

ASME SECTION XI VALVE TEST PROGRAM
2ND TEN YEAR INSPECTION INTERVAL

FOR THE D. C. COOK NUCLEAR POWER STATION UNIT NO. 1

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Date: 8-31-87

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ASME SECTION XI VALVE TEST PROGRAM
2ND TEN YEAR INSPECTION INTERVAL

FOR THE D. C. COOK NUCLEAR POWER STATION UNIT NO. 1

INTRODUCTION

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Figure - 1

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1. Valve Testing Program

- A. The valve test program shall be conducted in accordance with Subsection IWV of Section XI of the 1983 edition of the ASME Boiler and Pressure Vessel Code through Summer 1983 Addenda, except for specific relief requests which are identified in the Valve Summary Sheet. | 2
- B. The valve test program is applicable, for the second 10 year inspection interval which commences on July 1, 1986.
- C. The valve test program was developed employing the classification guidelines contained in 10 CFR 50.2(v) for Quality Group A and Regulatory Guide 1.26, Revision 3 for Quality Groups B and C. (Quality Group A is the same as ASME Class 1, Group B is 2, and Group C is 3). NRC staff guidance was provided by memorandum dated January 16, 1978.
- D. Figure 2 identifies the system flow diagrams which were used to develop this valve test program.

Valve Summary Sheets contain the following:

- * System Name: Name of the system (e.g., Main Steam)
- * Flow Diagram: Unit Number - Flow diagram number - Revision Number (e.g., 1-5105-29) | 2
- * Valve Number: Unique valve number (e.g., 1-DCR-310)

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- * Revision Number: Any change of valve description, function or test requirement.
- * Valve Type: Type of valve, one of the following:
 - REL - Relief and Safety
 - CK - Check
 - BF - Butterfly
 - GA - Gate
 - GL - Globe
 - DA - Diaphragm
 - 3W - Three-Way
 - ND - Needle
 - AG - Angle
 - BL - Ball
 - VB - Vacuum Breaker (Reverse Check Valve)
- * Valve Size: Nominal valve size in inches
- * Valve Actuator Type: Type of actuator, one of the following:
 - SA - Self Actuated (e.g., CK or REL)
 - MO - Motor Operated
 - A - Air Operated
 - M - Manual
 - PO - Pneumatic
 - SO - Solenoid Operated
- * Flow Diagram Coordinates: Alpha/Numeric grid location of valve
- * Valve position during normal plant operation or during performance of its safety function, one of the following:
 - O - Open
 - C - Closed
 - O/C - Open/Closed or vice versa

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- * Code Class: ASME Code class of valve, either 1, 2, or 3
- * Valve Status-A/P: Active or passive
- * Category: Section XI, Category of valve, either A, B, C, or D, as defined in IWV-2200.

NOTE: Combinations are possible (e.g., AC)

- * Primary Test Req'd: Test required per Section XI
- * Test Performed: Testing that will be performed

NOTE: Test nomenclature is explained in Figure 3

- * Test Mode: One of the following:

P - Power Operation (Every 3 months when unit is at power)
C - Cold Shutdown (Testing will be performed at cold shutdown frequency) See Note "F"
R - Refueling (Testing will be performed at refueling outage frequency)

- * Code Relief: Whether or not a code relief is being requested; will be one of the following:

NO - Valve is to be tested per code, no comments
NO, NOTE X - Valve is to be tested per code, but there are comments
YES, NOTE Y - Code Relief is requested. Alternate testing is proposed in lieu of that required by code, the note explains why relief is required.

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E. Alternative testing is to be performed on a check valve as indicated under relief request notes in lieu of stroke testing required by Section XI, Paragraph IWV - 3521. It is accomplished by disassembly or radiography method as explained below:

- a. Disassembly Method The valve bonnet is removed, and the disc is manually full-stroke exercised and condition of the valve internals are visually inspected. The results of this test is documented.
- b. Radiography Method This method is used as an alternative testing method to determine the disc position under no flow or reverse flow conditions (i.e., valve seated). This, in conjunction with, the full forward flow testing of the valve, provide assurance that disc was free to move from full-open position with the forward flow to the closed position with no flow or reverse flow conditions. The results of this test is documented.

The valve grouping for sample disassembly or radiography under alternative testing is done based on of the following criteria:

1. valve type and design similarities
2. system design, flow, and service conditions
3. frequency of valve operation
4. manufacturer
5. size range (i.e. up to 2", 2-1/2" to 4", 4" and 6", 6" and 8", etc.).

The alternative testing to be performed for a particular valve is indicated on the valve summary sheets and relief request notes. This will be accomplished by selecting one representative valve from each group of valves during refueling outages. If the inspection results are unacceptable, all the valves in that group will be inspected.

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F. Conditions for Valve Testing During Cold Shutdowns:

Cold shutdown testing of valves identified in the IST Program is acceptable when the following conditions are met:

1. Valve exercising need not be done more often than once every 3 months in case of frequent cold shutdowns.
 2. The testing shall commence as soon as the cold shutdown condition is achieved, but not later than 48 hours after shutdown, and continue until complete or the plant is ready to return to power.
 3. Completion of all valve testing is not a prerequisite to return to power. Any testing not completed during one cold shutdown should be performed during any subsequent cold shutdowns starting from the last test performed at the previous cold shutdown.
 4. For planned cold shutdowns, where ample time is available and testing all the valves identified for the cold shutdown test frequency in the IST Program will be accomplished, exceptions to the 48 hours commencement of testing is allowed.
- G. The following criteria have been used in developing limiting values of full-stroke time for the power operated valves:
- o Review of valve's design specification and/or manufacturer's test stroke times
 - o Review of system response time requirements (Technical Specification, FSAR, etc.)
 - o Valve's historical stroke time values at various system conditions

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Using the above criteria the limiting stroke time for each valve is derived as follows:

1. Valve Stroke Time \leq 2 Seconds

<u>Historical Stroke Time Range in Seconds</u>	<u>Established Base Line on Curves in Seconds</u>	<u>Recommended Action Time (Limiting Stroke Time Values in Seconds)</u>
		Based Line Time x 2 + 1 Second=Recommended Action Time or Tech. Spec. Limit, whichever is less.
up to .74	0.5	= .5 x 2 + 1 = 2 Seconds
.75 to 1.24	1.0	= 1 x 2 + 1 = 3 Seconds
1.24 to 1.74	1.5	= 1.5 x 2 + 1 = 4 Seconds
1.75 to 2.49	2.0	= 2 x 2 + 1 = 5 Seconds

2. Valve Stroke Time - 2.5 to 10.49 Seconds

2.5 to 10.49	3 to 10	Base Line Time x 1.5 = Action Time
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3. Valve Stroke Time - 10.5 Seconds and Up

10.5 and Up

11.0 and Up

Base Line Time x 1.25 =
Action Time (or 15 seconds,
whichever is larger)

- H. Code relief is requested for timing tolerance and trending per paragraphs IWV-3413(b) and IWV-3417(a) for fast acting valves (those with the maximum limiting stroke times of five seconds or less determined from historical stroke time values and/or valve design specification). The major influence in the stroke time testing of fast acting valves is the operator's response. Therefore, timing tolerances are influenced by operator action and trending is not indicative of valve performance. The fast acting valves have been identified as "ETF" and acceptance criteria has been defined in the program.

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2ND TEN YEAR INSPECTION INTERVAL OF
VALVE TEST PROGRAM FOR UNIT - 1

LIST OF DRAWINGS

Revision No: 2

Figure 2

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<u>SYSTEM</u>	<u>FLOW DIAGRAM NO.</u>	<u>REVISION NO.</u>
Main Steam	1-5105	29
Main Steam	1-5105B	35
Steam Generating System	1-5105D	1
Feedwater	1-5106	35
Feedwater (Auxiliary)	1-5106A	38
Essential Service Water	1-5113	41
Non-Essential Service Water	1-5114A	31
Station Drainage Containment	1-5124	22
Reactor Coolant	1-5128	19
Reactor Coolant	1-5128A	37
CVCS-Reactor Letdown & Charging	1-5129	31
	1-5129A	19
Component Cooling	1-5135	29
Component Cooling	1-5135A	30
Component Cooling	1-5135B	14
Nuclear Sampling	1-5141	29
Nuclear Sampling	1-5141A	32
Post Accident Sampling-Containment Hydrogen	1-5141D	10
Emergency Core Cooling (SIS)	1-5142	25

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2ND TEN YEAR INSPECTION INTERVAL OF
VALVE TEST PROGRAM FOR UNIT - 1

LIST OF DRAWINGS

Revision No: 2

Figure 2

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<u>SYSTEM</u>	<u>FLOW DIAGRAM NO.</u>	<u>REVISION NO.</u>
Emergency Core Cooling (RHR)	1-5143	36
Containment Spray	1-5144	28
Containment Penetration & Weld Channel Pressurization	1-5145	17
Ice Condenser Refrigeration	1-5146B	24
Containment Ventilation	1-5147A	34
Control Room Ventilation	1-5149	20
Emergency Diesel Generator	1-5151A	25
Emergency Diesel Generator	1-5151B	28
Emergency Diesel Generator	1-5151C	26
Emergency Diesel Generator	1-5151D	28
Make-Up Water & Primary Water System	12-5115A	41
Compressed Air System	12-5120B	22
CVCS-Boron Makeup	12-5131	19
Spent Fuel Pit Cooling & Clean-Up	12-5136	25
WDS Vents & Drains	12-5137A	21
Post Accident Liquid & Gas Sampling	12-5141C	8
Post Accident Liquid Sampling Inst. Panels	12-5141F	6

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NOMENCLATURE FOR TEST METHOD USED IN COLUMNS FOR
PRIMARY TEST REQUIRED AND TEST PERFORMED UNDER ASME SECTION XI

Revision No: 2

Figure 3

Date: 8-31-87

<u>1) CATEGORY A-B VALVES</u>		<u>ASME CODE SECTION XI PARAGRAPH</u>
EF-1	Exercise valve (full stroke) for operability every 3 months.	(IWV-3411)
EF-2	Exercise valve (full stroke) for operability at a cold shutdown or refueling outage frequency as indicated. Code relief requests are provided in the flow diagram notes.	(Code Relief Requested)
EF-3	Exercise valve (part stroke) for operability during operation; Exercise (full stroke) at a cold shutdown or refueling outage frequency as indicated. Justification for exercising the valve during cold shutdowns is provided in the flow diagram notes. Code relief request; as provided if full stroke test is deferred to coincide with refueling outages.	(IWV-3412)
EF-4	Exercise valve (full stroke) for operability prior to return to service	(IWV-3416)
EF-5	Valves with remote position indicator shall be observed at least once every 2 years to verify that valve operation is accurately indicated.	(IWV-3300)
EF-6	This note was intentionally deleted.	
EF-7	Exercise valve (with fail-safe actuators) to observe failure mode every 3 months	(IWV-3415)
EF-8	Exercise valve (with fail-safe actuators) to observe failure mode at a cold shutdown or refueling frequency as indicated.	(IWV-3415)
ET-XXX	Exercise valve - power operated (full stroke) and measure time. (E.G., ET-015 means recommended action stroke time is 15 seconds)	(IWV-3413 & 3417)
ETF-YYY	Exercise valve - power operated (full stroke) and measure time for fast acting valves. Code relief is requested in item H. (E.G., ETF-005 means recommended action stroke time is 5 seconds)	(IWV-3413 & 3417)

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NOMENCLATURE FOR TEST METHOD
USED IN COLUMNS FOR PRIMARY TEST REQUIRED AND
TEST PERFORMED UNDER ASME SECTION XI

Revision No: 2

Figure 3

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		ASME CODE SECTION XI PARAGRAPH
	<u>2) CATEGORY C VALVES</u>	
CF-1	Exercise valve (full stroke) for operability every 3 months.	(IWV-3521)
CF-2	Exercise valve (full stroke) for operability at a cold shutdown or refueling outage frequency as indicated. Code relief requests are provided in the flow diagram notes.	(Code Relief Requested)
CF-3	Exercise valve partial stroke during plant operation and full stroke for operability at a cold shutdown or refueling outage frequency as indicated. Justification for exercising valve during cold shutdown is provided in the flow diagram notes. Code relief requests are provided if full stroke testing is deferred to coincide with refueling outages.	(IWV-3522)
CF-4	Exercise valve (full stroke) for operability prior to return to service.	(IWV-3416)
TF-1	Safety and relief valve tests setpoint tests	(IWV-3510)
	<u>3) CATEGORY A or AC VALVES</u>	
SLT-1	Seat leakage test valve in accordance with requirements of paragraph IWV-3420, of ASME Code Section XI at refueling outage frequency but not less than once every 2 years. Permissible leakage values for each category A or AC valve are listed in Attachment-"A".	
SLT-2	Seat leakage test valve in accordance with 10CFR 50, Appendix J, in lieu of ASME Code Section XI except for paragraphs IWV-3426 and IWV-3427 which are applicable. Permissible leakage values for each category A or AC valve are listed in Attachment-"A".	

DONALD C. COOK NUCLEAR PLANT
NOMENCLATURE FOR TEST METHOD
USED IN COLUMNS FOR PRIMARY TEST REQUIRED AND
TEST PERFORMED UNDER ASME SECTION XI

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SLT-2A In lieu of the requirements of ASME Code Section XI paragraphs IWV-3423 and IWV-3424, valves are seat leakage tested as part of the Appendix J containment isolation test by imposing a static head of water on the downstream side of the valve and verifying that the leakage within the specified value of Attachment "A" for each category valve. This testing method, demonstrates that the containment spray and RHR Check Valve leakage over 30 days is limited to the water resident in the containment spray headers downstream of the check valves. The leakage specified would not deplete the water inventory so as to expose these valves to a post-LOCA environment for a minimum of 30 days in the event that a spray system must be shut down and drained. This testing method is as stated in Response to Question 22.15(5) of the original FSAR Appendix Q, Amendment 81 dated August 1978.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5105D-1

Revision No: 2

Date: 8-31-87

NOTE 1: MRV-210, -220, -230 and -240: These steam generator stop valves cannot be full stroke exercised during power operation because this would require securing steam from a steam generator which could result in a reactor trip. Three loop operation is not allowed for D. C. Cook per Technical Specification 3.4.1.1. Valves MRV-211, -221, -231, -241, -212, -222, -232, and -242 which activate MRV-210, -220, -230, and -240 are tested in accordance with IWV-3410. MRV-210, -220, -230 and -240 are part stroke tested quarterly by use of external hydraulics and full stroke tested during hot standby (Mode 3) at cold shutdown frequency.

NOTE 2: MS-108-2 and 108-3: These check valves are located in the steam supply lines to the Auxiliary Feedwater Pump Turbine. These valves operate during normal IST feedwater pump testing. Normal design flow rate for this pump is 900 GPM. However, flow is restricted to a maximum of approximately 700 GPM through the 3" test line used during pump test. The check valves are therefore stroked to the extent that they pass the required steam flow to drive the turbine driven auxiliary feed pump at a flow rate of 700 GPM. Steam flow through these valves to the auxiliary feedwater pump turbine is verified to within 10% (at 900 GPM flow to SG's, 31,000 lbs/hr steam vs. 700 GPM flow through test line, 28,000 lbs/hr steam) of the maximum requirement. This is considered adequate for full stroke testing. In addition, due to the plant design, the only method available to verify the valve closure is disassembly. The valve is not equipped with position indication. The valves will be verified closed by disassembly on a sampling basis at a refueling frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5105D-1

Revision No: 2

Date: 8-31-87

NOTE 3: FW-118-1 thru -4: The function of these valves is to provide feedwater flow from the main feedwater pumps to the steam generators. These valves cannot be exercised during power operation because closing of these valves would require securing feedwater flow to the steam generator and partial stroking may cause instability of steam generator water level which could result in reactor trip. Further three loop operation is not allowed per D. C. Cook Nuclear Plant Technical Specification 3.4.1.1. These valves will be confirmed closed by disassembly on a sampling basis during refueling outages.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5106-35

Revision No: 2

Date: 8-31-87

NOTE 1: FMO-201, -202, -203, -204 & FRV-210, -220, -230, -240:

The function of these valves is to provide feedwater flow from the feedwater pumps to the steam generators. These valves cannot be exercised during power operation because closing these valves would require securing feed flow to the steam generator and partial stroking may cause instability of steam generator water level which could result in reactor trip. Further, three loop operation is not allowed per D. C. Cook Nuclear Plant Technical Specification 3.4.1.1. These valves will be full stroke exercised during unit start-up or shutdown.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5106A-38

Revision No: 2

Date: 8-31-87

- NOTE 1: FW-153 and 160: These check valves installed on the Emergency Leak Off (ELO) lines open when the Motor Driven Auxiliary Feed Pumps (MDAFP) start. This can be established when the MDAF pump is operating through the test line. A pressure decrease in the pump discharge line is verified by a local pressure indicator when the parallel path ELO is opened. The pressure decrease indicates that flow is established through the ELO line and that the check valve is opened.
- NOTE 2: FW-132-1, -2, -3, -4: These auxiliary feedwater (AFW) check valves function to supply AFW to the steam generators whenever the AFW System is caused to operate. These check valves cannot be full or partial stroke exercised during power operation without energizing the AFW System and delivering cold water to the steam generators. This would result in thermal shock to the steam generator nozzles. These valves are full stroke exercised during startups. The valves will be verified closed quarterly by monitoring temperature of Auxiliary Feed Line as required by the plant procedure during shift inspection tours.
- NOTE 3: FW-134 & FW-135: These valves are located on the suction and discharge lines of the Turbine Driven Auxiliary Feedpump. The maximum flow rate through the Turbine Driven Auxiliary Feedpump during IST is approximately 700 gpm using the pump test line. In order to pass design flow of 900GPM through these valves would require delivering cold auxiliary feedwater water to the steam generators. This would result in thermal shock to the steam generator nozzles. We consider that 700 GPM (78% of design flow) is sufficient to demonstrate full stroke operability. In addition, these valves are full stroke tested with a flow rate of 900 GPM at a refueling outage frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5106A-38

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NOTE 4: FW-138-1, -2, -3, -4: These auxiliary feedwater (AFW) check valves function to supply AFW to the steam generators whenever the AFW System is caused to operate. These check valves cannot be full or partial stroke exercised during power operation without energizing the AFW System and delivering cold water to the steam generators. This would result in thermal shock to the steam generator nozzles. These valves are full stroke exercised when the plant is returned to power after cold shutdown. The valves will be verified closed quarterly by monitoring temperature of Auxiliary Feed Line as required by the plant procedure during shift inspection tours.

