NONE

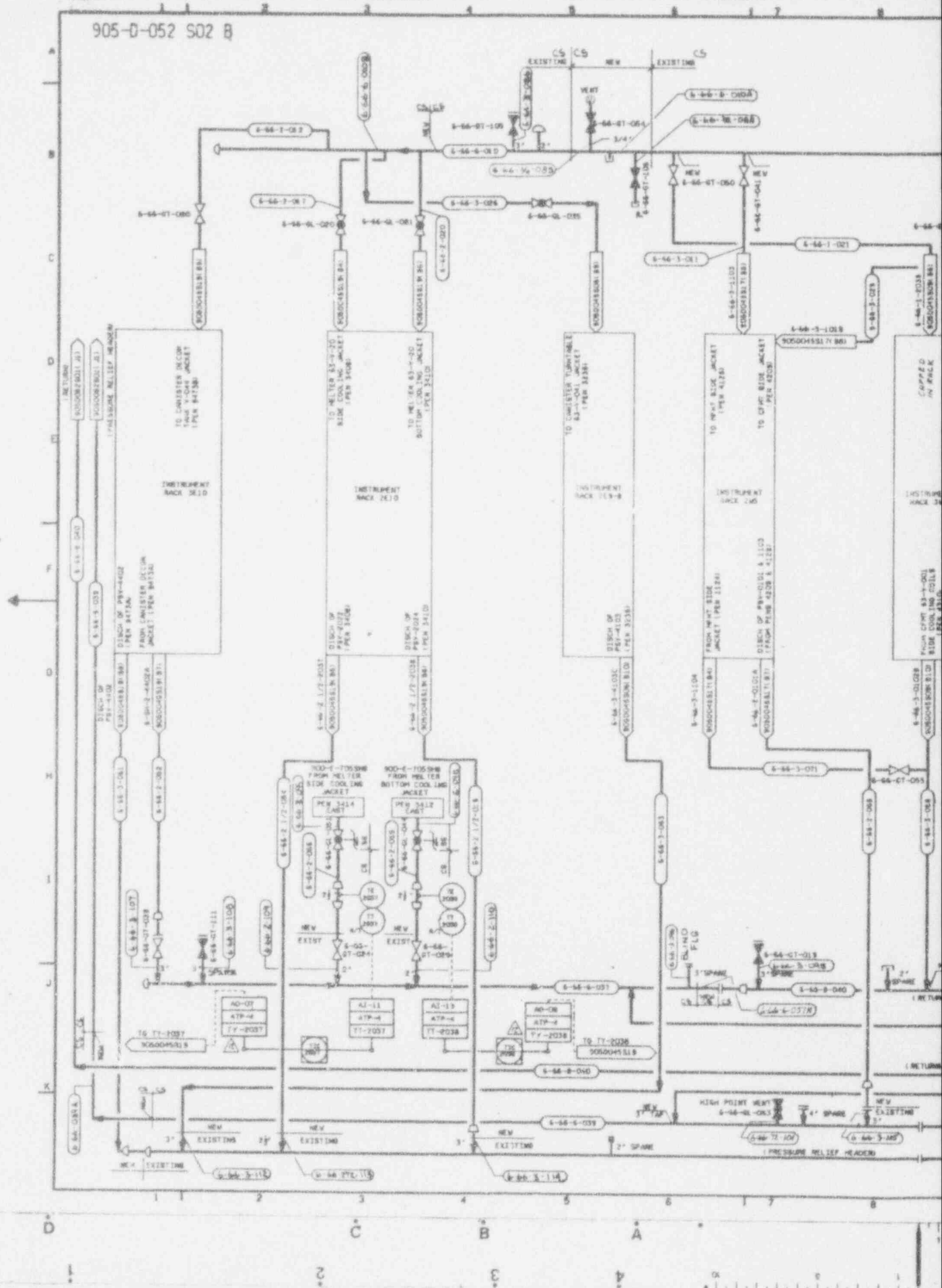
CAUTION  
 CURRENT AS OF

JAN 7 1994

CHECK DOCUMENT CONTROL FOR LATEST REVISION

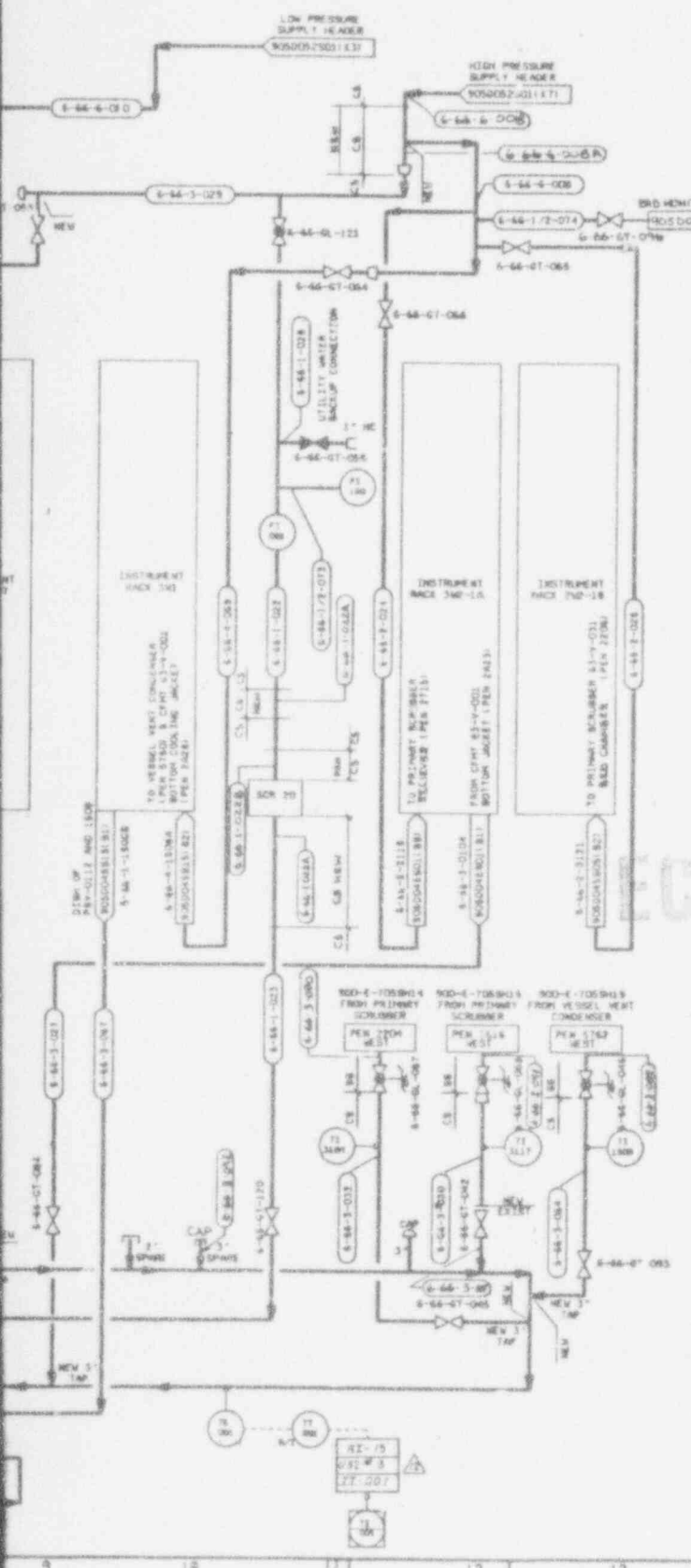
9403140264-19

905-D-052 S02 B





NO.	DATE	REVISION	DR	CH	APPROVED
6	10-28-89		PTT	JMK	R/L
GENERAL REVISION					
0	7/1/89	REV PER ECN 1240			
7	12-29-92	REV PER ECN 5737	GRD	J.M.	
8	1-8-95	REV PER ECN 5551	GM	AS	RAM
9	4-16-95	REV PER ECN 6201	PD	AS	HAJ
10	5-25-95	REV/ECN 4343	MS	DE	JAT
11	10-12-95	REV/ECN 4250	MS	DE	RAM
12	12-30-93	REV/ECN 7176	MS	DE	RAM



NOTES  
1. FOR NOTES SEE 905-D-052 SH 1.