NOTE 5: FW-149 and 150: The required full stroking of these check valves is satisfied when Turbine Driven Auxiliary Feedpump completes its required testing.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5113-41

Revision No: 2

Date: 8-31-87

- NOTE 1: ESW-109, -115, -243: These valves are normally closed and are required to be open when the condensate storage tank is exhausted. Exercising the valves could cause lake water contamination of the steam generators. Lake water chemistry can potentially impact steam generator tube integrity. We believe that testing at a refueling outage frequency is sufficient to demonstrate operability of this long term valve. The valves will be full stroke tested during refueling outages. Since the valves are manual, stroke timing is not required.
- NOTE 2: ESW-111, -112, -113, -114: These valves will be disassembled and inspected internally per procedure no. 12MHP-4030STP.046 during every refueling outage.
- NOTE 3: WRV-721, -723, -725, -727: These valves are located in the essential service water supply lines to the emergency diesel generators air after coolers. These three-way valves regulate water flow to maintain the temperature at which the after cooler air discharge thermostatic controller has been set. Water flow is regulated by passing a portion of the flow through the air coolers and bypassing the excess flow around the air after coolers. We are requesting code relief from the testing requirements since (1), these valves function only as regulating valves and not open/closed valves (2), these valves are demonstrated operable during diesel generator testing. Diesel generators are tested on a staggered basis, every 31 days per Technical Specification 4.8.1.1.2; and (3), these valves are demonstrated operable during diesel generator 24 hour runs performed each refueling outage. The valves will be "fail-safe" tested during refueling outages. The valves cannot be stroke timed because they are thermostatic valves whose position is controlled by process fluid temperature. There is no external control available.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5114A-31

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5124-22

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

NOTE-2: NS-357: This check valve is located on the return line of the post accident sampling system inside the containment. Since the line is open-ended inside the containment and the check valve is not equipped with the position indication, the valve will be full stroke exercised in the open position by performing a flow test quarterly and will be confirmed closed during the seat leakage testing per Appendix "J" Program at a refueling frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5128-19

Revision No: 2

Date: 8-31-87

NOTE 1: NSO-021, -022, -023 & -024: These four one-inch solenoid operated isolation valves are installed (two in each leg in series) in the reactor head vent. These valves cannot be tested during power operation, hot standby, or hot shutdown because the valve design is such that testing of either valve can cause "burping" (momentary opening) of the second valve resulting in the release of radioactive fluid and create an airborne situation in containment. The valves also cannot be tested during cold shutdown unless the RCS is operating at half loop, because testing of these valves can create a similar situation as that described above. Since half loop of the RCS operation is not a normal evolution during cold shutdown, full stroke test for these valves will be scheduled at refueling frequency.

Exercising the solenoid operated valves for verification of valve position (valve stem movement) will be performed during each refueling outage by performing a flow test through each valve because the valve stem is completely enclosed and cannot be observed. The reactor coolant discharged during the flow testing of the valves is collected in a container to minimize liquid contamination spill, radiation, and potential airborne situation in deference of ALARA consideration and personnel protection. The above tests are consistent with Technical Specification requirements.

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DONALD C. COOK NUCLEAR PLANT
VALVE TEST PROGRAM
RELIEF REQUEST NOTES

Flow Diagram No: 1-5128A-37

Revision No: 2

Date: 8-31-87

- NOTE 1: CS-442-1 thru 4: These containment isolation check valves are on the seal water supply line to the RC pumps. These valves cannot be part or full stroke exercised to the closed position during power operation because cooling flow is required to the RCP seals. During cold shutdown, seal water must be maintained to prevent backflow through the seals with possible damage from dirt. The valves will be full stroke exercised at a refueling outage frequency.
- NOTE 2: See Attachment-"A" for permissible seat leakage values.
- NOTE 3: NRV-151, -152, -153: These pressurizer power operated relief valves are normally closed during power operation (passive valves). The system is considered out of service (as defined per IWV-3416) during power operation. These valves will be full stroke exercised prior to placing them into service for RCS cold overpressurization protection.
- NOTE 4: PW-275: This containment isolation check valve is located in the primary water supply line to the pressurizer relief tank. The valve is not equipped with position indication. The valve cannot be full stroke tested to closed position during power operation or at a cold shutdown frequency due to lack of sufficient differential pressure to back seat the valve. The valve and necessary test connections are located inside the containment. Due to the plant design, the only method available to verify the valve closure is leak testing. The valve will be verified closed during seat leakage testing per Appendix "J" program at refueling frequency.
- NOTE 5: N-159: This containment isolation check valve is located in the nitrogen supply line to the pressurizer relief tank. The valve is not equipped with position indication. The valve cannot be full stroke tested to closed position during power operation or at a cold shutdown frequency due to lack of sufficient differential pressure to back seat the valve. The valve and necessary test connections are located inside the containment. Due to the plant design, the only method available to verify the valve closure is leak testing. The valve will be verified closed during seat leakage testing per Appendix "J" program at refueling frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5128A-37

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Date: 8-31-87

NOTE 6: NSO-061, -062, -063, -064: These four one-inch solenoid operated isolation valves are installed (two in each leg in series) in the pressurizer vent. These valves cannot be tested during power operation, hot standby, or hot shutdown because the valve design is such that testing of either valve can cause "burping" (momentary opening) of the second valve, resulting in the release of radioactive fluid and create an airborne situation in containment. The valves also cannot be tested during cold shutdown unless the RCS is operating at half loop, because testing of these valves can create a similar situation as that described above. Since half loop operation of the RCS is not a normal evolution during cold shutdown, full stroke test for these valves will be scheduled at refueling frequency.

Exercising the solenoid operated valves for verification of valve position (valve stem movement) will be performed during each refueling outage by performing a flow test through each valve because the valve stem is completely enclosed and cannot be observed. The reactor coolant discharged during flow testing of the valves is collected in a container to minimize contaminated liquid spill, radiation, and potential airborne situation in deference of ALARA consideration and personnel protection. The above tests are consistent with Technical Specification requirements.

NOTE 7: SI-189: This check valve is located in the safety valves discharge (Emergency Core Cooling SVs, RHR, SVs, centrifugal charging pump SVs, etc.) collection header leading to the pressurizer relief tank. Isolating this valve for testing would result in dead heading all safety valves in the above systems. This would result in loss of overpressurization protection and could put the plant in an unsafe condition. Test will be run at a refueling frequency when there is no potential for overpressurization.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5129-31

Revision No: 2

Date: 8-31-87

NOTE 1: CS-292: This valve is in the emergency boration path from the boric acid system to the charging pump suction header. Flow through this path is normally not provided because of the resultant large negative reactivity insertion. The valve will be full stroke exercised in the open position at a cold shutdown frequency. The check valve is not equipped with position indication. Due to the plant design, the only methods available to verify valve closure is either radiography or disassembly which can only be performed during the refueling outage when the system is not required to be operable. The radiography method is an acceptable method to verify the valve closure (disc against the seat) under no flow condition because it provides visual observation of the valve in the closed position. The flow testing of the valve verifies that it is open. This provides assurance that the disc is free to move from the open position with flow to the closed position with no flow or reverse flow.

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NOTE 2: CS-299E, -299W: These check valves located on the discharge lines of the 'E' and 'W' charging pumps function as pressure isolation valves to protect the low pressure charging pump suction lines. These valves cannot be full-stroke exercised during: (1) power operation because the charging pumps cannot achieve maximum flow rate with the reactor at full pressure, and (2) cold shutdown because the flow required could cause a low temperature overpressure condition. The valves will be part-stroke exercised quarterly and full stroke exercised during refueling outages.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5129-31

Revision No: 2

Date: 8-31-87

- NOTE 3: CS-321: This containment isolation check valve's function is to supply borated water from the volume control tank to the regenerative heat exchanger through the charging pumps for chemical shim control and reactor coolant system makeup. Isolation of this system would result in loss of control of pressurizer level which could result in a reactor trip. This valve is tested in the open direction quarterly and confirmed closed during refueling outages in deference to ALARA consideration.
- NOTE 4: See Attachment-"A" for permissible seat leakage values.
- NOTE 5: CS-328L1, -329L1, -328L4, -329L4: These check valves function to provide the interface point between the RCS and the CVCS. Since the discharge piping of the CVCS is designed to a pressure rating higher than the RCS, these valves do not perform a pressure isolation function. The higher pressure (RCS) to low pressure (CVCS Suction) isolation is accomplished by other valves which are tested to category "A" requirement. The valves will be full stroke exercised to open position quarterly.
- NOTE 6: QCR-300, -301: These air operated containment isolation valves are located on the letdown return line. Exercising these valves during power operation would result in letdown isolation which could result in loss of pressurizer level control which could result in a plant shutdown. The valves will be full stroke exercised and fail safe tested at a cold shutdown frequency and seat leakage tested during refueling outages.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5129-31

Revision No: 2

Date: 8-31-87

- NOTE 7: QMO-200, -201: These motor operated gate valves are installed on the CVCS charging line to provide borated water for RCS chemical shim control and reactor coolant system makeup. Isolation of this system would result in loss of control of pressurizer level which could result in a reactor trip. The valves will be tested at a cold shutdown frequency.
- NOTE 8: QRV-200: This control valve is required for emergency boration in Modes 5 and 6. The valve is normally open to permit charging flow. This valve cannot be full stroke tested during power operation because it would interrupt charging flow which could effect pressurizer level. The valve will be part stroke exercised during power operation and will be full stroke exercised at cold shutdown frequency. The valve cannot be "fail safe" tested nor stroke timed since position indication is not provided.
- NOTE 9: QRV-251: This control valve is required for emergency boration in Modes 5 and 6. The valve is normally open to permit charging flow when the centrifugal charging pumps are running. The valve cannot be full stroke tested during power operation because it would interrupt both charging and seal water flow which could effect the pressurizer level and damage the reactor coolant pump seals. The valve will be part stroke exercised during power operation and full stroke exercised at cold shutdown frequency. This valve cannot be "fail safe" tested nor stroke timed since position indication is not provided.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5129-31

Revision No: 2

Date: 8-31-87

NOTE 10: SI-185: This normally closed valve functions to transfer the suction source of the charging pumps to the refueling water storage tanks. This valve cannot be full stroke exercised during: (1) power operation without introducing a high concentration of boric acid in the RCS, and (2) cold shutdown because the only full flow path available is into the reactor coolant system and the system does not have sufficient volume to accommodate that flow without a possible low temperature overpressure condition. The valve will be full stroke exercised during refueling outages.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5129A-19

Revision No: 2

Date: 8-31-87

- NOTE 1: QCM-250, -350: These motor-operated reactor coolant pump seal water return isolation valves cannot be exercised during power operation because it would interrupt reactor coolant pump seal water flow and could cause damage to the seals. Therefore, the valves are full stroke exercised at cold shutdown frequency.
- NOTE 2: See "Attachment-A" for permissible seat leakage values.
- NOTE 3: QMO-451, -452: These motor-operated gate valves function as volume control tank isolation valves. Exercising these valves during power operation could result in a loss of pressurizer level control which could cause a reactor trip. These valves are full stroke exercised at cold shutdown frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5135-29

Revision No: 2

Date: 8-31-87

- NOTE 1: CCM-451, -452, -453, -454, -458 and -459: These valves cannot be tested during power operation without securing cooling water to the RC pump. Isolation of these valves could cause failure of the RCP. Valves to be tested at cold shutdown frequency.
- NOTE 2: See "Attachment-A" for permissible seat leakage values.
- NOTE 3: CCR-455, -456, and -457: These valves cannot be tested during power operation without securing cooling water to the reactor support coolers. These valves must remain open to prevent overheating of the concrete around the reactor supports during the normal operation. Valves to be tested at cold shutdown frequency.
- NOTE 4: CCW-135: This check valve cannot be tested during power operation without securing cooling water to the reactor support coolers. The valve must remain open to prevent overheating of the concrete around the reactor supports during the normal operation. The valve will be verified closed by seat leakage testing during refueling outage.
- NOTE 5: CRV-470: This air-operated valve is located in the Component Cooling Water (CCW) return from the letdown heat exchanger and controls the temperature of the letdown flow leaving the heat exchanger. The position of this valve is set by QTC-302. The valve cannot be "fail safe" tested nor stroke timed since no control switches are installed to perform those tests. The valve will be full stroke exercised quarterly.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5135A-30

Revision No: 2

Date: 8-31-87

NOTE 1: CCW-170: This valve will be tested in accordance with IWV-3416 whenever the spare maintenance CCW pump is placed in service.

NOTE 2: CMO-411, -412, -413, -414, -415 & 416: These valves remain open during initial safety injection, but may be closed during recirculation phase or passive failure. Therefore, the valve time will be recorded from open to close position.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5135B-14

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

NOTE 2: CCW-243-25, CCW-243-72, CCW-244-25 and CCW-244-72: These check valves are located in the penetration cooling supply headers of the CCW System inside the containment. The valves are open during power operation and cold shutdowns to provide cooling water to the main steam penetrations. These valves are not equipped with position indication. The valves are confirmed closed by seat leakage testing in accordance with Appendix "J" during refueling outage.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5141-29

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5141D-10

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

NOTE 2: NS-283: This containment isolation check valve is located in the sample return line of the Post-Accident Containment Hydrogen Monitoring System. The valve cannot be full stroke exercised to closed position quarterly or at a cold shutdown frequency because: 1) due to the plant design (line is open ended in the containment), the only method available to verify the valve closure is leak testing, and 2) check valve is not equipped with position indication. The valve will be full stroke exercised in the open position by performing a flow test quarterly and will be confirmed closed during the seat leakage testing per Appendix "J" program at a refueling frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5142-25

Revision No: 2

Date: 8-31-87

- NOTE 1: ICM-250 and ICM-251: These normally closed valves cannot be operated during normal plant operation without introducing Boron into a non-heat traced line. Boron could crystallize and plug the line. Valves will be tested at cold shutdown frequency.
- NOTE 2: See "Attachment-A" for permissible seat leakage values.
- NOTE 3: IMO-261: This valve cannot be tested when SI pumps are required to be operable. Testing would result in isolation of both pumps. This valve will be tested at cold shutdown frequency.
- NOTE 4: IMO-262 and -263: These motor operated valves are located in series in the re-circulation line of the Safety Injection pumps. Exercising any of these valves will make the SI pumps inoperable. These valves will be full-stroke exercised at cold shutdown frequency.
- NOTE 5: SI-110N, SI-110S and SI-101: Safety Injection (SI) pump discharge valves, SI-110N and -110S, cannot be exercised during power operation because SI pumps cannot overcome reactor pressure. Therefore, no flow path exists and, because minimum flow lines branch off upstream of these valves, they cannot be part-stroke tested during pump testing. The common (SI pumps) suction check valve, SI-101 is part-stroke exercised at power operation during pump testing. These valves cannot be exercised during cold shutdowns because SI pumps are required to be inoperable by Technical Specification 3.5.3 to protect against low temperature overpressurization of the Reactor Coolant System. These valves will be full-stroke exercised at refueling frequency in conjunction with the full flow test.

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RELIEF REQUEST NOTES

Flow Diagram No: 1-5142-25

Revision No: 2

Date: 8-31-87

NOTE 6: SI-142 L1, L2, L3, and L4: These check valves are located in the supply lines from the Boron Injection Tank to the reactor coolant cold legs (loop 1 through 4). These valves cannot be tested during power operation because this would require injecting highly concentrated boric acid solution from the Boron Injection Tank into the Reactor Coolant System resulting in probable plant shutdown.

These valves cannot be partially-stroke exercised using the BIT bypass line because this could result in bypassing the BIT, thereby not achieving design flow through the BIT if an accident occurred.

These valves cannot be full-stroked exercised during cold shutdown because this would require injecting the BIT into the RCS which could significantly delay startup from cold shutdown condition (the BIT would have to be brought to the proper Boron concentration and the RCS would have to be diluted sufficiently to allow startup). These valves will be full stroke exercised during refueling outage.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5143-36

Revision No: 2

Date: 8-31-88

NOTE 1: See "Attachment-A" for permissible seat leakage values.

NOTE 2: IMO-128 and ICM-129: These valves function as the normal return from the RCS to the RHR for heatup and cooldown. These valves are normally closed and cannot be operated during normal plant operation because they are interlocked to remain closed at RCS pressure above 450 psig. The valves will be full-stroke exercised prior to placing them into service at a cold shutdown frequency.

NOTE 3: IMO-310, -320, -314, -324: These valves remain open during the injection phase of a safety injection, but will be closed during recirculation phase. Therefore, stroke timing will be from open to close position.

NOTE 4: IMO-315, -316, -325, -326: Valves IMO-315 and -325 are normally closed valves, located in the RHR and SI Supply Header to RCS hot legs. Valves IMO-316 and -326 are normally open valves located in the RHR and SI Supply Header to RCS cold legs. These valves should not be exercised during power operation because failure in a non-conservative position would result in less than minimum number of injection flow path as required by the FSAR. The valves will be full stroke tested at cold shutdown frequency.

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RELIEF REQUEST NOTES

Flow Diagram No: 1-5143-36

Revision No: 2

Date: 8-31-87

NOTE 5: SI-166 L1, L2, L3, L4: These check valves function to prevent backflow from the RCS into the accumulators during normal operation. These valves function to supply flow from the accumulators to the RCS during an accident condition. These valves cannot be exercised open during power operation because the accumulators do not have sufficient head to overcome RCS pressure.

These valves cannot be exercised during cold shutdown because it would result in a possible low temperature overpressurization of the RCS. Similarly full stroke testing during refueling outages is not possible because the resulting water surge into the reactor could damage the reactor internals and potential for high airborne radiation contamination. These valves will be partially-stroke exercised during refueling outages and disassembled for internal inspection on a sampling basis.