ANSTEC APERTURE CARD  
Also Available on Aperture Card

ECN(S) PENDING #7400

WVNS APPROVAL  
 CC: MGR. *[Signature]*  
 CDD: ENGR. *[Signature]*  
 CWT: SUPV. *[Signature]*  
 S.A. MGR. *[Signature]*  
 RAS: MGR. *[Signature]*

APPROVING WVNS CO.	EBASCO SERVICES INCORPORATED
PROJECT NO.	A/E S.P.S. NO. 2388
DATE	TASK ORDER 202
ENGINEER SUPV.	WEST VALLEY NUCLEAR SERVICES COMPANY, INC. WEST VALLEY, NEW YORK
DESIGNER	WEST VALLEY DEMONSTRATION PROJECT
CONTRACTOR	VITRIFICATION FACILITY CLOSED LOOP COOLING WATER SYSTEM PAID
DATE	
SCALE	
DRAWING NO.	905D-052/12
PROJECT NO.	
SCALE	
DATE	
SCALE	

CAUTION  
CURRENT AS OF  
JUN 7 1995  
CHECK DOCUMENT CONTROL FOR LATEST REVISION

9403140264-20

LIVESH

DRYING MASH

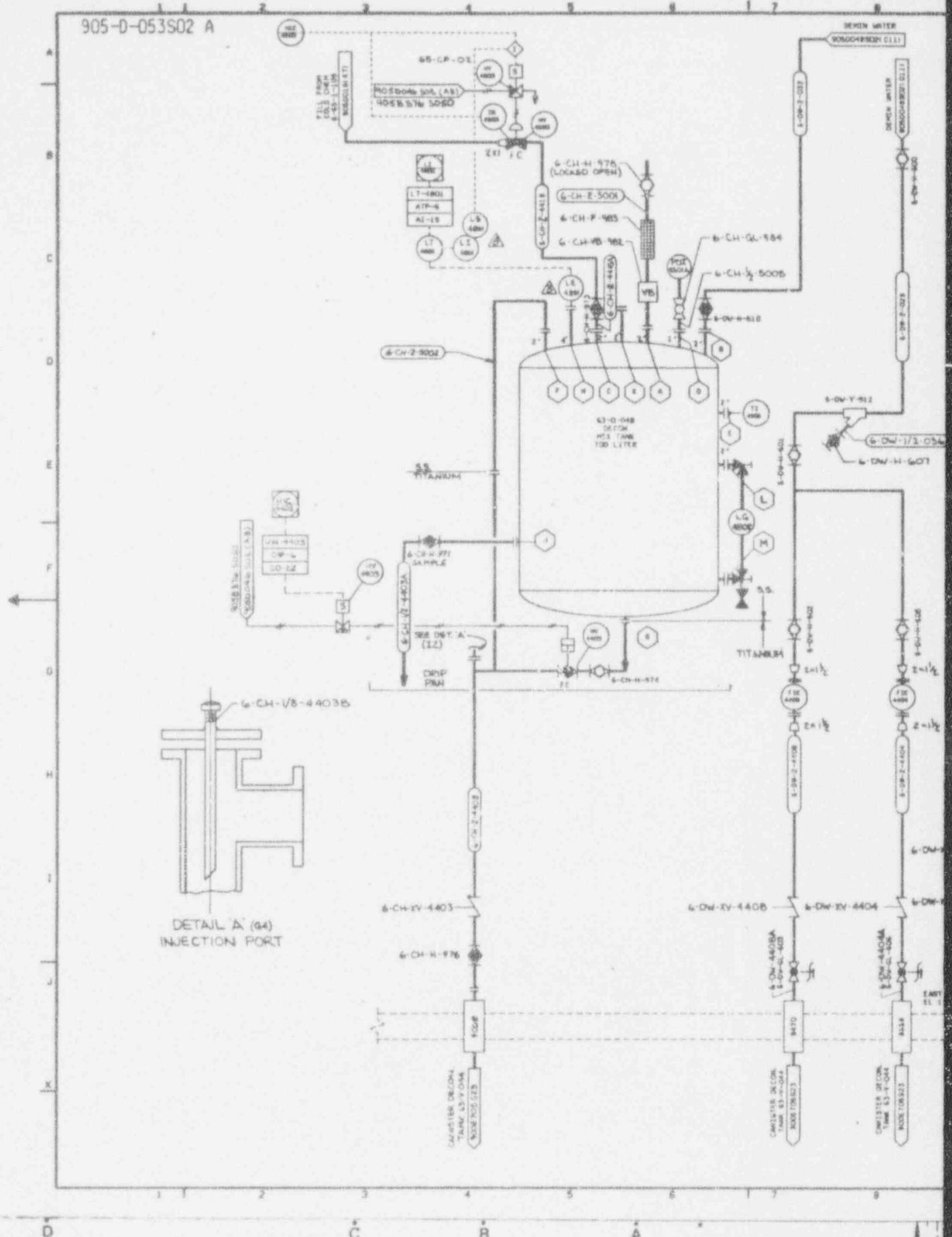
LIVESH

PLATE LAYOUT  
1/17/68

PLATE LAYOUT  
1/17/68

PLATE LAYOUT  
1/17/68

905-D-053S02 A



DETAIL A (64) INJECTION PORT

1 2 3 4 5 6 7 8

A B C D

1 2 3 4 5 6 7 8

A B C D



NO.	DATE	REVISION	DR	CH	APPROVED
0	7/1/79	FR 1046			
1	1/8/90	GEN. REV. PER ECH 3362	CGR	ENG	525
2	3-19-90	REV. PER ECH 5818	CW	ENG	525
3	5-9-90	REV. PER ECH 3683	CGR	ENG	525
4	7-12-90	REV. PER ECH 3777	CW	ENG	525
5	2-20-91	REV. PER ECH 4169	CM	ENG	525
6	08-13-92	REV. PER ECH 5819	MS	ENG	525
7	11-12-92	REV. PER ECH 5326	CW	ENG	525
8	12-10-93	REV. PER ECH 7110	CW	ENG	525

NOTES:

1. SEE NOTES ON DRAWING NO. 905-D-053S01.

ANSTEC  
APERTURE  
CARD

Also Available on  
Aperture Card

REFERENCE DRAWINGS:

P & ID VITRIFICATION FACILITY  
NON-RACK COLD CHEMICAL DECON SYS 905-D-027

INSTRUMENT INSTALLATION DETAILS 905-B-376

WVNS APPROVAL

CCO. USR *[Signature]*  
 CCO. ENR *[Signature]*  
 CRT. SUPR *[Signature]*  
 C.A. WFL *[Signature]*  
 C.S. WDR *[Signature]*

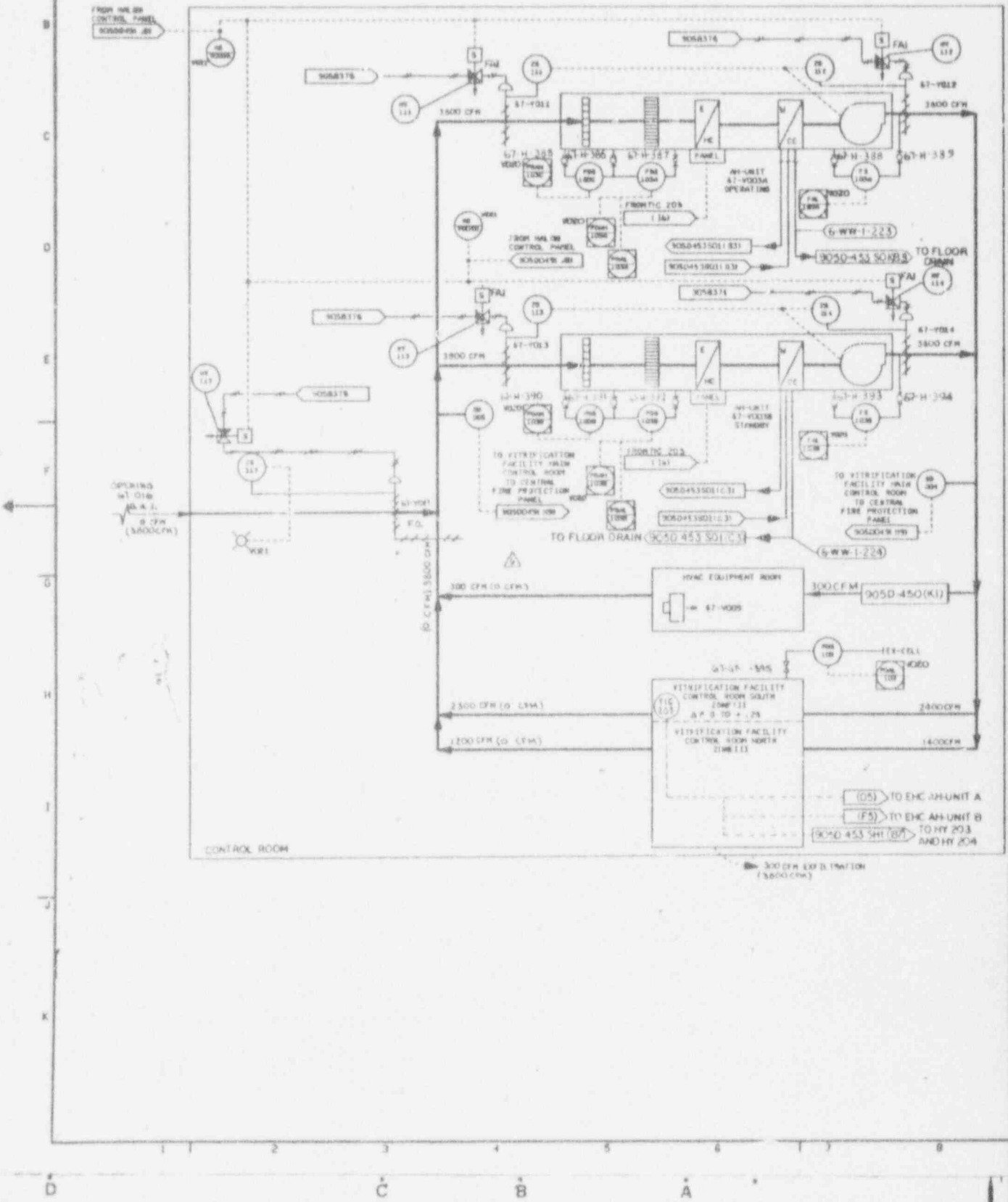
FOR DRAWING INDEX SEE DRAWING NO.

APPROVE WVNS CO.	EBASCO SERVICES INCORPORATED		
PROJECT NO.	A/E & P. E. NO. 1288	FOR TMR ORDER 200	
DESIGNER	WEST VALLEY NUCLEAR SERVICES COMPANY, INC		
LEAD ENGR	WEST VALLEY, NEW YORK		
CHECKED	WEST VALLEY DEMONSTRATION PROJECT		
DRAWN	P & ID VITRIFICATION FACILITY		
DATE	NON-RACK COLD CHEMICAL DECON & SLURRY SYSTEM		
SCALE	SCALE	DRAWING NO.	REV.
1:1	AS SHOWN	905-D-053	8
SCALE	SCALE	SHEET NO.	
1:1	AS SHOWN	305-D-053S02 A	

CAUTION  
CURRENT AS OF  
JAN 2 1994  
CHECK DOCUMENT CONTROL  
FOR LATEST REVISION.

9403140264-27

905-D-451 E



300 CFM EXH. FLOW  
(3600 CFM)

NO	DATE	REVISION	BY	CHK	APPROVED
B	02-27-87		B/L	RL	FF / JGE / JBV
GENERAL REVISION					
C	05-19-87		FJE	WVL	FF / JGE / JBV
GENERAL REVISION					
D	09-08-88		B/L	WVL	FF / JGE / JBV
GENERAL REVISION PER CSAR 110					
E	6/22/89		FJE	WVL	FF / JGE / JBV
GENERAL REVISION					
F	7-15-89	ER 1046			
G	02-15-89	GENERAL REV PER ECH 3297	Cal	WVL	FF / JGE / JBV
H	7-16-90	GENERAL REV PER ECH 3290	BJR	WVL	FF / JGE / JBV
I	02-3-90	REV PER ECH 3982	CGR	WVL	FF / JGE / JBV
J	9-16-93	REV ECH 5859	PD	WVL	FF / JGE / JBV
K	3-28-97	REV ECH 6578	PD	WVL	FF / JGE / JBV
L	11-23-98	REV ECH 7522	WVL	WVL	FF / JGE / JBV

NOTES

- FOR SYMBOLS, NOTES AND LEGEND SEE DRAWINGS 900-D-1306, 1307 & 1308.
- Δ P DENOTES INCHES OF WATER COLUMN.
- ALL AIR QUANTITIES (CFM) ARE FOR 1500 FT ALTITUDE ABOVE SEA LEVEL.
- ALL EQUIPMENT TAG NUMBERS ARE PREFIXED BY SYSTEM NUMBER 67 UNLESS OTHERWISE NOTED.
- REPRESENTS DESIGNATED CONTROL PANEL. SHARED DISPLAY SYMBOLS PER ISA 55.3 (M2) INDICATED CRT DISPLAY OR KEYBOARD CONTROL.
- REPRESENTS SEPARATE INSTRUMENTS TAG NUMBERS WITH SUFFIXES A, B, C, ...
- REPRESENTS INSTRUMENT AIR SUPPLY. SEE REFERENCE DWG 905-B-376 BELOW.

REFERENCE DRAWINGS

VITRIFICATION FACILITY CONTROL ROOM VENTILATION SYSTEM PLAN EL 124'-3" & 127'-0"	905-0-465
VITRIFICATION FACILITY AIR FLOW DIAG	905-0-450
VITRIFICATION FACILITY HVAC CHILLED WATER SYSTEM P&ID	905-0-453/501 AND 905-0-453/502
VITRIFICATION FACILITY HVAC CHILLED WATER SYSTEM P&ID	905-0-454
VITRIFICATION FACILITY FIRE PROTECTION SYSTEM P&ID	905-0-049
INSTRUMENT INSTALLATION DETAILS (P&ID). EXACT SHEET NUMBER SHOWING DETAILED AIR SUPPLY TO PARTICULAR AIR USER SEE HVAC INSTRUMENT LIST)	905-B-376
INSTRUMENT LOCATION ARRANGEMENTS	905-0-370
INSTRUMENT LOCATION ARRANGEMENTS	905-0-378

ANSTEC  
APERTURE  
CARD

Also Available on  
Aperture Card

CAUTION  
 CURRENT AS OF  
 JAN 2 1990  
 CHECK DOCUMENT CONTROL  
 FOR LATEST REVISION.