NOTE 6: SI-161, L1, L2, L3, L4: These check valves are located in the supply lines from the Residual Heat Removal and Safety Injection Pumps to the RCS cold legs (loop 1 through 4). These valves cannot be exercised during power operation because the RHR pumps and SI pumps do not develop sufficient head to overcome RCS pressure. The valves cannot be full stroke exercised during cold shutdown due to potential low temperature overpressurization damage to the reactor vessel. These valves will be part-stroke exercised at a cold shutdown frequency. The valves will also be full stroke exercised at refueling frequency when reactor vessel head is removed.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5143-36

Revision No: 2

Date: 8-31-87

- NOTE 7: RH-108E and RH-108W: These valves cannot be full stroke exercised quarterly because no full flow path exists. The valves will be full stroke exercised at cold shutdown frequency (during RHR operation).
- NOTE 8: RH-133, -134: These check valves function to circulate water from the RHR pumps to the RCS cold legs when the RHR system is aligned for heat removal operation. These valves cannot be exercised during power operation because the RHR pumps do not develop sufficient head to overcome RCS pressure. These valves will be exercised during start up pursuant to Technical Specification 3.4.6.2.
- NOTE 9: SI-148: Check valve SI-148 is located in the Refueling Water Storage Tank (RWST) supply line to the RHR system. The design flow through the valve is 6000 GPM. Flow to the core is not possible when the RCS pressure is above the shut-off pressure of the RHR pumps (195 psig). In order to full stroke exercise this valve, both RHR pumps must be operated and the RHR system manually aligned to recirculate flow back to the RWST. This configuration places both RHR trains inoperable since neither train can provide design flow to the core. In order to preclude placing the unit in an unsafe condition, a partial stroke test is performed quarterly with both trains operable. The valve cannot be full stroke exercised during cold shutdown since water solid RCS can not accomodate the introduction of 6000 GPM from the RHR system. In addition, during cold shutdown the RHR system is required to be operable for RCS temperature control. The valve will be full stroke exercised when the reactor cavity is being flooded at a refueling frequency.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5143-36

Revision No: 2

Date: 8-31-87

NOTE 10: SI-151 E, W: These check valves are located in the RHR supply lines to either the hot or cold legs. These valves cannot be exercised during power operation because the RHR pumps do not develop sufficient head to overcome RCS pressure. These valves will be exercised at a cold shutdown frequency.

NOTE 11: SI-152 N, S: These check valves function to provide Safety Injection pump discharge to either the hot or cold legs. These valves cannot be exercised during power operation because the SI pumps do not develop sufficient pressure to overcome RCS pressure. These valves cannot be exercised during cold shutdown because the safety injection pumps are required to be inoperable by Technical Specification Section 3.5.3, to protect against low temperature overpressurization of the RCS. Also, during cold shutdown, there may not be sufficient volume in the RCS to accommodate the amount of water needed to full stroke. These valves will be full stroke exercised at refueling frequency in conjunction with full flow test.

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RELIEF REQUEST NOTES

Flow Diagram No: 1-5143-36

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Date: 8-31-87

- NOTE 12: SI-158 L1, L2, L3, L4: Check valves SI-158 are located in the supply lines from the Residual Heat Removal and Safety Injection Pumps to the RCS hot legs (loop 1 through 4). These valves cannot be exercised during power operation because the RHR and SI pumps do not develop sufficient head to overcome RCS pressure. The valves cannot be full stroke exercised during cold shutdown due to potential low temperature overpressurization damage to the reactor vessel. These valves will be part stroke exercised at a cold shutdown frequency and will be full stroke exercised at refueling frequency when reactor vessel head is removed.
- NOTE 13: SI-170 L1, L2, L3, and L4: These valves are located on the RCS cold leg (loops 1 through 4) injection lines from the accumulators, RHR and SI systems. They cannot be exercised during power operation because the RHR and SI pumps do not develop sufficient head to overcome the RCS pressure. The valves will be part-stroke exercised at a cold shutdown frequency. Due to the plant design, the valves are sized as such that full stroke testing cannot be attained without discharging the accumulators and operating SI and RHR pumps simultaneously. The only method available to verify the full stroke exercising is disassembly method. The valve is not equipped with position indication. The valves will be disassembled on a sampling basis during refueling outages to verify the full stroke exercising.
- NOTE 14: N-102: This check valve is located in the nitrogen supply header to the accumulators for blanketing purposes. The valve cannot be full stroke tested to closed position during power operation or cold shutdown because, due to the plant design, the only method available to verify the valve closure is leak testing. The valve and necessary test connections are located inside the containment. The valve is not equipped with position indication. The valve will be verified closed during seat leakage testing per Appendix "J" program at refueling frequency.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5144-28

Revision No: 2

Date: 8-31-87

NOTE 1: CTS-138E & W, CTS-103E & W: These check valves are located in the supply lines from the RWST to the Containment Spray Pumps suction (CTS-138E & W) and the discharge line from the Containment Spray Pumps (CTS-103E & W) to the ring header in containment. The valves cannot be full stroke exercised during power operation, cold shutdown, or refueling without spraying the containment. These valves are partial stroked during Containment Spray Pump Testing. These valves are identical in type, design, and operate at similar frequencies, flows, and temperatures. Since the design conditions and size are sufficiently similar to warrant grouping them, the valves will be disassembled during refueling on a sample basis.

NOTE 2: CTS-131E & W, CTS-127E & W, RH-141, RH-142: These check valves are located in the supply lines to the containment spray ring headers. During normal plant operation, they are in the closed position. They are exposed to the containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by closed MOVs. These valves cannot be exercised during power operation, cold shutdown, or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method of verifying operability of these check valves is by disassembly. These valves are identical in type and design, and operate at similar conditions and frequencies. Since the design conditions and size are sufficiently similar to warrant grouping them, the valves will be disassembled on a sample basis during refueling outages.

NOTE 3: CTS-127E & W, CTS-131E & W, RH-141, RH-142: These valves are to be seat leakage tested in accordance with the special testing procedure because of the configuration at D. C. Cook Plant. The permissible seat leakage values of these valves are listed in Attachment-"A".

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5145-17

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5146B-24

Revision No: 2

Date: 8-31-87

NOTE 1: R-156 and R-157: These check valves are installed in parallel lines to the glycol main supply and return lines mainly to relieve glycol thermal expansion. These valves and necessary test connections are located inside the containment. Due to the plant design, the only method available to verify valve closure is leak testing. The valves are not equipped with position indication. The valves will be full stroke exercised in the open direction quarterly and verified closed by seat leakage testing per Appendix "J" at a refueling frequency.

NOTE 2: See "Attachment-A" for permissible seat leakage values.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5147A-34

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible leakage values.

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VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5149-20

Revision No: 2

Date: 8-31-87

NOTE 1: VRV-315, -325: These valves are located at the outlet of the control room air conditioner water pump. These three-way valves function to modulate water flow through the air handler package based on cooling requirements. These valves are demonstrated operable during normal control room air conditioning operation. The valves cannot be stroked timed because they are not equipped with position indicator and stroke times are not repeatable.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151A-25

Revision No: 2

Date: 8-31-87

NOTE 1: The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.

NOTE 2: QT-114-1AB: This valve is located at the discharge of the engine driven lube oil pump (diesel-generator). This three-way thermostatic valve functions to maintain the correct lube oil temperature by maintaining the correct proportion of oil flowing through the lube oil cooler and bypassing the lube oil cooler to maintain a preset lube oil temperature. We are requesting exemption from testing requirements since (1) this valve functions only as a regulating valve and not opened/closed; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested every 31 days on a staggered basis per Technical Specification 4.8.1.1.2. The valves will be verified operable by observing proper temperatures during diesel testing.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151B-28

Revision No: 2

Date: 8-31-87

NOTE 1: The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.

NOTE 2: QT-132-1AB: This valve is located at the discharge of the emergency diesel engine jacket water pump. This three-way thermostatic valve functions to maintain the correct proportion of water flowing through the diesel engine water cooler and bypassing the diesel engine jacket water cooler to maintain a preset jacket water temperature. We are requesting exemption from the testing requirements since (1) this valve functions only as regulating valve and not open/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested on a staggered basis, every 31 days per Technical Specification 4.8.1.1.2. The valve will be verified operable by observing proper temperatures during diesel testing.

NOTE 3: XRV-220 (Jet Assist), XRV-221 and -222 (Starting Air): The starting air valves are installed on parallel air supply lines to a diesel generator. The valves are not equipped with position indication devices to directly measure valve stroke times. Stroke timing is verified by measuring diesel starting times (Technical Specification acceptance ten seconds or less). The valves on a staggered basis are valved out one at a time to verify the operability of the opposite valve during diesel testing. The consistent compliance of the diesel generator start times (typically seven to nine seconds) demonstrates the valve performance. Position indication is confirmed during the above testing when only one starting air train is used to start the diesel generators. The starting air valves do not require or have a fail safe position because there is a redundant starting air supply system for each diesel generator.
(continued)

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151B-28

Revision No: 2

Date: 8-31-87

Note 3 con't

Similarly, stroke timing of jet assist valve XRV-220 is verified by measuring diesel starting times. The jet assist valve's fail safe position is "closed". The jet assist valve's function is to facilitate diesel generator quick start. Its failure to open upon a diesel start signal could cause the effected diesel generator to achieve operating conditions more slowly. Based on single failure criteria, the other diesel will start within the required ten seconds, thereby meeting system requirements. If this valve were to fail open, (open is the position to assist diesel generator starting) then the starting air reservoirs would bleed down, rendering that diesel generator inoperable. Therefore, in order to assure the starting air supply, the fail safe mode for this valve is closed.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151C-26

Revision No: 2

Date: 8-31-87

NOTE 1: The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.

NOTE 2: QT-114-1CD: This valve is located at the discharge of the engine driven lube oil pump (diesel-generator). This three-way thermostatic valve functions to maintain the correct lube oil temperature by maintaining the correct proportion of oil flowing through the lube oil cooler and bypassing the lube oil cooler to maintain a preset lube oil temperature. We are requesting exemption from testing requirements since (1) this valve functions only as a regulating valve and not opened/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested every 31 days on a staggered basis per Technical Specification 4.8.1.1.2. The valves will be verified operable by observing proper temperatures during diesel testing.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151D-28

Revision No: 2

Date: 8-31-87

NOTE 1: The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.

NOTE 2: QT-132-LCD: This valve is located at the discharge of the emergency diesel engine jacket water pump. This three-way thermostatic valve functions to maintain the correct proportion of water flowing through the diesel engine water cooler and bypassing the diesel engine jacket water cooler to maintain a preset jacket water temperature. We are requesting exemption from the testing requirements since (1) this valve functions only as a regulating valve and not open/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested on a staggered basis, every 31 days per Technical Specification 4.8.1.1.2. The valve will be verified operable by observing proper temperatures during diesel testing.

NOTE 3: XRV-225 (Jet Assist), XRV-226 and -227 (Starting Air): The starting air valves are installed on parallel air supply lines to a diesel generator. The valves are not equipped with position indication devices to directly measure valve stroke times. Stroke timing is verified by measuring diesel starting times (Technical Specification acceptance ten seconds or less). The valves on a staggered basis are valved out one at a time to verify the operability of the opposite valve during diesel testing. The consistent compliance of the diesel generator start times (typically seven to nine seconds) demonstrates the valve performance. Position indication is confirmed during the above testing when only one starting air train is used to start the diesel generators. The starting air valves do not require or have a fail safe position because there is a redundant starting air supply system for each diesel generator. (continued)

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151D-28

Revision No: 2

Date: 8-31-87

Note 3 cont'd

Similarly, stroke timing of jet assist valve XRV-225 is verified by measuring diesel starting times. The jet assist valve's fail safe position is "closed". The jet assist valve's function is to facilitate diesel generator quick start. Its failure to open upon a diesel start signal could cause the effected diesel generator to achieve operating conditions more slowly. Based on single failure criteria, the other diesel will start within the required ten seconds, thereby meeting system requirements. If this valve were to fail open, (open is the position to assist diesel generator starting) then the starting air reservoirs would bleed down, rendering that diesel generator inoperable. Therefore, in order to assure the starting air supply, the fail safe mode for this valve is closed.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5115A-41 - Unit-1

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5120B-22 - Unit-1

Revision No: 2

Date: 8-31-87

NOTE 1: PA-343: This check valve is located in the maintenance air supply line into the containment. The valve cannot be tested during power operation and cold shutdown because: 1) this line is generally isolated by removing a spool piece and inserting a blind flange, and 2) the valve and test connections are located inside the containment. The valve is not equipped with position indication. Due to the plant design, the only method available to verify the valve closure is leak testing. The valve will be verified closed during the seat leakage testing per Appendix "J" at a refueling frequency.

NOTE 2: See "Attachment-A" for permissible seat leakage values.

NOTE 3: XCR-100, -101, -102, -103: These air operated containment isolation valves are located in control air supply lines to the containment. These valves cannot be full stroke tested during power operation without causing a loss of containment control air. Testing of these valves can potentially cause: 1) disruption of air flow to air operated valves in the containment; as a result, they would go to their fail safe position, e.g., close position for containment isolation valves, 2) systems from performing their design function, i.e., termination of CVCS flow and change in RCS pressure and temperature, and 3) challenge to system safeguard protection which may result in a unit trip. The valves will be full stroke exercised at a cold shutdown frequency.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5131-19 - Unit 1

Revision No: 2

Date: 8-31-87

NOTE 1: CS-427N: This valve is in the emergency boration path.
This valve is not normally operated at power because of the
resulting large reactivity insertion. The valve will be full
stroke exercised at a cold shutdown frequency.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5136-25

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5137A-21

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

NOTE 2: N-160: This containment isolation check valve is located in the Nitrogen Supply line to Reactor Coolant Drain Tank. This valve cannot be part or full stroke exercised due to lack of sufficient differential pressure to back seat the valve during power operation or cold shutdown. Due to the plant design, the only method available to verify the valve closure is leak testing. The valve is not equipped with position indication. The valve will be verified closed during seat leakage testing per Appendix "J" at a refueling frequency.

2

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5141C-8

Revision No: 2

Date: 8-31-87

NOTE 1: See "Attachment-A" for permissible seat leakage values.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5141F-6

Revision No: 2

Date: 8-31-87

NOTE 1: ECR-36: This valve, located in the common sample return line of the lower containment radiation monitors, cannot be part or full stroke exercised during power operation or refueling because closure of the valve would isolate both radiation monitors which are required to be operable (Technical Specification Table 3.3-6) during power operation (Mode 1 through 4) and refueling (Mode 6). The valve will be full stroke exercised at a cold shutdown frequency.

2

NOTE 2: See "Attachment-A" for permissible leakage values.

NOTE 3: SM-1: This containment isolation check valve for the containment radiation monitors' sample return cannot be full or part stroke exercised during power operation because these monitors are required to be operable in Modes 1, 2, 3, 4 and 6. The valve is not equipped with position indication. The valve is located in the open ended return line inside the containment. The only method available to verify the valve closure is leak testing. The valve will be tested during seat leakage testing per Appendix "J" at a refueling frequency.

2

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

1. CONTAINMENT ISOLATION VALVES (Category A or AC):

Testing Method: (SLT-2) Seat leakage test the valve in accordance with 10CFR50, Appendix J, in lieu of ASME Code Section XI except for paragraphs IWV-3426 and IWV-3427.

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
WCR-920,-922	5114A	3	DA	900
WCR-921,-923	5114A	3	DA	900
WCR-932,-934	5114A	3	DA	900
WCR-933,-935	5114A	3	DA	900
WCR-941,-945	5114A	3	DA	900
WCR-944,-948	5114A	3	DA	900
WCR-951,-955	5114A	3	DA	900
WCR-954,-958	5114A	3	DA	900
WCR-924,-926	5114A	3	DA	900
WCR-925,-927	5114A	3	DA	900
WCR-928,-930	5114A	3	DA	900

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
WCR-929,-931	5114A	3	DA	900
WCR-942,-946	5114A	3	DA	900
WCR-952,-956	5114A	3	DA	900
WCR-943,-947	5114A	3	DA	900
WCR-953,-957	5114A	3	DA	900
WCR-960,-962	5114A	2	DA	750
WCR-961,-963	5114A	2	DA	750
WCR-964,-966	5114A	2	DA	750
WCR-965,-967	5114A	2	DA	750
ECR-10,-20	5141B	0.50	GL	750
ECR-11,-21	5141B	0.50	GL	750
ECR-12,-22	5141B	0.50	GL	750
ECR-13,-23	5141B	0.50	GL	750
ECR-14,-24	5141B	0.50	GL	750
ECR-15,-25	5141B	0.50	GL	750

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
ECR-16,-26	5141B	0.50	GL	750
ECR-17,-27	5141B	0.50	GL	750
ECR-18,-28	5141B	0.50	GL	750
ECR-19,-29	5141B	0.50	GL	750
CS-442-1	5128A	2	CK	750
CS-442-2	5128A	2	CK	750
CS-442-3	5128A	2	CK	750
CS-442-4	5128A	2	CK	750
SI-189	5128A	4	CK	1200
SM-1	5141F	1	CK	750
N-102	5143	1	CK	750
N-159	5128A	0.75	CK	750
PW-275	5128A	3	CK	900
CS-321	5129	3	CK	1800
VCR-10,-11	5146B	4	DA	1200

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
VCR-20,-21	5146B	4	DA	1200
DCR-203,-207	5137A	1	DA, GL	750
N-160, DCR-201	5137A	1	CK, DA	1125
DCR-610,-611	5137A	2.50	DA	750
DCR-620,-621	5137A	1	DA	750
DCR-205,-206	5137A	4	DA	1200
DCR-600,-601	5124	3	DA	900
QCR-300,-301	5129	2	GL	750
QCM-250,-350	5129A	4	GA	1200
QCR-919,-920	5115A	2	DA	750
SF-151,-153	5136	2.50	DA, GL	750
SF-159,-160	5137A	3	DA	900

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
NCR-105,-106	5141	0.50	GL	750
NCR-107,-108	5141	0.50	GL	750
NCR-109,-110	5141	0.50	GL	750
RCR-100,-101	5128A	0.375	GL	750
DCR-202,-204	5137A	0.75	DA	750
ICR-5,-6	5141	0.50	GL	750
ECR-33,-35	5141F	0.75,2	GL,DA	750
ICM-260	5142	4	GA(DD) *	2 600
ICM-265	5142	4	GA(DD) *	
ECR-31,-32	5141F	1	GL	750
XCR-100,-101	5120B	1	GL	750
XCR-102,-103	5120B	1	GL	750
GCR-301	5128A	0.75	DA	375
GCR-314	5143	1	GL	375