WVNS APPROVAL

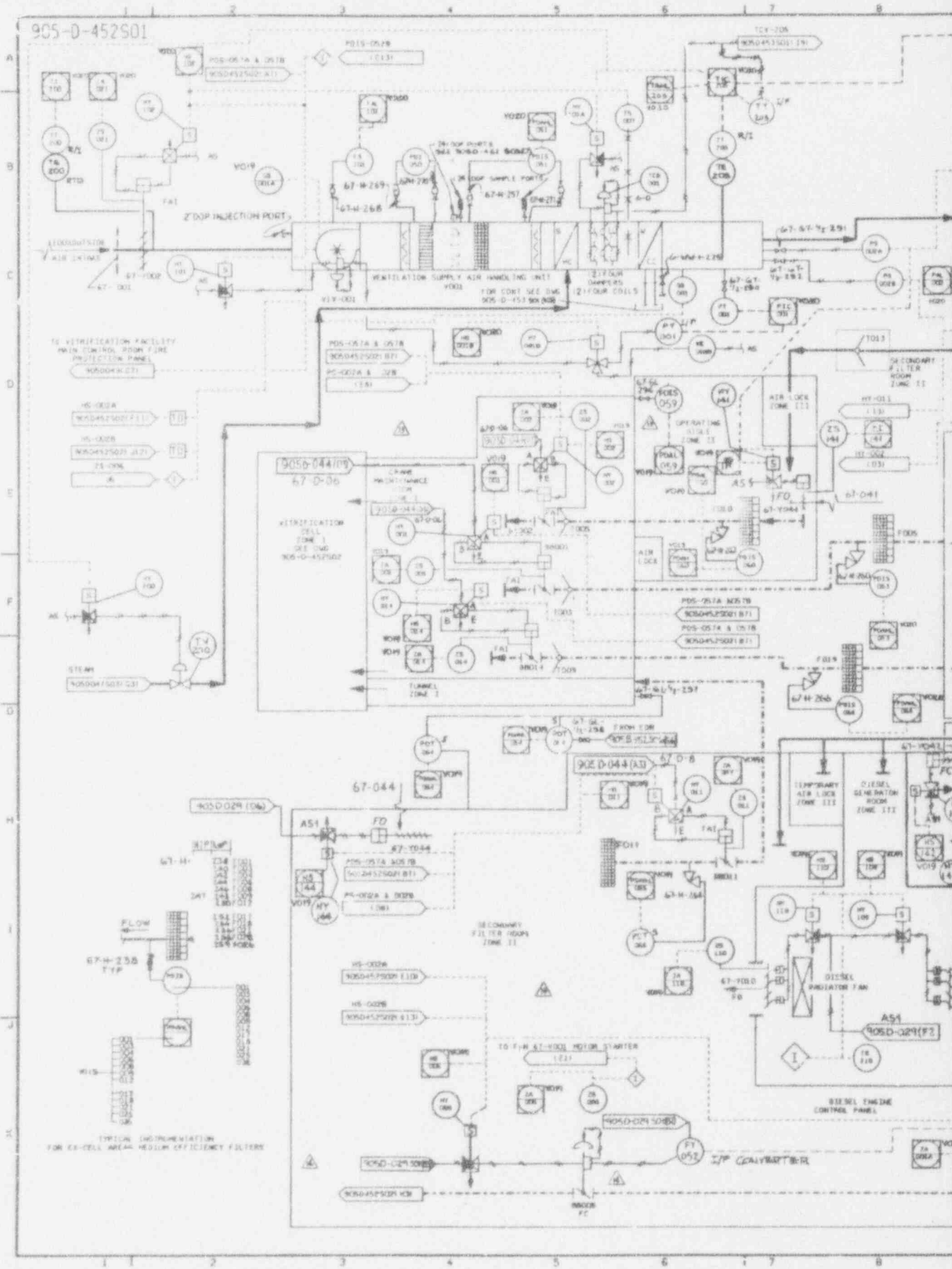
DES. WVL  
 CDR. WVL  
 DRFT. SUPP. *[Signature]*  
 QA. WVL *[Signature]*  
 RES. WVL *[Signature]*

FOR DRAWING INDEX SEE DRAWING NO.

APPROVED WVNS CO.	EBASCO SERVICES INCORPORATED		
PROJECT NO.	WV D.P.S. NO. 2288		
DATE OF ORDER	TANK ORDER 008		
ENGINEER SUPP.	WEST VALLEY NUCLEAR SERVICES COMPANY, INC		
LEAD DISK ENGR	WEST VALLEY, NEW YORK		
TV JOURNALIST	WEST VALLEY DEMONSTRATION PROJECT		
REVISION	VITRIFICATION SYSTEM HVAC AIR FLOW DIAGRAM AND P&ID CONTROL ROOM		
CHECKED	DATE		
ISSUED	DATE		
PROJECT NO.	D	905D-451	6
ISSUED FOR CONSTRUCTION	SCALE	905-0-451	E