* Double Discs

2

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
SI-171,-172,-194	5143	0.75	GL	1125
NCR-252	5128A	3	GL	450
CCR-460,-462	5135	3	GL	900
CCR-457,CCW-135	5135	2,2.50	GL,CK	1125
CCR-455,-456	5135	2	GL	750
SM-4,-6	5147A	0.50	GL	750
ICM-251	5142	4	GA(DD)*	2 600
ICM-250	5142	4	GA(DD)*	
CA-181S	5145	0.50	CK	750
CA-181N	5145	0.50	CK	750
SM-8,-10	5147A	0.50	ND	750
CCW-243-25	5135B	1	CK	750
CCW-244-25	5135B	1	CK	750

* Double Discs | 2

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
CCW-243-72	5135B	1	CK	750
CCW-244-72	5135B	1	CK	750
CCM-430	5135B	1.50	GL	375
CCM-431	5135B	1.50	GL	375
CCR-440	513B	1.50	GL	375
CCR-441	5135B	1.50	GL	375
CCM-432	5135B	1.50	GL	375
CCM-433	5135B	1.50	GL	375
R-156	5146B	0.375	CK	750
R-157	5146B	0.375	CK	750
NS-357	5124	0.50	CK	750
ECR-496,-497	5141C	0.50	GL	750
ECR-416	5141C	0.50	GL	375
ECR-417	5141C	0.50	GL	375
ECR-535	5141C	0.50	GL	375

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
ECR-536	5141C	0.50	GL	375
ECR-36	5147A	2	DA	375
PCR-40	5120B	2	GA	375
PA-343	5120B	2	CK	750
NS-283	5141D	0.50	CK	750
WCR-900,-902	5114A	6	DA	1800
WCR-901,-903	5114A	6	DA	1800
WCR-912,-914	5114A	6	DA	1800
WCR-913,-915	5114A	6	DA	1800
WCR-904,-906	5114A	6	DA	1800
WCR-905,-907	5114A	6	DA	1800
WCR-908,-910	5114A	6	DA	1800
WCR-909,-911	5114A	6	DA	1800
VCR-101,-201	5147A	14	BF	4200
VCR-102,-202	5147A	14	BF	4200

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (SCCM)</u>
VCR-103,-203	5147A	24	BF	7200
VCR-104,-204	5147A	30	BF	9000
VCR-105,-205	5147A	30	BF	9000
VCR-106,-206	5147A	24	BF	7200
VCR-107,-207	5147A	14	BF	4200
ICM-305	5143	18	GA (DD) *	2 2700
ICM-306	5143	18	GA (DD) *	
CCM-452,-454,-458	5135	8,4,8	BF, GL, BF	3000
CCM-451,-453,-459	5135	8,4,8	BF, GL, BF	3000
NPX-151	5128A	0.50	GL	375

* Double Discs | 2

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

2. CONTAINMENT SPRAY VALVES (Catagory A or AC)

Testing Method: As described in SLT-2A, Figure 3.

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<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (CCM)</u>
CTS-131W	5144	8	CK	3.73
CTS-131E	5144	8	CK	3.00
CTS-127W	5144	6	CK	22.55
CTS-127E	5144	6	CK	21.21
RH-141	5144	8	CK	20.70
RH-142	5144	8	CK	23.00

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

3. PRESSURE ISOLATION VALVES (Catagory A or AC)

Testing Method: (SLT-1) Seat leakage test the valve per ASME Code Section XI.

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (GPM)</u>
CS-299E	5129	4	CK	2.0
CS-299W	5129	4	CK	2.0
SI-152-N	5143	4	CK	5.0
SI-152-S	5143	4	CK	5.0
ICM-129	5143	14	GA(DD)* 2	10.0
SI-161-L1,-L4	5143	6	CK	10.0
SI-161-L2,-L3	5143	6	CK	10.0
SI-170-L1	5143	10	CK	5.0
SI-170-L2	5143	10	CK	1.0
SI-170-L3	5143	10	CK	1.0
SI-170-L4	5143	10	CK	5.0
SI-158-L1,-L4	5143	6	CK	10.0

* Double Discs | 2

DONALD C. COOK NUCLEAR PLANT

ASME SECTION XI VALVE TEST PROGRAM FOR UNIT #1

ATTACHMENT-A

Revision No: 2

Date: 8-31-87

<u>Valve No.</u>	<u>Flow Diagram</u>	<u>Size</u>	<u>Type</u>	<u>Permissible Leakage Values (GPM)</u>
SI-158-L2,-L3	5143	6	CK	10.0
SI-151-E	5143	8	CK	5.0
SI-151-W	5143	8	CK	5.0
SI-166-L1	5143	10	CK	5.0
SI-166-L2	5143	10	CK	5.0
SI-166-L3	5143	10	CK	5.0
SI-166-L4	5143	10	CK	5.0
RH-133,-134	5143	8	CK	1.0

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5105-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAIN STEAM

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-DCR-310	0	GL	2	A	D/5	O	C	2	A	B	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-006	ET-006	P	NO	
1-DCR-320	0	GL	2	A	D/5	O	C	2	A	B	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-008	ET-008	P	NO	
1-DCR-330	0	GL	2	A	D/5	O	C	2	A	B	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-006	ET-006	P	NO	
1-DCR-340	0	GL	2	A	D/5	O	C	2	A	B	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-006	ET-006	P	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5105B-35

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAIN STEAM

VALVE				VALVE POSITION				ASME SECTION XI									
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)			
1-QT-506	1	GL	4	MO	L/8	C	O	3	A	B	EF-1 EF-5 ET-021	EF-1 EF-5 ET-021	P - P	NO NO NO			

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5105D-1

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-FW-118-1	2	CK	14	SA	C/4	O	C	2	A	C	CF-1	CF-2	R	YES, NOTE 3
1-FW-118-2	2	CK	14	SA	K/4	O	C	2	A	C	CF-1	CF-2	R	YES, NOTE 3
1-FW-118-3	2	CK	14	SA	K/8	O	C	2	A	C	CF-1	CF-2	R	YES, NOTE 3
1-FW-118-4	2	CK	14	SA	B/9	O	C	2	A	C	CF-1	CF-2	R	YES, NOTE 3
1-MCM-221	2	GL	4	MO	K/4	O	O/C	2	A	B	EF-1 EF-5 ET-048	EF-1 EF-5 ET-048	P - P	NO NO NO
1-MCM-231	2	GL	4	MO	K/4	O	O/C	2	A	B	EF-1 EF-5 ET-045	EF-1 EF-5 ET-045	P - P	NO NO NO
1-MRV-210	2	GA	28	PD	B/3	O	C	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-3 EF-5 EF-8 ET-005	P - C C	NO, NOTE 1 NO NO, NOTE 1 NO
1-MRV-211	2	AG	2	A	A/1	C	O	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO
1-MRV-212	2	AG	2	A	A/1	C	O	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5105D-1

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAIN STEAM

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-MRV-220	2	GA	28	PO	L/3	O	C	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-3 EF-5 EF-8 ET-005	P - C C	NO, NOTE 1 NO NO, NOTE 1 NO
1-MRV-221	2	AG	2	A	M/1	C	O	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO
1-MRV-222	2	AG	2	A	M/1	C	O	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO
1-MRV-230	2	GA	28	PO	L/7	O	C	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-3 EF-5 EF-8 ET-004	P - C C	NO, NOTE 1 NO NO, NOTE 1 NO
1-MRV-231	2	AG	2	A	M/5	C	O	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO
1-MRV-232	2	AG	2	A	M/5	C	O	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5105D-1

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAIN STEAM

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-MRV-240	2	GA	28	PO	B/7	O	C	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-3 EF-5 EF-8 ET-005	P - C C	NO, NOTE 1 NO NO, NOTE 1 NO
1-MRV-241	2	AG	2	A	A/5	C	O	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO
1-MRV-242	2	AG	2	A	A/5	C	O	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO
1-MS-108-2	2	CK	4	SA	K/4	C	O/C	3	A	C	CF-1	CF-2	R	YES, NOTE 2
1-MS-108-3	2	CK	4	SA	K/4	C	O/C	3	A	C	CF-1	CF-2	P	YES, NOTE 2
1-SV-1A-1	2	REL	6	SA	C/1	C	O	2	A	C	TF-1	TF-1	R	NO
1-SV-1A-2	2	REL	6	SA	K/1	C	O	2	A	C	TF-1	TF-1	R	NO
1-SV-1A-3	2	REL	6	SA	K/5	C	O	2	A	C	TF-1	TF-1	R	NO
1-SV-1A-4	2	REL	6	SA	C/5	C	O	2	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5105D-1

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAIN STEAM

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF	REQUEST(S)
1-SV-1B-1	2	REL	6	SA	B/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-1B-2	2	REL	6	SA	L/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-1B-3	2	REL	6	SA	L/5	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-1B-4	2	REL	6	SA	B/5	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2A-1	2	REL	6	SA	B/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2A-2	2	REL	6	SA	L/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2A-3	2	REL	6	SA	L/5	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2A-4	2	REL	6	SA	B/5	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2B-1	2	REL	6	SA	A/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2B-2	2	REL	6	SA	L/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2B-3	2	REL	6	SA	L/5	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-2B-4	2	REL	6	SA	B/5	C	0	2	A	C	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-51050-1

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAIN STEAM

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-SV-3-1	2	REL	6	SA	A/1	C	0	2 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-3-2	2	REL	6	SA	L/1	C	0	2 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-3-3	2	REL	6	SA	L/5	C	0	2 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-3-4	2	REL	6	SA	A/5	C	0	2 A C	TF-1	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5106-35

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-FMO-201	0	GA	14	MO	F/5	0	C	2	A	B	EF-1 EF-5 ET-019	EF-2 EF-5 ET-019	C - C	YES, NOTE 1 NO NO
1-FMO-202	0	GA	14	MO	F/9	0	C	2	A	B	EF-1 EF-5 ET-019	EF-2 EF-5 ET-019	C - C	YES, NOTE 1 NO NO
1-FMO-203	0	GA	14	MO	F/9	0	C	2	A	B	EF-1 EF-5 ET-019	EF-2 EF-5 ET-019	C - C	YES, NOTE 1 NO NO
1-FMO-204	0	GA	14	MO	G/5	0	C	2	A	B	EF-1 EF-5 ET-019	EF-2 EF-5 ET-019	C - C	YES, NOTE 1 NO NO
1-FRV-210	0	AG	14	A	G/5	0	C	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-2 EF-5 EF-8 ET-005	C - C C	YES, NOTE 1 NO NO, NOTE 1 NO
1-FRV-220	0	AG	14	A	E/9	0	C	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-2 EF-5 EF-8 ET-005	C - C C	YES, NOTE 1 NO NO, NOTE 1 NO
1-FRV-230	0	AG	14	A	G/9	0	C	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-2 EF-5 EF-8 ET-005	C - C C	YES, NOTE 1 NO NO, NOTE 1 NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5106-35

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE

VALVE POSITION

ASME SECTION XI

NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-FRV-240	0	AG	14	A	H/5	0	C	2	A B	EF-1 EF-5 EF-7 ET-005	EF-2 EF-5 EF-8 ET-005	C - C C	YES, NOTE 1 NO NO, NOTE 1 NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5106A-38

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-FM0-211	0	GL	4	MO	J/4	0	0	3	A	B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO
1-FM0-212	0	GL	4	MO	J/5	0	0	3	A	B	EF-1 EF-5 ET-029	EF-1 EF-5 ET-029	P - P	NO NO NO
1-FM0-221	0	GL	4	MO	F/5	0	0	3	A	B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO
1-FM0-222	0	GL	4	MO	F/6	0	0	3	A	B	EF-1 EF-5 ET-035	EF-1 EF-5 ET-035	P - P	NO NO NO
1-FM0-231	0	GL	4	MO	F/5	0	0	3	A	B	EF-1 EF-5 ET-024	EF-1 EF-5 ET-024	P - P	NO NO NO
1-FM0-232	0	GL	4	MO	F/6	0	0	3	A	B	EF-1 EF-5 ET-038	EF-1 EF-5 ET-038	P - P	NO NO NO
1-FM0-241	0	GL	4	MO	J/5	0	0	3	A	B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5106A-38

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-FMO-242	0	GL	4	NO	J/5	0	0	3	A	B	EF-1 EF-5 ET-035	EF-1 EF-5 ET-035	P - P	NO NO NO
1-FRV-247	0	GL	1	A	C/8	C	C/O	3	A	B	EF-1 EF-5 EF-7 ET-008	EF-1 EF-5 EF-7 ET-008	P - P P	NO NO NO NO
1-FRV-257	0	GL	1	A	F/8	C	C/O	3	A	B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO
1-FRV-258	0	GL	1	A	J/9	C	C/O	3	A	B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO
1-FH-124	0	CK	8	SA	H/7	C	0	3	A	C	CF-1	CF-1	P	NO
1-FH-128	0	CK	6	SA	F/7	C	0	3	A	C	CF-1	CF-1	P	NO
1-FH-132-1	2	CK	4	SA	H/5	C	0/C	2	A	C	CF-1	NOTE 2	-	YES, NOTE 2
1-FH-132-2	2	CK	4	SA	F/6	C	0/C	2	A	C	CF-1	NOTE 2	-	YES, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5106A-38

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-FW-132-3	2	CK	4	SA	F/6	C	O/C	2	A	C	CF-1	NOTE 2	-	YES, NOTE 2
1-FW-132-4	2	CK	4	SA	H/5	C	O/C	2	A	C	CF-1	NOTE 2	-	YES, NOTE 2
1-FW-134	0	CK	10	SA	L/9	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 3
1-FW-135	0	CK	8	SA	J/8	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 3
1-FW-138-1	2	CK	4	SA	H/4	C	O/C	2	A	C	CF-1	NOTE 4	-	YES, NOTE 4
1-FW-138-2	2	CK	4	SA	F/5	C	O/C	2	A	C	CF-1	NOTE 4	-	YES, NOTE 4
1-FW-138-3	2	CK	4	SA	F/5	C	O/C	2	A	C	CF-1	NOTE 4	-	YES, NOTE 4
1-FW-138-4	2	CK	4	SA	H/4	C	O/C	2	A	C	CF-1	NOTE 4	-	YES, NOTE 4
1-FW-149	0	CK	0.75	SA	L/3	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 5
1-FW-150	0	CK	0.75	SA	L/4	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 5
1-FW-153	2	CK	1	SA	F/8	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-FW-159	0	CK	6	SA	C/7	C	0	3	A	C	CF-1	CF-1	P	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5106A-38

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: FEEDWATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-FW-160	2	CK	1	SA	C/8	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-FW-161	0	CK	8	SA	E/7	C	O	3	A	C	CF-1	CF-1	P	NO
1-SV-140-A	0	REL	0.75	SA	M/2	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-140-B	0	REL	0.75	SA	L/2	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-169-A	0	REL	0.75	SA	D/8	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-169-B	0	REL	0.75	SA	G/8	C	O	3	A	C	TF-1	TF-1	R	NO
12-CRV-51	2	GL	8	A	M/8	O/C	C	3	A	B	EF-1	EF-1	-	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	-	NO
											ET-033	ET-033	-	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5113-41

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-ESW-101-E	2	CK	20	SA	N/8	C	O	3	A	C	CF-1	CF-1	P	NO
1-ESW-101-W	0	CK	20	SA	H/8	C	O	3	A	C	CF-1	CF-1	P	NO
1-ESW-109	0	BF	4	M	B/5	C	O	3	A	B	EF-1	EF-2	R	YES, NOTE 1
1-ESW-111	0	CK	6	SA	C/6	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 2
1-ESW-112	0	CK	6	SA	C/6	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 2
1-ESW-113	0	CK	6	SA	B/6	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 2
1-ESW-114	0	CK	6	SA	B/6	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 2
1-ESW-115	0	BF	6	M	E/6	C	O	3	A	B	EF-1	EF-2	R	YES, NOTE 1
1-ESW-168-N	0	BF	3	M	H/1	C	O	3	A	B	EF-1	EF-1	P	NO
1-ESW-168-S	0	BF	3	M	H/1	C	O	3	A	B	EF-1	EF-1	P	NO
1-ESW-169-N	0	BF	3	M	G/1	O	C	3	A	B	EF-1	EF-1	P	NO
1-ESW-169-S	0	BF	3	M	G/1	O	C	3	A	B	EF-1	EF-1	P	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5113-41

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POKER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-ESW-170-N	0	BF	3	M	F/1	0	C	3	A	B	EF-1	EF-1	P	NO
1-ESW-170-S	0	BF	3	M	F/1	0	C	3	A	B	EF-1	EF-1	P	NO
1-ESW-171-N	0	BF	3	M	F/1	C	0	3	A	B	EF-1	EF-1	P	NO
1-ESW-171-S	0	BF	3	M	F/1	C	0	3	A	B	EF-1	EF-1	P	NO
1-ESW-243	0	BF	4	M	D/6	C	0	3	A	B	EF-1	EF-2	R	YES, NOTE 1
1-SV-14-E	0	REL	1	SA	A/1	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-14-M	0	REL	1	SA	C/1	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-15-E	0	REL	0.75	SA	E/4	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-15-M	0	REL	0.75	SA	G/4	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-16-AB	0	REL	1	SA	C/8	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-16-CD	0	REL	1	SA	C/8	C	0	3	A	C	TF-1	TF-1	R	NO
1-WO-701	2	BF	20	NO	N/8	C	0	3	A	B	EF-1 EF-5 ET-053	EF-1 EF-5 ET-053	P - P	NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5113-41

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WM0-702	0	BF	20	MO	H/8	C	0	3	A B	EF-1 EF-5 ET-056	EF-1 EF-5 ET-056	P - P	NO NO NO	
1-WM0-705	0	BF	20	MO	G/6	0	O/C	3	A B	EF-1 EF-5 ET-054	EF-1 EF-5 ET-054	P - P	NO NO NO	
1-WM0-707	0	BF	20	MO	G/7	0	O/C	3	A B	EF-1 EF-5 ET-058	EF-1 EF-5 ET-058	P - P	NO NO NO	
1-WM0-713	0	BF	12	MO	A/5	C	0	3	A B	EF-1 EF-5 ET-024	EF-1 EF-5 ET-024	P - P	NO NO NO	
1-WM0-717	0	BF	12	MO	B/5	C	0	3	A B	EF-1 EF-5 ET-035	EF-1 EF-5 ET-035	P - P	NO NO NO	
1-WM0-721	0	BF	6	MO	D/6	C	0	3	A B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO	
1-WM0-723	0	BF	6	MO	C/6	C	0	3	A B	EF-1 EF-5 ET-015	EF-1 EF-5 ET-015	P - P	NO NO NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5113-41

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF	REQUEST(S)
1-WMO-725	0	BF	6	MO	B/6	C	0	3	A	B	EF-1 EF-5 ET-023	EF-1 EF-5 ET-023	P - P	NO NO NO	
1-WMO-727	0	BF	6	MO	B/6	C	0	3	A	B	EF-1 EF-5 ET-024	EF-1 EF-5 ET-024	P - P	NO NO NO	
1-WMO-733	0	BF	16	MO	C/3	O/C	0	3	A	B	EF-1 EF-5 ET-056	EF-1 EF-5 ET-056	P - P	NO NO NO	
1-WMO-737	0	BF	16	MO	E/3	O/C	0	3	A	B	EF-1 EF-5 ET-051	EF-1 EF-5 ET-051	P - P	NO NO NO	
1-WMO-744	0	BF	4	MO	D/6	C	0	3	A	B	EF-1 EF-5 ET-036	EF-1 EF-5 ET-036	P - P	NO NO NO	
1-WMO-753	0	BF	6	MO	D/6	C	0	3	A	B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO	
1-WMO-754	0	BF	4	MO	B/5	C	0	3	A	B	EF-1 EF-5 ET-021	EF-1 EF-5 ET-021	P - P	NO NO NO	



DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5113-41

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: ESSENTIAL SERVICE WATER

VALVE					VALVE POSITION			ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WRV-721	0	3W	4	A	D/8	0	0	3	A B	EF-1 EF-7 ET-NA	NOTE 3 EF-8 NOTE 3	P R -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3	
1-WRV-723	0	3W	4	A	B/8	0	0	3	A B	EF-1 EF-7 ET-NA	NOTE 3 EF-8 NOTE 3	P R -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3	
1-WRV-725	0	3W	4	A	D/8	0	0	3	A B	EF-1 EF-7 ET-NA	NOTE 3 EF-8 NOTE 3	P R -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3	
1-WRV-727	0	3W	4	A	B/8	0	0	3	A B	EF-1 EF-7 ET-NA	NOTE 3 EF-8 NOTE 3	P R -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WCR-900-1	0	DA	6	A	J/9	O	C	2	A A	EF-1 EF-5 EF-7 ET-010 SLT-1	EF-1 EF-5 EF-7 ET-010 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-901-1	0	DA	6	A	K/9	O	C	2	A A	EF-1 EF-5 EF-7 ET-010 SLT-1	EF-1 EF-5 EF-7 ET-010 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-902-1	0	DA	6	A	J/4	O	C	2	A A	EF-1 EF-5 EF-7 ET-010 SLT-1	EF-1 EF-5 EF-7 ET-010 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-903-1	0	DA	6	A	K/4	O	C	2	A A	EF-1 EF-5 EF-7 ET-009 SLT-1	EF-1 EF-5 EF-7 ET-009 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-904-2	0	DA	6	A	J/9	O	C	2	A A	EF-1 EF-5 EF-7 ET-010 SLT-1	EF-1 EF-5 EF-7 ET-010 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIN REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-MCR-905-2	0	DA	6	A	K/9	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-009	ET-009	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-906-2	0	DA	6	A	J/4	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-009	ET-009	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-907-2	0	DA	6	A	K/4	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-008	ET-008	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-908-3	0	DA	6	A	J/9	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-010	ET-010	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-909-3	0	DA	6	A	K/9	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-010	ET-010	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)		
1-WCR-910-3	0	DA	6	A	J/4	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-009	ET-009	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-911-3	0	DA	6	A	K/4	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-009	ET-009	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-912-4	0	DA	6	A	J/9	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-010	ET-010	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-913-4	0	DA	6	A	K/9	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-009	ET-009	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-914-4	0	DA	6	A	J/4	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-009	ET-009	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-WCR-915-4	0	DA	6	A	K/4	0	C	2	A	A	EF-1 EF-5 EF-7 ET-009 SLT-1	EF-1 EF-5 EF-7 ET-009 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-920-1	0	DA	3	A	J/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-921-1	0	DA	3	A	K/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-922-1	0	DA	3	A	K/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-923-1	0	DA	3	A	J/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-006 SLT-1	EF-1 EF-5 EF-7 ET-006 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-WCR-924-2	0	DA	3	A	J/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-925-2	0	DA	3	A	K/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-926-2	0	DA	3	A	K/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-927-2	0	DA	3	A	J/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-928-3	0	DA	3	A	J/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WCR-929-3	0	DA	3	A	K/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-930-3	0	DA	3	A	K/2	0	C	2	A A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-931-3	0	DA	3	A	J/2	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-932-4	0	DA	3	A	J/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-933-4	0	DA	3	A	K/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE					VALVE POSITION					ASME SECTION XI				
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WCR-934	0	DA	3	A	K/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-935-4	0	DA	3	A	J/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-941-1	0	DA	3	A	J/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-942-2	0	DA	3	A	J/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-943-3	0	DA	3	A	J/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WCR-944-4	0	DA	3	A	J/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-945-1	0	DA	3	A	J/3	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-946-2	0	DA	3	A	J/3	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-947-3	0	DA	3	A	J/3	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	
1-WCR-948-4	0	DA	3	A	J/3	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE

VALVE POSITION

ASME SECTION XI

NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-WCR-951-1	0	DA	3	A	K/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-952-2	0	DA	3	A	K/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-953-3	0	DA	3	A	K/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-954-4	0	DA	3	A	K/6	0	C	2	A A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-WCR-955-1	0	DA	3	A	J/3	0	C	2	A A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-MCR-956-2	0	DA	3	A	J/3	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-003	ET-003	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-957-3	0	DA	3	A	J/3	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-003	ET-003	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-958-4	0	DA	3	A	J/3	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-003	ET-003	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-960-4	0	DA	2	A	J/7	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-MCR-961-4	0	DA	2	A	J/7	O	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-WCR-962-4	0	DA	2	A	J/3	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-963-4	0	DA	2	A	J/3	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-964-3	0	DA	2	A	J/7	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-965-3	0	DA	2	A	J/7	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-WCR-966-3	0	DA	2	A	J/3	0	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5114A-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NON-ESSENTIAL SERVICE WATER

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-MCR-967-3	0	DA	2	A	J/3	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5124-22

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: STATION DRAINAGE - CONTAINMENT

VALVE

VALVE POSITION

ASME SECTION XI

NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-DCR-600	0	DA	3	A	N/6	O	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-DCR-601	0	DA	3	A	N/6	O	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-NS-357	2	CK	0.5	SA	K/9	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5128-19

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: REACTOR COOLANT

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-NSO-021	2	GL	1	SO	E/6	C	O/C	2	A	B	EF-1	EF-2	R	YES, NOTE 1	
											EF-5	EF-5	-	NO, NOTE 1	
											EF-7	EF-8	R	YES, NOTE 1	
											ETF-002	ETF-002	R	YES, NOTE 1	
1-NSO-022	2	GL	1	SO	E/6	C	O/C	2	A	B	EF-1	EF-2	R	YES, NOTE 1	
											EF-5	EF-5	R	NO, NOTE 2	
											EF-7	EF-8	R	YES, NOTE 1	
											ETF-002	ETF-002	R	YES, NOTE 1	
1-NSO-023	2	GL	1	SO	E/6	C	O/C	2	A	B	EF-1	EF-2	R	YES, NOTE 1	
											EF-5	EF-5	-	NO, NOTE 1	
											EF-7	EF-8	R	YES, NOTE 1	
											ETF-002	ETF-002	R	YES, NOTE 1	
1-NSO-024	2	GL	1	SO	E/6	C	O/C	2	A	B	EF-1	EF-2	R	YES, NOTE 1	
											EF-5	EF-5	-	NO, NOTE 1	
											EF-7	EF-8	R	YES, NOTE 1	
											ETF-002	ETF-002	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5128A-37

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: REACTOR COOLANT

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CS-442-1	0	CK	2	SA	B/4	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-CS-442-2	0	CK	2	SA	B/4	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-CS-442-3	0	CK	2	SA	B/4	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-CS-442-4	0	CK	2	SA	B/4	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-GCR-301	0	DA	0.75	A	B/8	0	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-N-159	2	CK	0.75	SA	C/8	0/C	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 5 YES, NOTE 2
1-NCR-252	0	GL	3	A	B/9	C	C	2	P	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-NMO-151	0	GA	3	MO	K/7	0	C	1	A	B	EF-1 EF-5 ET-014	EF-1 EF-5 ET-014	P - P	NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5128A-37

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: REACTOR COOLANT

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-NM10-152	0	GA	3	MO	K/7	0	C	1	A	B	EF-1 EF-5 ET-015	EF-1 EF-5 ET-015	P - P	NO NO NO
1-NM10-153	0	GA	3	MO	K/6	0	C	1	A	B	EF-1 EF-5 ET-014	EF-1 EF-5 ET-014	P - P	NO NO NO
1-NPX-151	0	GL	0.5	M	N/8	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 2
1-NRV-151	0	GL	3	A	K/7	C	C/O	1	A	B	EF-1 EF-5 EF-7 ET-006	EF-4 EF-5 EF-8 ET-006	- - - -	NO, NOTE 3 NO NO, NOTE 3 NO
1-NRV-152	0	GL	3	A	K/7	C	C/O	1	A	B	EF-1 EF-5 EF-7 ET-006	EF-4 EF-5 EF-8 ET-006	- - - -	NO, NOTE 3 NO NO, NOTE 3 NO
1-NRV-153	0	GL	3	A	K/6	C	C/O	1	A	B	EF-1 EF-5 EF-7 ET-006	EF-4 EF-5 EF-8 ET-006	- - - -	NO, NOTE 3 NO NO, NOTE 3 NO
1-NS0-061	2	GL	1	SO	N/6	C	O/C	2	A	B	EF-1 EF-5 EF-7 ETF-002	EF-2 EF-5 EF-8 ETF-002	R - R R	YES, NOTE 6 NO, NOTE 6 YES, NOTE 6 YES, NOTE 6

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5128A-37

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM_NAME: REACTOR_COOLANT

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-NSO-062	2	GL	1	SO	M/6	C	O/C	2	A	B	EF-1 EF-5 EF-7 ETF-002	EF-2 EF-5 EF-8 ETF-002	R - R R	YES, NOTE 6 NO, NOTE 6 YES, NOTE 6 YES, NOTE 6	
1-NSO-063	2	GL	1	SO	M/6	C	O/C	2	A	B	EF-1 EF-5 EF-7 ETF-002	EF-2 EF-5 EF-8 ETF-002	R - R R	YES, NOTE 6 NO, NOTE 6 YES, NOTE 6 YES, NOTE 6	
1-NSO-064	2	GL	1	SO	M/6	C	O/C	2	A	B	EF-1 EF-5 EF-7 ETF-002	EF-2 EF-5 EF-8 ETF-002	R - R R	YES, NOTE 6 NO, NOTE 6 YES, NOTE 6 YES, NOTE 6	
1-PH-275	2	CK	3	SA	B/9	O/C	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 4 YES, NOTE 2	
1-RCR-100	0	GL	0.375	A	B/7	O	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2	
1-RCR-101	0	GL	0.375	A	B/7	O	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5128A-37

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: REACTOR COOLANT

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-SI-189	2	CK	4	SA	D/7	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 7 YES, NOTE 2
1-SV-45A	0	REL	6	SA	K/6	C	0	1	A	C	TF-1	TF-1	R	NO
1-SV-45B	0	REL	6	SA	J/6	C	0	1	A	C	TF-1	TF-1	R	NO
1-SV-45C	0	REL	6	SA	H/6	C	0	1	A	C	TF-1	TF-1	R	NO
1-SV-50	0	REL	2	SA	G/3	C	0	3	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5129-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CVCS - LETDOWN & CHARGING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CS-292	0	CK	2	SA	H/6	C	O/C	2	A	C	CF-1	CF-2	C	YES, NOTE 1
1-CS-297-E	0	CK	2	SA	H/7	O/C	O	2	A	C	CF-1	CF-1	P	NO
1-CS-297-W	0	CK	2	SA	F/7	O/C	O	2	A	C	CF-1	CF-1	P	NO
1-CS-299-E	0	CK	4	SA	H/7	O	O/C	2	A	AC	CF-1 SLT-1	CF-3 SLT-1	P R	YES, NOTE 2 NO, NOTE 4
1-CS-299-W	0	CK	4	SA	F/7	O	O/C	2	A	AC	CF-1 SLT-1	CF-3 SLT-1	P R	YES, NOTE 2 NO, NOTE 4
1-CS-321	0	CK	3	SA	E/3	O	C/O	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 3 YES, NOTE 4
1-CS-328-L1	0	CK	3	SA	B/2	O/C	O	1	A	C	CF-1	CF-1	P	NO, NOTE 5
1-CS-328-L4	0	CK	3	SA	B/3	O/C	O	1	A	C	CF-1	CF-1	P	NO, NOTE 5
1-CS-329-L1	0	CK	3	SA	B/2	O/C	O	1	A	C	CF-1	CF-1	P	NO, NOTE 5
1-CS-329-L4	0	CK	3	SA	B/3	O/C	O	1	A	C	CF-1	CF-1	P	NO, NOTE 5
1-IMO-360	0	GA	4	MO	H/6	C	O	2	A	B	EF-1 EF-5 ET-008	EF-1 EF-5 ET-008	P - P	NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5129-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CVCS - LETDOWN & CHARGING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-IMO-910	0	GA	8	MO	L/5	C	0	2	A B	EF-1 EF-5 ET-013	EF-1 EF-5 ET-013	P - P	NO NO NO	
1-IMO-911	0	GA	8	MO	L/6	C	0	2	A B	EF-1 EF-5 ET-013	EF-1 EF-5 ET-013	P - P	NO NO NO	
1-QCR-300	0	GL	2	A	E/1	0	C	2	A A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-2 EF-5 EF-8 ET-005 SLT-2	C - C C R	YES, NOTE 6 NO NO, NOTE 6 NO YES, NOTE 4	
1-QCR-301	0	GL	2	A	E/1	0	C	2	A A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-2 EF-5 EF-8 ET-005 SLT-2	C - C C R	YES, NOTE 6 NO NO, NOTE 6 NO YES, NOTE 4	
1-QMO-200	0	GA	3	MO	J/3	0	O/C	2	A B	EF-1 EF-5 ET-013	EF-2 EF-5 ET-013	C - C	YES, NOTE 7 NO NO	
1-QMO-201	0	GA	3	MO	J/3	0	O/C	2	A B	EF-1 EF-5 ET-013	EF-2 EF-5 ET-013	C - C	YES, NOTE 7 NO NO	
1-QMO-225	0	GA	2	MO	J/7	0	O/C	2	A B	EF-1 EF-5 ET-012	EF-1 EF-5 ET-012	P - P	NO NO NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5129-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CVCS - LETDOWN & CHARGING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-QMO-226	0	GA	2	MO	G/7	0	O/C	2	A	B	EF-1 EF-5 ET-013	EF-1 EF-5 ET-013	P - P	NO NO NO
1-QRV-200	1	GL	3	A	H/3	0	0	2	A	B	EF-1 EF-7 ET-NA	EF-3 NOTE 8 NOTE 8	P - -	NO, NOTE 8 YES, NOTE 8 YES, NOTE 8
1-QRV-251	1	GL	3	A	H/5	0	0	2	A	B	EF-1 EF-7 ET-NA	EF-3 NOTE 9 NOTE 9	P - -	NO, NOTE 9 YES, NOTE 9 YES, NOTE 9
1-QRV-61	0	GL	3	A	C/2	C	0	2	A	B	EF-1 EF-5 EF-7 ET-008	EF-1 EF-5 EF-7 ET-008	P - P P	NO NO NO NO
1-QRV-62	0	GL	3	A	C/2	O/C	0	2	A	B	EF-1 EF-5 EF-7 ET-012	EF-1 EF-5 EF-7 ET-012	P - P P	NO NO NO NO
1-SI-185	0	CK	8	SA	K/5	C	0	2	A	C	CF-1	CF-2	R	YES, NOTE 10
1-SV-51	0	REL	2	SA	E/2	C	0	2	A	C	TF-1	TF-1	R	NO
1-SV-52	0	REL	2	SA	K/1	C	0	2	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5129-31

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CVCS - LETDOWN & CHARGING

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-SV-55	0	REL	0.75	SA	K/7	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-56	0	REL	0.75	SA	L/6	C	0	2	A	C	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5129A-19