9403140264-22

905-D-452S01



TE VENTILATION FACILITY  
 MAIN CONTROLS ROOM FURE  
 PROTECTION PANEL  
 905D452S01

HS-002A  
 905D452S01 F11  
 HS-002B  
 905D452S01 A11  
 TS-006  
 A

905-D-44709  
 67-D-06  
 VENTILATION CELL  
 ZONE I  
 905-D-452S02

STEAM  
 905D452S01 C31

905-D-029 (06)  
 67-H-255  
 TYP

TYPICAL INSTRUMENTATION  
 FOR EX-CELL AREA HIGH EFFICIENCY FILTERS

905-D-029 (06)  
 67-H-255  
 TYP

HS-002A  
 905D452S01 F11  
 HS-002B  
 905D452S01 A11

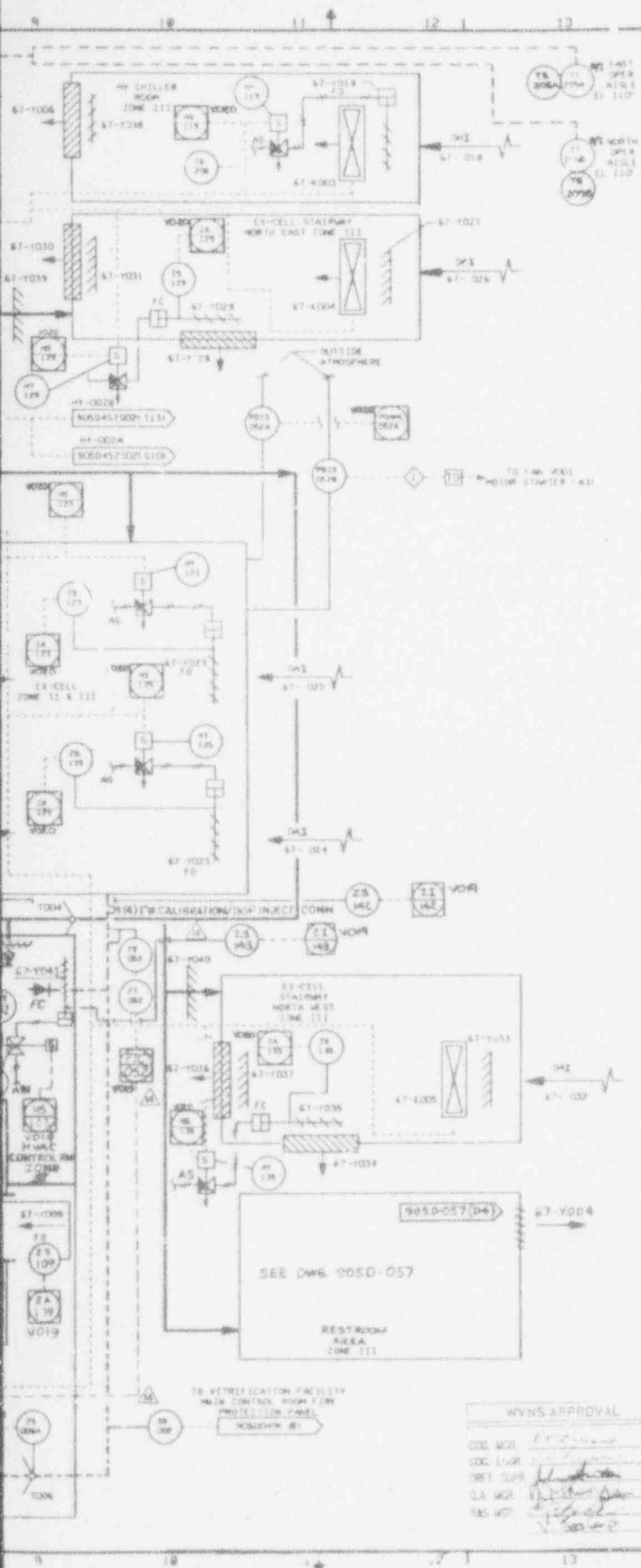
TO FAN 67-002 MOTOR STARTER  
 1231

905-D-029 (06)  
 67-H-255  
 TYP

DIESEL ENGINE  
 CONTROL PANEL

905-D-029 (F2)

905-D-029 (06)  
 67-H-255  
 TYP



NO.	DATE	REVISION	DR	CH	APPROVED
1	10-17-81	GENERAL REVISION	...	...	...
2	10-19-81	GENERAL REVISION	...	...	...
3	11-15-81	GENERAL REVISION PER ESNW 411	...	...	...
4	12-11-81	GENERAL REVISION PER ESNW 1193	...	...	...
5	12-21-81	GENERAL REVISION PER ESNW 1180	...	...	...
6	2-22-82	GEN REV PER ECN 5675	OW	...	...
7	3-31-82	REV PER ECN 5578	PD	...	...
8	8-8-82	REV PER ECN 6622	PD	...	...
9	9-14-83	REV ECN 6738	PD	...	...
10	10-7-83	REV ECN 6865	PD	...	...
11	12-23-83	REV PER ECN 7161	PD	...	...
12	2-18-84	REV PER ECN 4731	CM	...	...

- NOTES**
- FOR SYMBOLS, NOTES AND LEGEND SEE DRAWINGS 905-0-1306, 1307 & 1308.
  - ALL EQUIPMENT IN THE SECONDARY FILTER ROOM AND CRANE MAINT. ROOM SHALL BE SEISMICALLY QUALIFIED EQUIPMENT AND SHALL BE SEISMICALLY SUPPORTED.
  - ALL TAG NUMBERS ARE PREFIXED BY SYSTEM NUMBER 67 UNLESS OTHERWISE NOTED.
  - REPRESENTS SEPARATE INSTRUMENTS TAG NUMBERS WITH SUFFIXES A, B, C, ...
  - AS = 50 PSIG, ASI = 20 PSIG
  - REPRESENTS DESIGNATED CONTROL PANEL SHARED DISPLAY SYMBOLS PER ISA-5.5 (1982) INDICATED CRT DISPLAY OR KEYBOARDED CONTROL.
  - AS - REPRESENTS INSTRUMENT AIR SUPPLY SEE REFERENCED DWG 905-0-376 AND 905-0-352 E/FLOW.

- REFERENCE DRAWINGS**
- V.F. HVAC STEAM SYSTEM P&ID 905-0-047503
  - V.F. FIRE PROTECTION P&ID 905-0-049
  - V.F. VENTILATION SYSTEM PLAN EL. 100.00' 905-0-401
  - V.F. VENTILATION SYSTEM SECTIONS 905-0-402
  - V.F. SECONDARY HEPA FILTER RM 905-0-403
  - V.F. SECONDARY HEPA FILTER RM SECTIONS 905-0-404
  - V.F. VENTILATION SYSTEM PLANS & SECTIONS 905-0-405
  - V.F. VENTILATION SYSTEM PLAN EL. 124.00' 905-0-406
  - V.F. HVAC INSTRUMENTATION PIPING 905-0-409
  - VITRIFICATION FACILITY AIR FLOW DIAG. 905-0-420
  - VITRIFICATION FACILITY INST & UTILITY AIR P&ID 905-0-029
  - VITRIFICATION FACILITY AIR FLOW DIAG. CONTROL ROOM 905-0-454
  - VITRIFICATION FACILITY HVAC CHILLED WATER SYSTEM P&ID 905-0-453 AND 905-0-454
  - INSTRUMENT LOCATION ARRANGEMENTS 905-0-370 AND 905-0-376 905-0-376 905-0-352

**INSTRUMENT INSTALLATION DETAILS**

NO.	DATE	REV PER ECN	DR	CH	APPROVED
7	6-26-82	REV PER ECN 4891	PD	...	...
8	8-11-82	REV PER ECN 5205	PKR	...	...
9	11-24-82	GEN REV ECN 5041	PD	...	...

FOR DRAWING INDEX SEE DRAWING NO.

APPROVED BY: [Signature]	DATE: [Date]
PROJECT MGR: [Signature]	DATE: [Date]
ENGINEER SUPV: [Signature]	DATE: [Date]
LEAD DISE: [Signature]	DATE: [Date]
DESIGN: [Signature]	DATE: [Date]
CHECKED: [Signature]	DATE: [Date]
DRAWN: [Signature]	DATE: [Date]
DESIGNED BY: [Signature]	DATE: [Date]
PROJECT NO.:	905D-452
SCALE:	AS SHOWN

**WBASCO SERVICES INCORPORATED**  
 415 W. 5. RD. 1288 TAGE ORDER 022

**WEST VALLEY NUCLEAR SERVICES COMPANY, INC**  
 WEST VALLEY, NEW YORK

**WEST VALLEY DEMONSTRATION PROJECT**

**VITRIFICATION SYSTEM HVAC P&ID**

**VITRIFICATION FACILITY**

**ANSTEC APERTURE CARD**

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**CAUTION**  
 CURRENT AS OF 1/28/84