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CVCS - LETDOWN & CHARGING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-QCM-250	0	GA	4	MO	C/8	0	C	2	A	A	EF-1 EF-5 ET-014 SLT-1	EF-2 EF-5 ET-014 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-QCM-350	0	GA	4	MO	C/8	0	C	2	A	A	EF-1 EF-5 ET-006 SLT-1	EF-2 EF-5 ET-006 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-QMO-451	0	GA	4	MO	J/5	0	C	2	A	B	EF-1 EF-5 ET-008	EF-2 EF-5 ET-008	C - C	YES, NOTE 3 NO NO
1-QMO-452	0	GA	4	MO	J/5	0	C	2	A	B	EF-1 EF-5 ET-011	EF-2 EF-5 ET-011	C - C	YES, NOTE 3 NO NO
1-QRV-400	0	GL	2	A	K/4	C	O	2	A	B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO
1-SV-53	0	REL	3	SA	H/2	C	O	2	A	C	TF-1	TF-1	R	NO
1-SV-54	0	REL	2	SA	E/4	C	O	2	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CCM-451	0	BF	8	MO	E/4	0	C	2	A	A	EF-1 EF-5 ET-026 SLT-1	EF-2 EF-5 ET-026 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-CCM-452	0	BF	8	MO	E/5	0	C	2	A	A	EF-1 EF-5 ET-022 SLT-1	EF-2 EF-5 ET-022 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-CCM-453	0	GL	4	MO	E/4	0	C	2	A	A	EF-1 EF-5 ET-030 SLT-1	EF-2 EF-5 ET-030 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-CCM-454	0	GL	4	MO	E/5	0	C	2	A	A	EF-1 EF-5 ET-030 SLT-1	EF-2 EF-5 ET-030 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-CCM-458	0	BF	8	MO	A/2	0	C	2	A	A	EF-1 EF-5 ET-024 SLT-1	EF-2 EF-5 ET-024 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-CCM-459	0	BF	8	MO	B/2	0	C	2	A	A	EF-1 EF-5 ET-023 SLT-1	EF-2 EF-5 ET-023 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-CCR-455	0	GL	2	A	B/3	0	C	2	A	A	EF-1	EF-2	C	YES, NOTE 3
											EF-5	EF-5	-	NO
											EF-7	EF-8	C	NO, NOTE 3
											ET-008	ET-008	C	NO
											SLT-1	SLT-2	R	YES, NOTE 2
1-CCR-456	0	GL	2	A	D/4	0	C	2	A	A	EF-1	EF-2	C	YES, NOTE 3
											EF-5	EF-5	-	NO
											EF-7	EF-8	C	NO, NOTE 3
											ET-005	ET-005	C	NO
											SLT-1	SLT-2	R	YES, NOTE 2
1-CCR-457	0	GL	2	A	D/4	0	C	2	A	A	EF-1	EF-2	C	YES, NOTE 3
											EF-5	EF-5	-	NO
											EF-7	EF-8	C	NO, NOTE 3
											ET-005	ET-005	C	NO
											SLT-1	SLT-2	R	YES, NOTE 2
1-CCR-460	0	GL	3	A	C/4	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-008	ET-008	P	NO
											SLT-1	SLT-2	R	YES, NOTE 2
1-CCR-462	0	GL	3	A	A/4	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-006	ET-006	P	NO
											SLT-1	SLT-2	R	YES, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CCW-135	0	CK	2.5	SA	B/3	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 4 YES, NOTE 2
1-CRV-445	0	BL	6	A	L/5	0	C/O	3	A	B	EF-1 EF-5 EF-7 ET-044	EF-1 EF-5 EF-7 ET-044	P - P P	NO NO NO NO
1-CRV-470	0	GL	6	A	G/1	0	C	3	A	B	EF-1 EF-7 ET-NA	EF-1 NOTE 5 NOTE 5	P - -	NO YES, NOTE 5 YES, NOTE 5
1-CRV-485	0	BF	10	A	B/7	0	C	3	A	B	EF-1 EF-5 EF-7 ET-011	EF-1 EF-5 EF-7 ET-011	P - P P	NO NO NO NO
1-SV-122-37	2	REL	1	SA	D/3	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-62-1	2	REL	1	SA	D/3	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-62-2	2	REL	1	SA	D/3	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-62-3	2	REL	1	SA	D/3	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-62-4	2	REL	1	SA	D/3	C	0	3	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-SV-63	0	REL	1	SA	E/3	C	0	3 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-64	0	REL	1	SA	C/3	C	0	3 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-65	0	REL	1	SA	H/1	C	0	3 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-68	0	REL	1	SA	J/2	C	0	3 A C	TF-1	TF-1	TF-1	R	NO	
1-SV-71	0	REL	1	SA	L/3	C	0	3 A C	TF-1	TF-1	TF-1	R	NO	



DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135A-30

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CCN-170	0	CK	16	SA	M/4	C	0	3	A	C	CF-1	CF-4	-	NO, NOTE 1
1-CCN-176-E	0	CK	16	SA	L/4	O/C	0	3	A	C	CF-1	CF-1	P	NO
1-CCN-176-W	0	CK	16	SA	K/4	O/C	0	3	A	C	CF-1	CF-1	P	NO
1-CMO-410	0	BF	16	MO	H/4	O/C	0	3	A	B	EF-1 EF-5 ET-053	EF-1 EF-5 ET-053	P - P	NO NO NO
1-CMO-411	0	BF	18	MO	M/5	0	O/C	3	A	B	EF-1 EF-5 ET-053	EF-1 EF-5 ET-053	P - P	NO NO NO, NOTE 2
1-CMO-412	0	BF	16	MO	L/3	0	O/C	3	A	B	EF-1 EF-5 ET-053	EF-1 EF-5 ET-053	P - P	NO NO NO, NOTE 2
1-CMO-413	0	BF	18	MO	L/5	0	O/C	3	A	B	EF-1 EF-5 ET-054	EF-1 EF-5 ET-054	P - P	NO NO NO, NOTE 2
1-CMO-414	0	BF	16	MO	K/3	0	O/C	3	A	B	EF-1 EF-5 ET-054	EF-1 EF-5 ET-054	P - P	NO NO NO, NOTE 2
1-CMO-415	0	BF	16	MO	H/5	0	O/C	3	A	B	EF-1 EF-5 ET-054	EF-1 EF-5 ET-054	P - P	NO NO NO, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135A-30

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CMO-416	0	BF	16	MO	G/5	0	O/C	3	A	B	EF-1 EF-5 ET-111	EF-1 EF-5 ET-111	P - P	NO NO NO, NOTE 2
1-CMO-419	0	BF	14	MO	E/5	C	0	3	A	B	EF-1 EF-5 ET-055	EF-1 EF-5 ET-055	P - P	NO NO NO
1-CMO-420	0	BF	16	MO	H/4	O/C	0	3	A	B	EF-1 EF-5 ET-109	EF-1 EF-5 ET-109	P - P	NO NO NO
1-CMO-429	0	BF	14	MO	E/5	C	0	3	A	B	EF-1 EF-5 ET-051	EF-1 EF-5 ET-051	P - P	NO NO NO
1-CRV-412	0	GL	4	A	K/1	0	C	3	A	B	EF-1 EF-5 EF-7 ET-030	EF-1 EF-5 EF-7 ET-030	P - P P	NO NO NO NO
1-SV-60	0	REL	3	SA	L/1	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-72	0	REL	1	SA	E/5	C	0	3	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135B-14

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-CCM-430	0	GL	1.5	MO	D/6	C	O/C	2	A	A	EF-1 EF-5 ET-019 SLT-1	EF-1 EF-5 ET-019 SLT-2	P - P R	NO NO NO YES, NOTE 1
1-CCM-431	0	GL	1.5	MO	D/6	C	O/C	2	A	A	EF-1 EF-5 ET-019 SLT-1	EF-1 EF-5 ET-019 SLT-2	P - P R	NO NO NO YES, NOTE 1
1-CCM-432	0	GL	1.5	MO	D/6	C	O/C	2	A	A	EF-1 EF-5 ET-018 SLT-1	EF-1 EF-5 ET-018 SLT-2	P - P R	NO NO NO YES, NOTE 1
1-CCM-433	0	GL	1.5	MO	D/6	C	O/C	2	A	A	EF-1 EF-5 ET-019 SLT-1	EF-1 EF-5 ET-019 SLT-2	P - P R	NO NO NO YES, NOTE 1
1-CCR-440	0	GL	1.5	A	D/6	O	C	2	A	A	EF-1 EF-5 EF-7 ET-008 SLT-1	EF-1 EF-5 EF-7 ET-008 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-CCR-441	0	GL	1.5	A	D/6	O	C	2	A	A	EF-1 EF-5 EF-7 ET-011 SLT-1	EF-1 EF-5 EF-7 ET-011 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135B-14

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPONENT COOLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-CCN-243-25	2	CK	1	SA	C/5	0	C	2	A AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1	
1-CCN-243-72	2	CK	1	SA	C/5	0	C	2	A AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1	
1-CCN-244-25	2	CK	1	SA	C/6	0	C	2	A AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1	
1-CCN-244-72	2	CK	1	SA	C/6	0	C	2	A AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1	
1-SV-122-25B	0	REL	1.5	SA	B/6	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-122-72B	0	REL	1.5	SA	B/6	C	0	3	A C	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NUCLEAR SAMPLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-ICR-5	0	GL	0.5	A	C/5	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-ICR-6	0	GL	0.5	A	D/5	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-NCR-105	0	GL	0.5	A	C/7	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-NCR-106	0	GL	0.5	A	C/7	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-NCR-107	0	GL	0.5	A	D/6	0	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141-29

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NUCLEAR SAMPLING

VALVE

VALVE POSITION

ASME SECTION XI

NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-NCR-108	0	GL	0.5	A	D/6	0	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-NCR-109	0	GL	0.5	A	D/6	0	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-NCR-110	0	GL	0.5	A	D/6	0	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141A-32

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NUCLEAR SAMPLING

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-DCR-301	0	GL	0.5	A	B/2	O	C	2	A B	EF-1 EF-5 EF-7 ETF-002	EF-1 EF-5 EF-7 ETF-002	P - P P	NO NO NO NO	
1-DCR-302	0	GL	0.5	A	B/3	O	C	2	A B	EF-1 EF-5 EF-7 ETF-002	EF-1 EF-5 EF-7 ETF-002	P - P P	NO NO NO NO	
1-DCR-303	0	GL	0.5	A	B/3	O	C	2	A B	EF-1 EF-5 EF-7 ETF-002	EF-1 EF-5 EF-7 ETF-002	P - P P	NO NO NO NO	
1-DCR-304	0	GL	0.5	A	B/3	O	C	2	A B	EF-1 EF-5 EF-7 ETF-002	EF-1 EF-5 EF-7 ETF-002	P - P P	NO NO NO NO	
1-MCR-251	0	GL	0.5	A	B/2	O	C	2	A B	EF-1 EF-5 EF-7 ETF-002	EF-1 EF-5 EF-7 ETF-002	P - P P	NO NO NO NO	
1-MCR-252	0	GL	0.5	A	B/2	O	C	2	A B	EF-1 EF-5 EF-7 ETF-002	EF-1 EF-5 EF-7 ETF-002	P - P P	NO NO NO NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141A-32

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: NUCLEAR SAMPLING

VALVE		VALVE POSITION		ASHE SECTION XI									
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-MCR-253	0	GL	0.5	A	B/1	O	C	.2	A B	EF-1	EF-1	P	NO
										EF-5	EF-5	-	NO
										EF-7	EF-7	P	NO
										ETF-002	ETF-002	P	NO
1-MCR-254	0	GL	0.5	A	B/1	O	C	2	A B	EF-1	EF-1	P	NO
										EF-5	EF-5	-	NO
										EF-7	EF-7	P	NO
										ETF-002	ETF-002	P	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141D-10

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS CONTAINMENT HYDROGEN

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-ECR-10	0	GL	0.5	A	C/8	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-11	0	GL	0.5	A	A/2	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-12	0	GL	0.5	A	A/2	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-13	0	GL	0.5	A	A/1	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-14	0	GL	0.5	A	A/3	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141D-10

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS CONTAINMENT HYDROGEN

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-ECR-15	0	GL	0.5	A	A/1	C	O/C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-ECR-16	0	GL	0.5	A	A/3	C	O/C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-ECR-17	0	GL	0.5	A	A/3	C	O/C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-ECR-18	0	GL	0.5	A	A/4	C	O/C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-ECR-19	0	GL	0.5	A	A/4	C	O/C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141D-10

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS CONTAINMENT HYDROGEN

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-ECR-20	0	GL	0.5	A	C/8	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-21	0	GL	0.5	A	B/2	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-22	0	GL	0.5	A	B/2	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-23	0	GL	0.5	A	B/1	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-24	0	GL	0.5	A	B/3	C	O/C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-51410-10

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS CONTAINMENT HYDROGEN

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-ECR-25	0	GL	0.5	A	B/1	C	O/C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ETF-002	ETF-002	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-ECR-26	0	GL	0.5	A	B/3	C	O/C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ETF-002	ETF-002	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-ECR-27	0	GL	0.5	A	B/3	C	O/C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ETF-002	ETF-002	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-ECR-28	0	GL	0.5	A	B/4	C	O/C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ETF-002	ETF-002	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-ECR-29	2	GL	0.5	A	B/4	C	O/C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ETF-002	ETF-002	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5141D-10

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS CONTAINMENT HYDROGEN

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-NS-283	2	CK	0.5	SA	C/8	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5142-25

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - SIS

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-ICM-250	0	GA	4	MO	H/2	C	O/C	2	A	A	EF-1 EF-5 ET-014 SLT-1	EF-2 EF-5 ET-014 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-ICM-251	0	GA	4	MO	H/3	C	O/C	2	A	A	EF-1 EF-5 ET-014 SLT-1	EF-2 EF-5 ET-014 SLT-2	C - C R	YES, NOTE 1 NO NO YES, NOTE 2
1-ICM-260	0	GA	4	MO	C/9	O	O/C	2	A	A	EF-1 EF-5 ET-014 SLT-1	EF-1 EF-5 ET-014 SLT-2	P - P R	NO NO NO YES, NOTE 2
1-ICM-265	0	GA	4	MO	C/8	O	O/C	2	A	A	EF-1 EF-5 ET-011 SLT-1	EF-1 EF-5 ET-011 SLT-2	P - P R	NO NO NO YES, NOTE 2
1-IMO-255	0	GA	4	MO	J/7	C	O	2	A	B	EF-1 EF-5 ET-014	EF-1 EF-5 ET-014	P - P	NO NO NO
1-IMO-256	0	GA	4	MO	J/6	C	O	2	A	B	EF-1 EF-5 ET-014	EF-1 EF-5 ET-014	P - P	NO NO NO
1-IMO-261	0	GA	8	MO	M/8	O	O/C	2	A	B	EF-1 EF-5 ET-014	EF-2 EF-5 ET-014	C - C	YES, NOTE 3 NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5142-25

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - SIS

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-IMO-262	0	GL	2	MO	L/8	0	O/C	2	A	B	EF-1 EF-5 ET-015	EF-2 EF-5 ET-015	C - C	YES, NOTE 4 NO NO
1-IMO-263	0	GL	2	MO	L/8	0	O/C	2	A	B	EF-1 EF-5 ET-012	EF-2 EF-5 ET-012	C - C	YES, NOTE 4 NO NO
1-IMO-270	0	GA	4	MO	E/9	0	O/C	2	A	B	EF-1 EF-5 ET-024	EF-1 EF-5 ET-024	P - P	NO NO NO
1-IMO-275	0	GA	4	MO	E/8	0	O/C	2	A	B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO
1-IMO-361	0	GA	4	MO	G/9	C	C/O	2	A	B	EF-1 EF-5 ET-008	EF-1 EF-5 ET-008	P - P	NO NO NO
1-IMO-362	0	GA	4	MO	G/9	C	C/O	2	A	B	EF-1 EF-5 ET-008	EF-1 EF-5 ET-008	P - P	NO NO NO
1-IRV-251	0	GL	1	A	H/5	0	C	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5142-25

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - SIS

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-IRV-252	0	GL	1	A	J/5	O	C	3	A	B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO
1-IRV-255	0	GL	1	A	H/6	O	C	2	A	B	EF-1 EF-5 EF-7 ET-004	EF-1 EF-5 EF-7 ET-004	P - P P	NO NO NO NO
1-SI-101	0	CK	8	SA	M/8	C	O	2	A	C	CF-1	CF-3	R	YES, NOTE 5
1-SI-104-N	0	CK	0.75	SA	E/9	C	O	2	A	C	CF-1	CF-1	P	NO
1-SI-104-S	0	CK	0.75	SA	J/9	C	O	2	A	C	CF-1	CF-1	P	NO
1-SI-110-N	0	CK	4	SA	E/9	C	O	2	A	C	CF-1	CF-2	R	YES, NOTE 5
1-SI-110-S	0	CK	4	SA	H/9	C	O	2	A	C	CF-1	CF-2	R	YES, NOTE 5
1-SI-126	0	CK	1	SA	H/6	O	C	2	A	C	CF-1	CF-1	P	NO
1-SI-142-L1	0	CK	1.5	SA	C/1	C	O	1	A	C	CF-1	CF-2	R	YES, NOTE 6
1-SI-142-L2	0	CK	1.5	SA	C/2	C	O	1	A	C	CF-1	CF-2	R	YES, NOTE 6

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5142-25

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - SIS

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-SI-142-L3	0	CK	1.5	SA	C/2	C	0	1	A	C	CF-1	CF-2	R	YES, NOTE 6	
1-SI-142-L4	0	CK	1.5	SA	C/1	C	0	1	A	C	CF-1	CF-2	R	YES, NOTE 6	
1-SV-96	0	REL	0.75	SA	J/8	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-97	0	REL	0.75	SA	J/4	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-98-N	0	REL	0.75	SA	C/9	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-98-S	0	REL	0.75	SA	E/8	C	0	2	A	C	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE						VALVE POSITION			ASME SECTION XI					
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-GCR-314	0	GL	1	A	G/2	0	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ICM-129	2	GA	14	MO	E/8	C	C	1	P	A	EF-1 EF-5 ET-131 SLT-1	EF-2 EF-5 ET-131 SLT-1	- - - R	YES, NOTE 2 NO NO NO, NOTE 1
1-ICM-305	0	GA	18	MO	D/9	C	0	2	A	A	EF-1 EF-5 ET-050 SLT-1	EF-1 EF-5 ET-050 SLT-2	P - P R	NO NO NO YES, NOTE 1
1-ICM-306	0	GA	18	MO	D/9	C	0	2	A	A	EF-1 EF-5 ET-050 SLT-1	EF-1 EF-5 ET-050 SLT-2	P - P R	NO NO NO YES, NOTE 1
1-IMO-128	2	GA	14	MO	B/8	C	C	1	P	B	EF-1 EF-5 ET-134	EF-2 EF-5 ET-134	- - -	YES, NOTE 2 NO NO
1-IMO-310	0	GA	14	MO	H/9	0	O/C	2	A	B	EF-1 EF-5 ET-163	EF-1 EF-5 ET-163	P - P	NO NO NO, NOTE 3

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-IMO-312	0	GL	2	MO	J/5	0	O/C	2	A	B	EF-1 EF-5 ET-012	EF-1 EF-5 ET-012	P - P	NO NO NO
1-IMO-314	0	GA	8	MO	K/6	0	O/C	2	A	B	EF-1 EF-5 ET-033	EF-1 EF-5 ET-033	P - P	NO NO NO, NOTE 3
1-IMO-315	0	GA	8	MO	C/7	C	C/O	1	A	B	EF-1 EF-5 ET-053 ET-055	EF-2 EF-5 ET-053(C) ET-055(O)	C - C C	YES, NOTE 4 NO NO NO
1-IMO-316	0	GA	8	MO	C/7	0	O/C	2	A	B	EF-1 EF-5 ET-050 ET-054	EF-2 EF-5 ET-050(C) ET-054(O)	C - C C	YES, NOTE 4 NO NO NO
1-IMO-320	0	GA	14	MO	L/9	0	O/C	2	A	B	EF-1 EF-5 ET-150	EF-1 EF-5 ET-150	P - P	NO NO NO, NOTE 3
1-IMO-322	0	GL	2	MO	M/5	0	O/C	2	A	B	EF-1 EF-5 ET-012	EF-1 EF-5 ET-012	P - P	NO NO NO
1-IMO-324	1	GA	8	MO	M/6	0	O/C	2	A	B	EF-1 EF-5 ET-034	EF-1 EF-5 ET-034	P - P	NO NO NO, NOTE 3

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-IMO-325	0	GA	8	MO	C/7	C	C/O	1	A B	EF-1 EF-5 ET-055	EF-2 EF-5 ET-055	C - C	YES, NOTE 4 NO NO	
1-IMO-326	0	GA	8	MO	C/7	O	O/C	2	A B	EF-1 EF-5 ET-049 ET-054	EF-2 EF-5 ET-049(C) ET-054(O)	C - C C	YES, NOTE 4 NO NO NO	
1-IMO-330	0	GA	8	MO	G/4	C	O	2	A B	EF-1 EF-5 ET-053	EF-1 EF-5 ET-053	P - P	NO NO NO	
1-IMO-331	0	GA	8	MO	L/5	C	O	2	A B	EF-1 EF-5 ET-051	EF-1 EF-5 ET-051	P - P	NO NO NO	
1-IMO-340	0	GA	8	MO	H/5	C	O	2	A B	EF-1 EF-5 ET-015	EF-1 EF-5 ET-015	P - P	NO NO NO	
1-IMO-350	0	GA	8	MO	L/5	C	O	2	A B	EF-1 EF-5 ET-015	EF-1 EF-5 ET-015	P - P	NO NO NO	
1-N-102	2	CK	1	SA	F/5	O/C	C	2	A AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 14 YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P ICL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-RH-108E	0	CK	8	SA	K/9	C	0	2	A	C	CF-1	CF-3	C	YES, NOTE 7
1-RH-108W	0	CK	8	SA	N/9	C	0	2	A	C	CF-1	CF-3	C	YES, NOTE 7
1-RH-133	0	CK	8	SA	C/5	C	C	1	P	AC	CF-1 SLT-1	CF-2 SLT-1	C R	NO, NOTE 8 NO, NOTE 1
1-RH-134	0	CK	8	SA	C/5	C	C	1	P	AC	CF-1 SLT-1	CF-2 SLT-1	C R	NO, NOTE 8 NO, NOTE 1
1-SI-148	2	CK	12	SA	G/7	C	0	2	A	C	CF-1	CF-3	-	YES, NOTE 9
1-SI-151-E	0	CK	8	SA	D/7	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-1	C R	YES, NOTE 10 NO, NOTE 1
1-SI-151-W	0	CK	8	SA	D/7	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-1	C R	YES, NOTE 10 NO, NOTE 1
1-SI-152-N	0	CK	4	SA	D/8	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-1	R R	YES, NOTE 11 NO, NOTE 1
1-SI-152-S	0	CK	4	SA	D/7	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-1	R R	YES, NOTE 11 NO, NOTE 1
1-SI-158-L1	2	CK	6	SA	B/8	C	0	1	A	AC	CF-1 SLT-1	NOTE 12 SLT-1	- R	YES, NOTE 12 NO, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-SI-158-L2	2	CK	6	SA	B/7	C	0	1	A	AC	CF-1 SLT-1	NOTE 12 SLT-1	- R	YES, NOTE 12 NO, NOTE 1
1-SI-158-L3	2	CK	6	SA	B/7	C	0	1	A	AC	CF-1 SLT-1	NOTE 12 SLT-1	- R	YES, NOTE 12 NO, NOTE 1
1-SI-158-L4	2	CK	6	SA	B/7	C	0	1	A	AC	CF-1 SLT-1	NOTE 12 SLT-1	- R	YES, NOTE 12 NO, NOTE 1
1-SI-161-L1	2	CK	6	SA	B/6	C	0	1	A	AC	CF-1 SLT-1	NOTE 12 SLT-1	- R	YES, NOTE 6 NO, NOTE 1
1-SI-161-L2	2	CK	6	SA	B/5	C	0	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 6 NO, NOTE 1
1-SI-161-L3	2	CK	6	SA	B/5	C	0	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 6 NO, NOTE 1
1-SI-161-L4	2	CK	6	SA	B/6	C	0	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 6 NO, NOTE 1
1-SI-166-L1	0	CK	10	SA	C/4	C	0	1	A	AC	CF-1 SLT-1	CF-2 SLT-1	R R	YES, NOTE 5 NO, NOTE 1
1-SI-166-L2	0	CK	10	SA	C/4	C	0	1	A	AC	CF-1 SLT-1	CF-2 SLT-1	R R	YES, NOTE 5 NO, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-SI-166-L3	0	CK	10	SA	C/4	C	0	1	A	AC	CF-1 SLT-1	CF-2 SLT-1	R R	YES, NOTE 5 NO, NOTE 1
1-SI-166-L4	0	CK	10	SA	C/4	C	0	1	A	AC	CF-1 SLT-1	CF-2 SLT-1	R R	YES, NOTE 5 NO, NOTE 1
1-SI-170-L1	2	CK	10	SA	A/4	C	0	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 13 NO, NOTE 1
1-SI-170-L2	2	CK	10	SA	A/5	C	0/C	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 13 NO, NOTE 1
1-SI-170-L3	2	CK	10	SA	A/5	C	0/C	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 13 NO, NOTE 1
1-SI-170-L4	2	CK	10	SA	A/4	C	0	1	A	AC	CF-1 SLT-1	NOTE 6 SLT-1	- R	YES, NOTE 13 NO, NOTE 1
1-SI-171	0	GL	0.75	M	H/6	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SI-172	0	GL	0.75	M	H/6	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SI-194	0	GL	0.75	M	G/6	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SV-100-1	0	REL	1	SA	D/1	C	0	2	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5143-36

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY CORE COOLING - RHR

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF	REQUEST(S)
1-SV-100-2	0	REL	1	SA	D/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-100-3	0	REL	1	SA	D/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-100-4	0	REL	1	SA	D/1	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-102	0	REL	0.75	SA	E/5	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-103	0	REL	3	SA	F/8	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-104E	0	REL	2	SA	G/4	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-104W	0	REL	2	SA	K/4	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-105E	0	REL	2	SA	D/9	C	0	2	A	C	TF-1	TF-1	R	NO	
1-SV-105W	0	REL	2	SA	D/9	C	0	2	A	C	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5144-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTAINMENT SPRAY

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CTS-103-E	2	CK	10	SA	J/9	C	0	2	A	C	CF-1	CF-3	-	YES, NOTE 1
1-CTS-103-W	2	CK	10	SA	L/9	C	0	2	A	C	CF-1	CF-3	-	YES, NOTE 1
1-CTS-109	0	VB	1	SA	H/6	C	0	2	A	C	TF-1	TF-1	R	NO
1-CTS-110	0	VB	1	SA	H/6	C	0	2	A	C	TF-1	TF-1	R	NO
1-CTS-120-E	0	CK	2	SA	H/8	C	0	2	A	C	CF-1	CF-1	P	NO
1-CTS-120-W	0	CK	2	SA	K/8	C	0	2	A	C	CF-1	CF-1	P	NO
1-CTS-127-E	0	CK	6	SA	E/5	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 2 YES, NOTE 3
1-CTS-127-W	0	CK	6	SA	E/4	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 2 YES, NOTE 3
1-CTS-131-E	0	CK	8	SA	E/2	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 2 YES, NOTE 3
1-CTS-131-W	0	CK	8	SA	E/2	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 2 YES, NOTE 3
1-CTS-138-E	2	CK	12	SA	G/9	C	O/C	2	A	C	CF-1	CF-3	-	YES, NOTE 1



DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5144-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTAINMENT SPRAY

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-CTS-138-W	2	CK	12	SA	J/9	C	O/C	2	A	C	CF-1	CF-3	-	YES, NOTE 1
1-IMO-202	0	GA	2.5	MO	M/7	C	O	2	A	B	EF-1 EF-5 ET-018	EF-1 EF-5 ET-018	P - P	NO NO NO
1-IMO-204	0	GA	2.5	MO	M/7	C	O	2	A	B	EF-1 EF-5 ET-018	EF-1 EF-5 ET-018	P - P	NO NO NO
1-IMO-210	0	GA	10	MO	J/8	C	O	2	A	B	EF-1 EF-5 ET-065	EF-1 EF-5 ET-065	P - P	NO NO NO
1-IMO-211	0	GA	10	MO	J/8	C	O	2	A	B	EF-1 EF-5 ET-065	EF-1 EF-5 ET-065	P - P	NO NO NO
1-IMO-212	0	GA	2	MO	H/8	O	O/C	2	A	B	EF-1 EF-5 ET-025	EF-1 EF-5 ET-025	P - P	NO NO NO
1-IMO-215	0	GA	12	MO	G/9	O	O/C	2	A	B	EF-1 EF-5 ET-075	EF-1 EF-5 ET-075	P - P	NO NO NO
1-IMO-220	0	GA	10	MO	L/8	C	O	2	A	B	EF-1 EF-5 ET-065	EF-1 EF-5 ET-065	P - P	NO NO NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5144-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTAINMENT SPRAY

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-IMO-221	0	GA	10	MO	L/8	C	0	2	A	B	EF-1 EF-5 ET-065	EF-1 EF-5 ET-065	P - P	NO NO NO	
1-IMO-222	0	GA	2	MO	L/9	0	O/C	2	A	B	EF-1 EF-5 ET-029	EF-1 EF-5 ET-029	P - P	NO NO NO	
1-IMO-225	0	GA	12	MO	J/9	0	O/C	2	A	B	EF-1 EF-5 ET-075	EF-1 EF-5 ET-075	P - P	NO NO NO	
1-RH-141	0	CK	8	SA	E/3	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 2 YES, NOTE 3	
1-RH-142	0	CK	8	SA	E/3	C	0	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 2 YES, NOTE 3	
1-SV-107	0	REL	1	SA	N/5	C	0	2	A	C	TF-1	TF-1	R	NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5145-17

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CPN/WELD CHANNEL PRESSURIZATION

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF	REQUEST(S)
1-CA-181-N	0	CK	0.5	SA	F/2	C	C	2	P	AC	SLT-1	SLT-2	R	YES,	NOTE 1
1-CA-181-S	0	CK	0.5	SA	F/3	C	C	2	P	AC	SLT-1	SLT-2	R	YES,	NOTE 1



DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5146B-24

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: ICE CONDENSER REFRIGERATION

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-R-156	2	CK	0.375	SA	L/4	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-R-157	2	CK	0.375	SA	L/6	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-VCR-10	0	DA	4	A	M/5	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-VCR-11	0	DA	4	A	L/5	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-VCR-20	0	DA	4	A	M/7	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-VCR-21	0	DA	4	A	L/7	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5147A-34

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTAINMENT VENTILATION

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD ICL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-SM-10	0	GA	0.5	M	A/4	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SM-4	0	GA	0.5	M	A/2	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SM-6	0	GA	0.5	M	A/2	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SM-8	0	GA	0.5	M	A/4	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-VCR-101	0	BF	14	A	J/8	C	C	2	P	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-VCR-102	0	BF	14	A	J/9	C	C	2	P	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-VCR-103	0	BF	24	A	J/5	C	C	2	P	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-VCR-104	0	BF	30	A	J/6	C	C	2	P	A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5147A-34

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTAINMENT VENTILATION

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-VCR-105	0	BF	30	A	J/3	C	C	2	P	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-005	ET-005	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-VCR-106	0	BF	24	A	J/3	C	C	2	P	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-005	ET-005	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-VCR-107	0	BF	14	A	J/4	C/O	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-005	ET-005	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-VCR-201	0	BF	14	A	J/8	C	C	2	P	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-005	ET-005	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-VCR-202	0	BF	14	A	J/9	C	C	2	P	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-005	ET-005	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5147A-34

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTAINMENT VENTILATION

VALVE				VALVE POSITION				ASME SECTION XI									
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)			
1-VCR-203	0	BF	24	A	J/5	C	C	2	P	A	EF-1	EF-1	P	NO			
											EF-5	EF-5	-	NO			
											EF-7	EF-7	P	NO			
											ET-005	ET-005	P	NO			
											SLT-1	SLT-2	R	YES, NOTE 1			
1-VCR-204	0	BF	30	A	J/6	C	C	2	P	A	EF-1	EF-1	P	NO			
											EF-5	EF-5	-	NO			
											EF-7	EF-7	P	NO			
											ET-005	ET-005	P	NO			
											SLT-1	SLT-2	R	YES, NOTE 1			
1-VCR-205	0	BF	30	A	J/3	C	C	2	P	A	EF-1	EF-1	P	NO			
											EF-5	EF-5	-	NO			
											EF-7	EF-7	P	NO			
											ET-005	ET-005	P	NO			
											SLT-1	SLT-2	R	YES, NOTE 1			
1-VCR-206	0	BF	24	A	J/3	C	C	2	P	A	EF-1	EF-1	P	NO			
											EF-5	EF-5	-	NO			
											EF-7	EF-7	P	NO			
											ET-005	ET-005	P	NO			
											SLT-1	SLT-2	R	YES, NOTE 1			
1-VCR-207	0	BF	14	A	J/4	C/O	C	2	A	A	EF-1	EF-1	P	NO			
											EF-5	EF-5	-	NO			
											EF-7	EF-7	P	NO			
											ET-005	ET-005	P	NO			
											SLT-1	SLT-2	R	YES, NOTE 1			

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5149-20

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CONTROL ROOM VENTILATION

VALVE				VALVE POSITION				ASHE SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-DN-163-N	0	GA	2.5	M	F/2	0	O/C	3	A	B	EF-1	EF-1	P	NO	
1-DN-163-S	0	GA	2.5	M	G/2	0	O/C	3	A	B	EF-1	EF-1	P	NO	
1-DN-166-N	0	GA	2.5	M	E/5	0	O/C	3	A	B	EF-1	EF-1	P	NO	
1-DN-166-S	0	GA	2.5	M	J/5	0	O/C	3	A	B	EF-1	EF-1	P	NO	
1-VRV-315	0	3N	2.5	A	F/5	0	0	3	A	B	EF-1	EF-1	P	NO, NOTE 1	
											EF-7	EF-7	P	NO, NOTE 1	
											ET-NA	NOTE 1	-	YES, NOTE 1	
1-VRV-325	0	3N	2.5	A	G/5	0	0	3	A	B	EF-1	EF-1	P	NO, NOTE 1	
											EF-7	EF-7	P	NO, NOTE 1	
											ET-NA	NOTE 1	-	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLON DIAGRAM: 1-5151A-25

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY DIESEL GENERATOR

VALVE				VALVE POSITION				ASME SECTION XI									
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)			
1-DL-113A	0	CK	1.5	SA	B/9	0	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1			
1-DL-115A	0	CK	1.5	SA	B/9	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1			
1-DL-131A	0	" CK	1	SA	F/9	0	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1			
1-DL-157A	0	CK	6	SA	G/6	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1			
1-QT-114-1AB	0	3N	6	SA	H/5	0	0	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2			

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151B-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY DIESEL GENERATOR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-DG-101A	0	CK	1.5	SA	H/4	0	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-103A	0	CK	1.5	SA	F/3	0	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-127A	0	CK	1	SA	C/4	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-129A	0	CK	1	SA	C/4	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-131A	0	CK	3	SA	B/4	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-133A	0	CK	3	SA	B/4	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-139A	1	CK	0.5	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
1-DG-141A	1	CK	0.5	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
1-DG-145A	0	CK	2	SA	A/8	0	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-151A	0	CK	4	SA	D/8	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-153A	0	CK	4	SA	C/8	C	0	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-QT-132-1AB	0	3W	6	SA	E/8	0	0	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151B-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY DIESEL GENERATOR

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-SV-120-1AB	0	REL	0.25	SA	G/2	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-139-1AB	0	REL	1	SA	B/2	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-61-1AB	0	REL	1	SA	A/8	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-78-1AB1	0	REL	1	SA	E/3	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-78-1AB2	0	REL	1	SA	D/3	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-79-1AB1	0	REL	0.5	SA	E/1	C	0	3	A	C	TF-1	TF-1	R	NO
1-SV-79-1AB2	0	REL	0.5	SA	E/1	C	0	3	A	C	TF-1	TF-1	R	NO
1-XRV-220	0	GA	1	A	B/3	C	0	3	A	B	EF-1 EF-7 ET-010	EF-1 EF-7 NOTE 3	P P P	NO NO YES, NOTE 3
1-XRV-221	0	GL	3	A	B/4	C	0	3	A	B	EF-1 ET-010	EF-1 NOTE 3	P P	NO YES, NOTE 3
1-XRV-222	0	GL	3	A	B/4	C	0	3	A	B	EF-1 ET-010	EF-1 NOTE 3	P P	NO YES, NOTE 3

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151C-26

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY DIESEL GENERATOR

VALVE						VALVE POSITION			ASME SECTION XI					
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-DF-108C	0	CK	1.5	SA	J/3	C	0	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DF-109C	0	CK	1.5	SA	K/3	C	0	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DF-114C	0	CK	1.5	SA	L/3	C	0	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DF-115C	0	CK	1.5	SA	M/3	C	0	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DL-113C	0	CK	1.5	SA	B/9	0	C	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DL-115C	0	CK	1.5	SA	B/9	C	0	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DL-131C	0	CK	1	SA	F/9	0	C	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-DL-157C	0	CK	6	SA	G/5	C	0	3	A C	CF-1	CF-1	P	NO, NOTE 1	
1-QT-114-1CD	0	3N	6	SA	H/5	0	0	3	A B	EF-1	NOTE 2	P	NO, NOTE 2	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151D-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY DIESEL GENERATOR "CD"