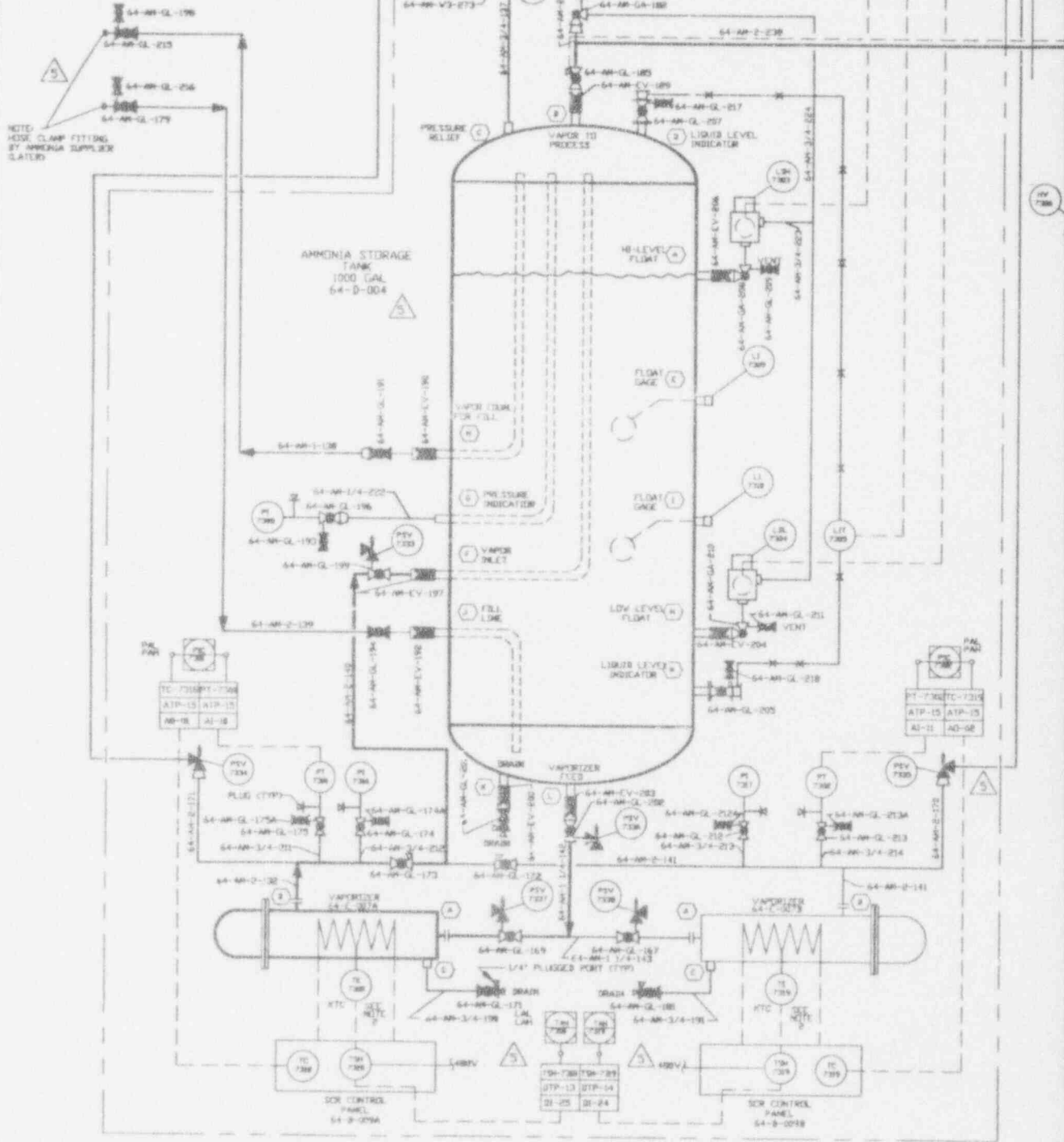
CHECK DOCUMENT CONTROL FOR LATEST REVISION.

9403140264-23



# 906-D-014 ANHYDROUS AMMONIA NFPA IDENTIFICATION SYSTEM

HEALTH HAZARD 3  
 FIRE HAZARD 1  
 REACTIVITY 0  
 SPECIFIC HAZARD N/A



NOTE:  
HOSE CLAMP FITTINGS  
BY AMMONIA SUPPLIER  
SATURD

AMMONIA STORAGE  
TANK  
1000 GAL  
64-D-004

VAPORIZER  
64-D-009A

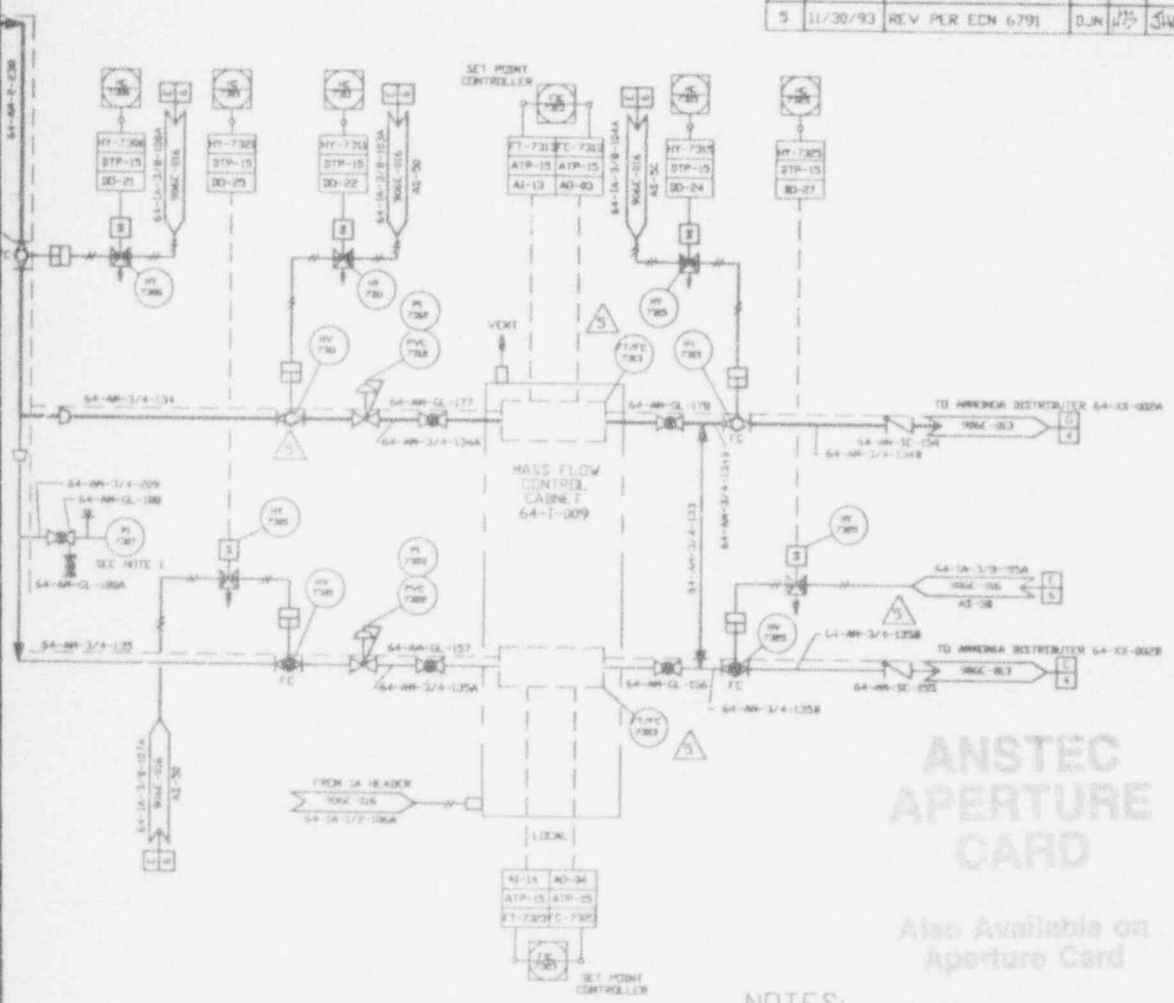
VAPORIZER  
64-D-009B

SCR CONTROL  
PANEL  
64-D-009A

SCR CONTROL  
PANEL  
64-D-009B

NO.	DATE	REVISION	DR	CH	APPROVED
B	02-19-93		TP	JK	KEL DM F.A.S.
GENERAL REVISION					
C	03-09-93		TP	JK	KEL DM F.A.S.
GENERAL REVISION					
D	9/24/91	ER 2193			JRH
1	10/2/91	GEN REV PER EDN 4553	LRK	HAP	B L GERMOND
2	02/19/93	GEN REV PER EDN 5908	SRC	HAB	J H KRZICKI
3	02/13/93	GEN REV PER EDN 6137	SRC	KMG	P A NESTER
4	04/05/93	REV PER EDN 6136	SRC	KMG	P A NESTER
5	11/30/93	REV PER EDN 6791	DJA	JTS	SHL

AM VAPORIZER (SEE NOTE 1)  
 90A VALVE GALLERY



**ANSTEC  
 APERTURE  
 CARD**

Also Available on  
 Aperture Card

**NOTES:**

1. INSTRUMENTS AND VALVES SUPPLIED BY THE AMMONIA TANK MANUFACTURER.
2. THERMOCOUPLE MOUNTED ON VAPORIZER.
3. == HEAT TRACED PIPES.
4. ALL INSTRUMENT NUMBERS PREFIXED BY SYSTEM NO '64'

**REFERENCE DRAWINGS:**

VF. PID MELTER OFF-GAS SYSTEM	906E-017
VF. PID MELTER OFF-GAS SYSTEM	906E-013
VF. PID MELTER OFF-GAS SYSTEM	906D-015
INSTRUMENT AIR SYSTEM PID	906E-016
SYMBOLS NOTES & LEGEND	900D-1306
SYMBOLS NOTES & LEGEND	900D-1307
SYMBOLS NOTES & LEGEND	900D-1308
AMMONIA STORAGE TANK	906D-020

FOR DRAWING INDEX SEE DRAWING NO.

APPROVE VMSH 05	EBASCO SERVICES INCORPORATED
PROJECT MGR T. J. C. STUREY	WEST VALLEY NUCLEAR SERVICES COMPANY INC WEST VALLEY, NEW YORK
DESIGNER R. J. LEVY	WEST VALLEY DEMONSTRATION PROJECT
CHECKED P. PARSONS	VITRIFICATION FACILITY PID MELTER EX-CELL OFF-GAS SYSTEM
DRAWN T. PATRICK	PROJECT NO. 906D-014
ISSUED FOR CONSTRUCTION	DRAWING NO. 906D-014

CAD DRAWING - DO NOT REVISE THIS ORIGINAL

CHECK DRAWING FOR CONTROL  
 CURRENT AS OF  
 JAN 2 1994  
 FOR LATEST REVISIONS

9403140264-24



1/25/94

Section 1.3: General Arrangement Drawings

Page 1

Section 1.3.1 Vitrification Facility

905-D-030 Sht:001 Rev:009 Title: General arrangement vitrification facility plan EL 100'

905-D-030 Sht:002 Rev:000 Title: VF GENERAL ARRANGEMENT FUEL OIL STORAGE

905-D-032 Sht:001 Rev:005 Title: General arrangement vitrification facility plan EL  
110.25'

905-D-032 Sht:002 Rev:002 Title: VF CONTROL ROOM GENERAL ARRANGEMENT

905-D-034 Sht:001 Rev:004 Title: General arrangement vitrification facility plan EL 124'  
& above

905-D-038 Sht:001 Rev:004 Title: General arrangement vitrification facility sections

905-D-040 Sht:001 Rev:002 Title: General arrangement vitrification facility plan EL  
146.25' & roof

Section 1.3.2 Tank Farm

904-D-060 Sht:001 Rev:001 Title: SMS Utilities to pump/dist. pits general arrangement

904-D-060 Sht:001 Rev:006 Title: SMS HLW transfer piping

904-D-060 Sht:002 Rev:005 Title: SMS HLW transfer piping

904-D-060 Sht:003 Rev:005 Title: SMS HLW transfer piping

904-D-060 Sht:004 Rev:006 Title: SMS HLW transfer piping

904-D-060 Sht:005 Rev:011 Title: SMS HLW transfer piping

Section 1.3.3 High Level Waste Storage

905-D-031 Sht:001 Rev:001 Title: General arrangement vitrification facility EDR, CPC plan  
EL 130'

905-D-033 Sht:001 Rev:001 Title: General arrangement vitrification facility EDR CPC plan  
EL 117'

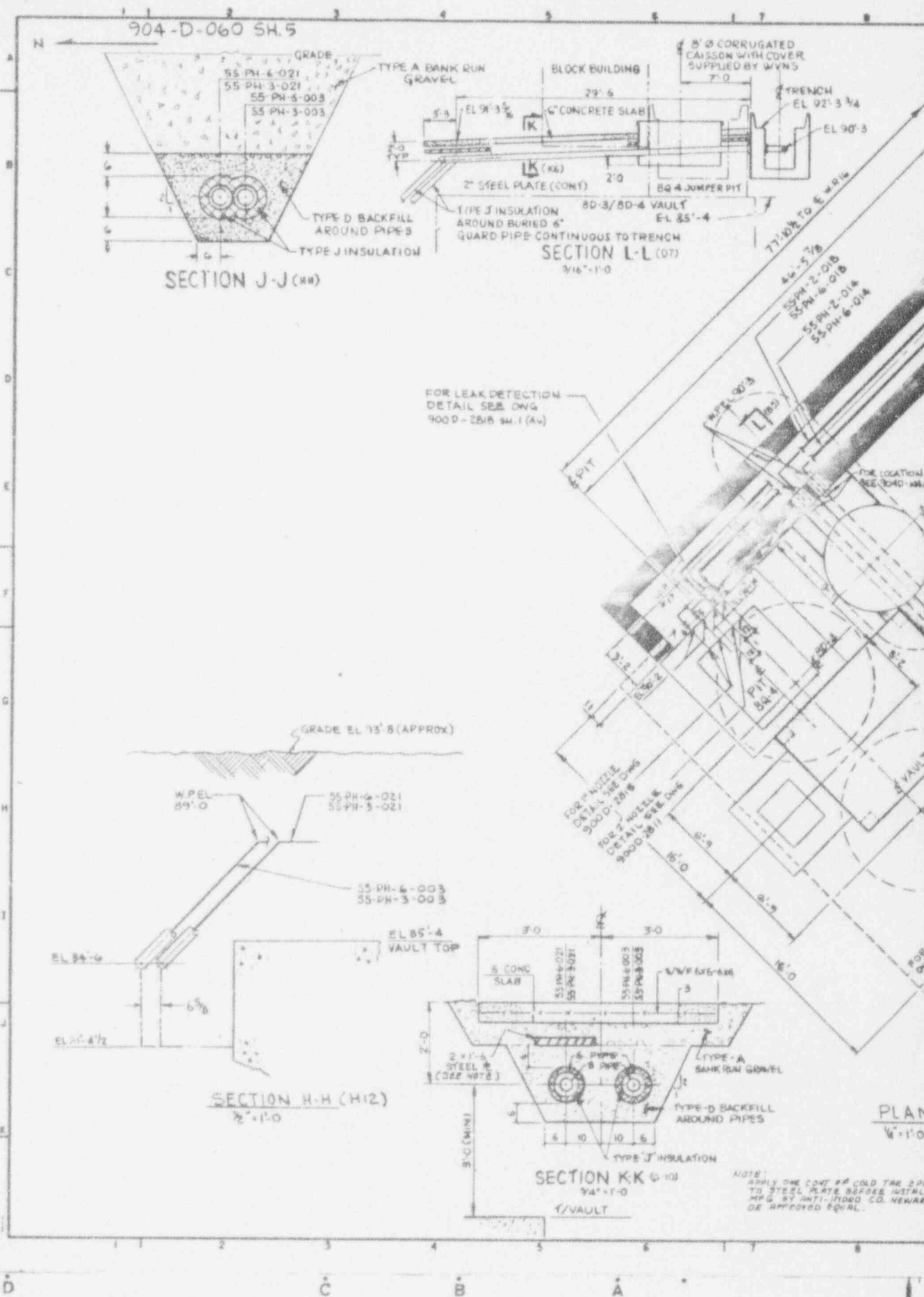
## Section 1.3.4 Ex-cell Off-gas 0-14 Building

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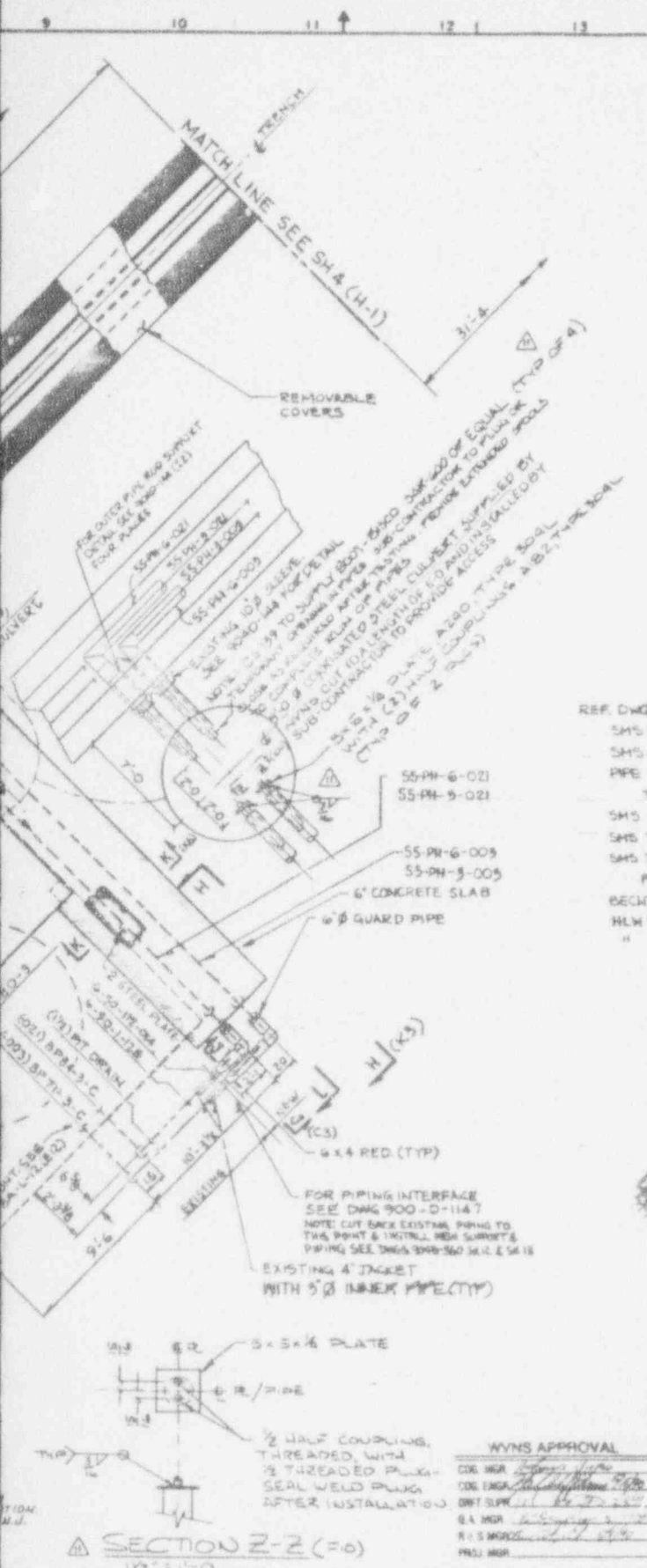
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906-D-030	Sht:001	Rev:006	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING 98'
906-D-030	Sht:002	Rev:001	Title: VF GENERAL ARRANGEMENT NOx TRENCH
906-D-030	Sht:003	Rev:002	Title: VF GENERAL ARRANGEMENTS 01/14 BUILDING PLAN EL 98'
906-D-031	Sht:001	Rev:005	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING 116.53'
906-D-032	Sht:001	Rev:005	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING 130'
906-D-033	Sht:001	Rev:005	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING 144'
906-D-034	Sht:001	Rev:005	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING SECTION
906-D-035	Sht:001	Rev:005	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING SECTION
906-D-036	Sht:001	Rev:003	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING PLAN EL 158' ROOF PLAN
906-D-037	Sht:001	Rev:006	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING PLAN EL 124'
906-D-036	Sht:001	Rev:006	Title: VF MELTER OFF-GAS GENERAL ARRANGEMENTS 01/14 BUILDING SECTION

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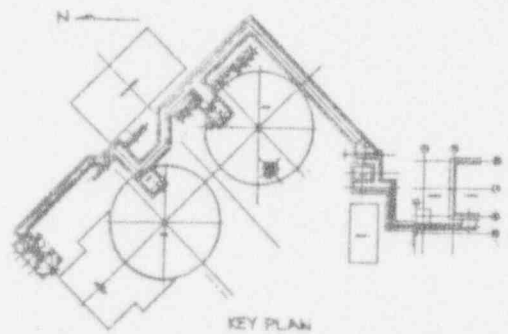


REV NO	DATE	REVISION	DR	CH	APPROVED
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GENERAL REVISION					
C	4/19/90		AV	RL	PLP
GENERAL REVISION					
0	4/8/90	ER/ST			
1	6/27/90	REV PER ECH 3742	CGR	JAG	JAG
2	10/15/90	REV PER ECH 3930	CGR	JAG	JAG
3	11/5/90	REV PER ECH 4022	CGR	JAG	JAG
4	5-4-92	GEN REV PER ECH 4831	PD	JB	PD
5	6-1-92	REV PER ECH 5155	PD	JB	PD
6	8-10-92	REV/FCN VF 28-0063	PD	JB	PD
7	4-27-93	GEN REV PER ECH 6059	PD	JB	PD
8	6-18-93	REV/FCN VF 28-0281	PD	JB	PD
9	9-8-93	REV/FCN VF 28-0280	PD	JB	PD
10	9-27-93	REV/ECH 6647A	PD	JB	PD
11	1-12-94	REV/FCN VF 28-544	AAJ	JB	PD



NOTE  
FOR GENERAL NOTES & REFERENCE DRAWINGS  
SEE 904-D-060 SH-1

- REF DWGS:
- SHS HLW TRANSFER PIPING 904D-060 SH-4
  - SHS TRENCH PLAN & SECT'S. SH-4 904D-144
  - PIPE ROUTING & MECH DET. FROM VALVE ANGLE 9000-1147 SH-1 TO 8D-3
  - SHS 2" HORIZ. 2 NOZZLE WALL ENBECMENT 9000-2511
  - SHS TRANSFER PIT SQ-4 1" WALL NOZZLE ENBEC. 9000-2515
  - SHS TRANSFER LINES LEAK DETECTION PIPING 9000-2518
- PLAN & SECTIONS
- BECHTEL CON-RO WASTE STORAGE TANKS. SA-L-12
  - HLW TRANSFER PROCESS PIPING SUPPORT LOCATIONS 904D-510 SH-2
  - " " " " " " 904D-560 SH-13



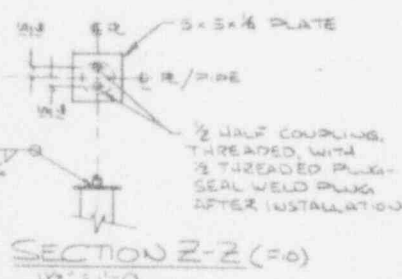
FOR DRAWING INDEX SEE DRAWING NO.

APPROVED WORK	EBASCO SERVICES INCORPORATED
PROJECT NO.	A/E O.F.S. NO. 1288
DESIGNER	WEST VALLEY NUCLEAR SERVICES COMPANY, INC
LEAD O.E.C. ENGINEER	WEST VALLEY, NEW YORK
DESIGN	WEST VALLEY DEMONSTRATION PROJECT
CHECKER	SLUDGE MOBILIZATION SYSTEM
DATE	HLW TRANSFER PIPING
DR. NO.	904D-060-11
PROJECT NO.	904D-060-11
SCALE	AS NOTED

WYNS APPROVAL

CON. ENGR. [Signature]

DATE [Date]



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CAUTION

CHECK DOCUMENT WITH ORIGINAL FOR LATEST REVISION