VALVE						VALVE POSITION				ASME SECTION XI				
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-DG-101C	0	CK	1.5	SA	H/4	0	O/C	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-103C	0	CK	1.5	SA	F/3	0	O/C	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-127C	0	CK	1	SA	C/3	C	0	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-129C	0	CK	1	SA	C/3	C	0	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-131C	0	CK	3	SA	B/4	C	0	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-133C	0	CK	3	SA	B/4	C	0	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-139-CD	0	CK	0.5	SA	F/1	C	O/C	3 A C	C	CF-1	CF-1	P	NO	
1-DG-141-CD	0	CK	0.5	SA	F/1	C	O/C	3 A C	C	CF-1	CF-1	P	NO	
1-DG-145C	0	CK	2	SA	A/9	0	C	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-151C	0	CK	4	SA	D/9	C	0	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-DG-153C	0	CK	4	SA	C/9	C	0	3 A C	C	CF-1	CF-1	P	NO, NOTE 1	
1-QT-132-1CD	0	3W	6	SA	E/8	0	0	3 A B	B	EF-1	NOTE 2	P	NO, NOTE 2	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151D-28

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: EMERGENCY DIESEL GENERATOR "CD"

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-SV-120-1CD	0	REL	0.25	SA	H/2	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-139-1CD	0	REL	1	SA	B/2	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-61-1CD	0	REL	1	SA	A/8	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-78-1CD1	0	REL	1	SA	E/3	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-78-1CD2	0	REL	1	SA	D/3	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-79-1CD1	0	REL	0.5	SA	E/1	C	0	3	A C	TF-1	TF-1	R	NO	
1-SV-79-1CD2	0	REL	0.5	SA	E/1	C	0	3	A C	TF-1	TF-1	R	NO	
1-XRV-225	0	GA	1	A	B/3	C	0	3	A B	EF-1 EF-7 ET-010	EF-1 EF-7 NOTE 3	P P P	NO NO YES, NOTE 3	
1-XRV-226	0	GL	3	A	B/4	C	0	3	A B	EF-1 ET-010	EF-1 NOTE 3	P P	YES, NOTE 3 YES, NOTE 3	
1-XRV-227	0	GL	3	A	B/4	C	0	3	A B	EF-1 ET-010	EF-1 NOTE 3	P P	YES, NOTE 3 YES, NOTE 3	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5115A-41

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: MAKE UP & PRIMARY WATER UNIT 1

VALVE				VALVE POSITION				ASME SECTION XI							
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-QCR-919	0	DA	2	A	D/7	O/C	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-005	ET-005	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	
1-QCR-920	0	DA	2	A	D/7	O/C	C	2	A	A	EF-1	EF-1	P	NO	
											EF-5	EF-5	-	NO	
											EF-7	EF-7	P	NO	
											ET-004	ET-004	P	NO	
											SLT-1	SLT-2	R	YES, NOTE 1	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5120B-22

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: COMPRESSED AIR SYSTEM UNIT 1

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-PA-343	2	CK	2	SA	B/7	O/C	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 1 YES, NOTE 2
1-PCR-40	2	GA	2	A	D/7	O/C	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-XCR-100	0	GL	1	A	L/3	O	C	2	A	A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-2 EF-5 EF-8 ET-004 SLT-2	C - C C R	YES, NOTE 3 NO NO, NOTE 3 NO YES, NOTE 2
1-XCR-101	0	GL	1	A	L/3	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-2 EF-5 EF-8 ET-005 SLT-2	C - C C R	YES, NOTE 3 NO NO, NOTE 3 NO YES, NOTE 2
1-XCR-102	0	GL	1	A	L/2	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-2 EF-5 EF-8 ET-005 SLT-2	C - C C R	YES, NOTE 3 NO NO, NOTE 3 NO YES, NOTE 2
1-XCR-103	0	GL	1	A	L/2	O	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-2 EF-5 EF-8 ET-005 SLT-2	C - C C R	YES, NOTE 3 NO NO, NOTE 3 NO YES, NOTE 2

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5131-19

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: CVCS - BORON MAKE-UP - UNITS 1 & 2

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-CS-415-1	0	CK	2	SA	H/6	O/C	0	3	A C	CF-1	CF-1	P	NO	
1-CS-415-2	0	CK	2	SA	H/6	O/C	0	3	A C	CF-1	CF-1	P	NO	
1-CS-426-N	0	CK	1	SA	G/6	O/C	0	3	A C	CF-1	CF-1	P	NO	
1-CS-427-N	0	CK	2	SA	G/5	C	0	3	A C	CF-1	CF-2	C	YES, NOTE 1	
1-QMO-410	0	GL	2	MO	G/5	C	0	3	A B	EF-1 EF-5 ET-011	EF-1 EF-5 ET-011	P - P	NO NO NO	
1-QRV-411	0	GL	1	A	G/6	O/C	0	3	A B	EF-1 EF-5 EF-7 ET-008	EF-1 EF-5 EF-7 ET-008	P - P P	NO NO NO NO	
1-QRV-412	0	GL	2	A	F/7	0	C	3	A B	EF-1 EF-5 EF-7 ET-005	EF-1 EF-5 EF-7 ET-005	P - P P	NO NO NO NO	

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5136-25

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: SPENT FUEL PIT COOLING & CLEANUP U1

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-SF-118N	0	CK	8	SA	J/5	O/C	O	3	A	C	CF-1	CF-1	P	NO
1-SF-118S	0	CK	8	SA	J/5	O/C	O	3	A	C	CF-1	CF-1	P	NO
1-SF-151	0	DA	2.5	M	K/8	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SF-153	0	GL	2.5	M	K/8	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5137A-21

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: WDS VENTS & DRAINS

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-DCR-201	0	DA	1	A	E/4	C	C	2	P	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-DCR-202	0	DA	0.75	A	E/5	O	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-DCR-203	0	DA	1	A	F/4	C	C	2	P	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-DCR-204	0	DA	0.75	A	F/5	O	C	2	A	A	EF-1 EF-5 EF-7 ETF-002 SLT-1	EF-1 EF-5 EF-7 ETF-002 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-DCR-205	0	GL	4	A	E/7	O/C	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5137A-21

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: WDS VENTS & DRAINS

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-DCR-206	0	GL	4	A	E/8	O/C	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-005	ET-005	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-DCR-207	0	DA	1	A	F/4	O	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ETF-002	ETF-002	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-DCR-610	0	DA	2.5	A	M/9	O	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-003	ET-003	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-DCR-611	0	DA	2.5	A	N/9	O	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-003	ET-003	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1
1-DCR-620	0	DA	1	A	M/9	O	C	2	A	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-004	ET-004	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5137A-21

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: WDS VENTS & DRAINS

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-DCR-621	0	DA	1	A	N/9	0	C	2	A	A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-N-160	0	CK	1	SA	F/4	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 2 YES, NOTE 1
1-SF-159	0	DA	3	M	E/5	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1
1-SF-160	0	DA	3	M	F/5	C	C	2	P	A	SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5141C-8

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS LIQUID & GAS - UNIT-1

VALVE

VALVE POSITION

ASME SECTION XI

NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-ECR-416	0	GL	0.5	A	B/6	C	C	2	P	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-417	0	GL	0.5	A	B/6	C	C	2	P	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-496	0	GL	0.5	A	B/8	C	C	2	P	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-497	0	GL	0.5	A	B/8	C	C	2	P	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1
1-ECR-535	0	GL	0.5	A	B/2	C	C	2	P	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5141C-8

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAS LIQUID & GAS - UNIT-1

VALVE				VALVE POSITION				ASME SECTION XI						
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD A/P CL	CAT	PRIN TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)	
1-ECR-536	0	GL	0.5	A	B/2	C	C	2	P	A	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-003	ET-003	P	NO
											SLT-1	SLT-2	R	YES, NOTE 1

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5141F-6

RUN DATE AND TIME: 14SEP87:12:58

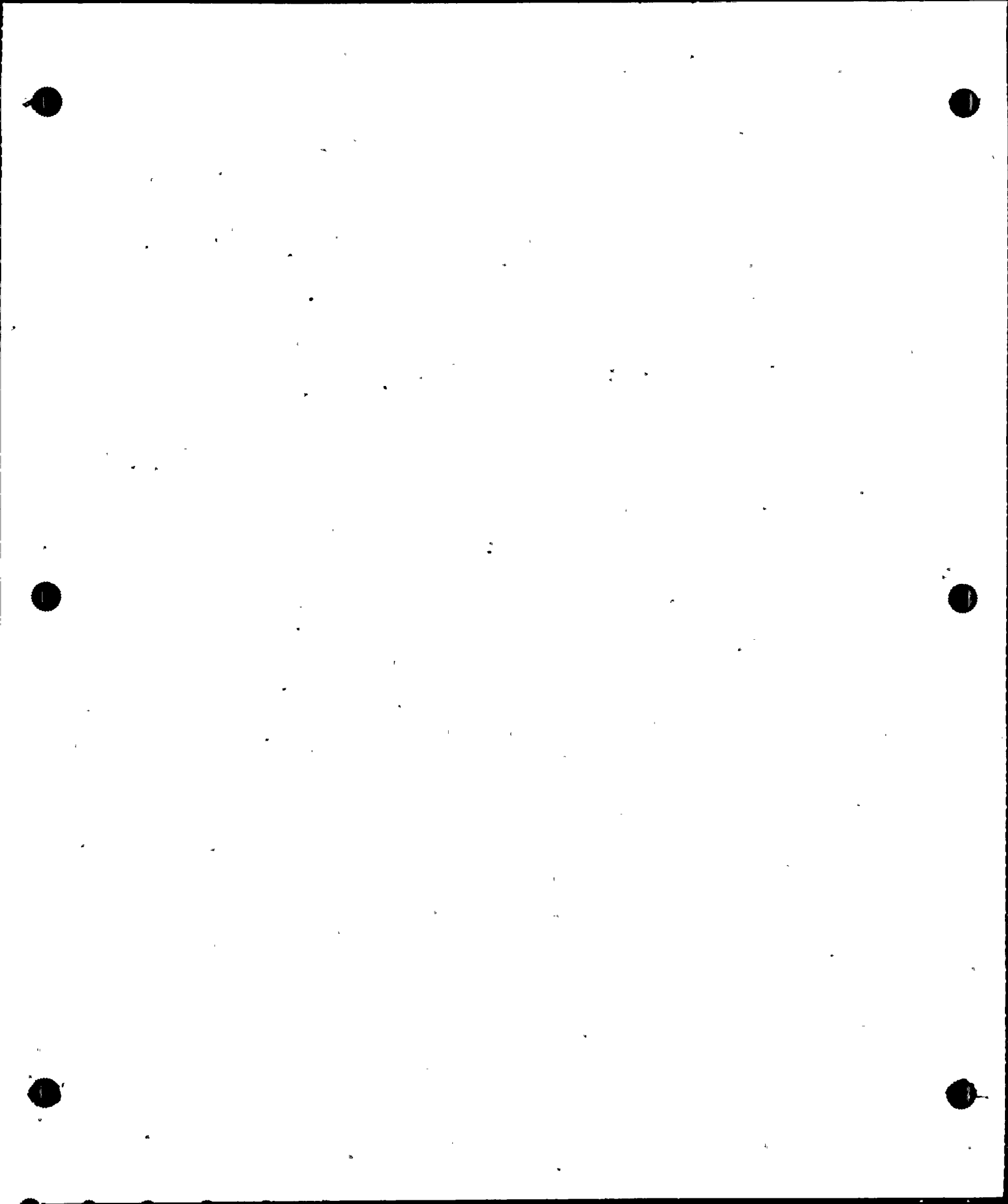
SYSTEM NAME: PAL SAMPLING & INST. PANELS - U-1

VALVE

VALVE POSITION

ASME SECTION XI

NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
1-ECR-31	2	GL	1	A	B/5	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-ECR-32	2	GL	1	A	B/5	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-1 EF-5 EF-7 ET-005 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-ECR-33	2	GL	0.75	A	B/5	0	C	2	A	A	EF-1 EF-5 EF-7 ET-003 SLT-1	EF-1 EF-5 EF-7 ET-003 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-ECR-35	2	GL	1	A	B/5	0	C	2	A	A	EF-1 EF-5 EF-7 ET-004 SLT-1	EF-1 EF-5 EF-7 ET-004 SLT-2	P - P P R	NO NO NO NO YES, NOTE 2
1-ECR-36	2	GL	1	A	B/6	0	C	2	A	A	EF-1 EF-5 EF-7 ET-005 SLT-1	EF-2 EF-5 EF-8 ET-005 SLT-2	C - C C R	YES, NOTE 1 NO NO, NOTE 1 YES, NOTE 1 YES, NOTE 2



DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOD DIAGRAM: 12-5141F-6

RUN DATE AND TIME: 14SEP87:12:58

SYSTEM NAME: PAL SAMPLING & INST. PANELS - U-1

VALVE

VALVE POSITION

ASME SECTION XI

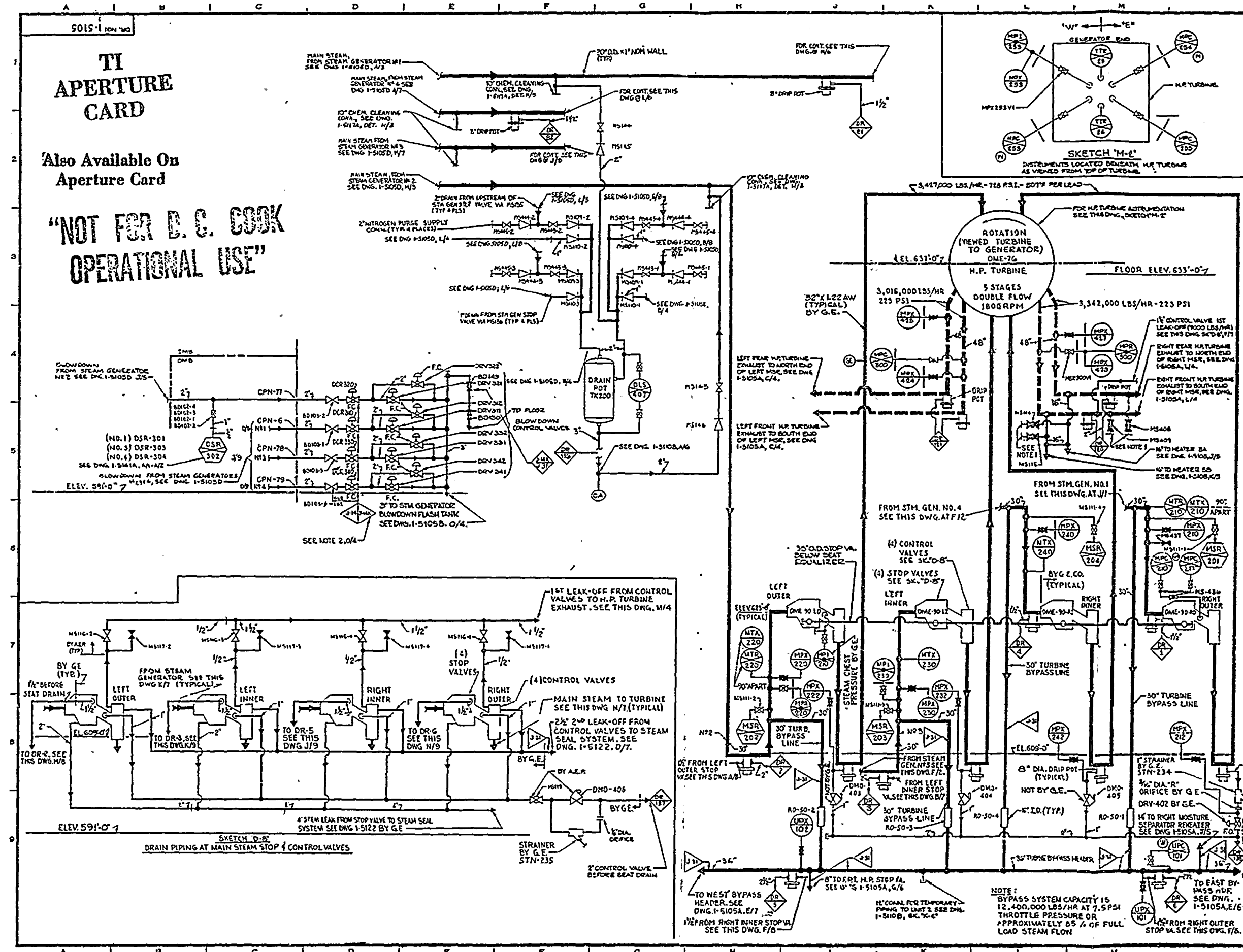
NUMBER	REV	TYPE	SIZE	ACT TYPE	F.D. COORD	POWER OPER	SAFETY FUNCT	CD CL	A/P	CAT	PRIM TEST REQUIRED	TEST PERFORMED	TEST MODE	RELIEF REQUEST(S)
--------	-----	------	------	-------------	---------------	---------------	-----------------	----------	-----	-----	-----------------------	-------------------	--------------	-------------------

1-SM-1	0	CK	1	SA	A/6	0	C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2	R R	YES, NOTE 3 YES, NOTE 2
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TI APERTURE CARD

Also Available On
Aperture Card

"NOT FOR D. C. COOK
OPERATIONAL USE"



GENERAL NOTES

LEGEND

- MAIN STEAM
- H.P. TURBINE EXHAUST (BY G.E.)
- AUXILIARY PIPING

BY WESTINGHOUSE

FOR VALVE INSTRUMENT SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG., AND FOR MARK NUMBER CODES, SEE DNG. 12-5103 & 12-5104.

QUANTITIES: FROM G.E.

HEAT-BALANCE 371 HB 136

REVISED 3-25-68

BASED ON REACTOR DESIGN STEAM PRESSURE

NOTE 1

CONNECTIONS FOR TRACER DURING TURBINE PERFORMANCE TESTING, SKATE 2, D/V6

PIPING DESIGNATED 3-14 X WAS FABRICATED/INSTALLED AS A CLASS 1 QUALITY LEVEL SYSTEM. ANY WORK DONE ON THIS SYSTEM AFTER 6/0/75 MUST BE PERFORMED & DOCUMENTED AS CLASS 1 QUALITY LEVEL, INCLUDING ANY MATERIAL USED.

ALL EQUIPMENT S.C.I. EXCEPT AS NOTED

NOTE 2

FOR CLASS 2 INSTRUMENT CONNECTIONS, THE 1ST BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE.

NOTE 3

SEE DNG. 1-5105B FOR CONTINUATION OF DRAINS. SEE DNG. 1-5105C FOR TERMINATION OF DRAINS AT DEPRESSURIZERS & E.C.

NOTE 4

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION IS "1" UNLESS OTHERWISE NOTED.

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

2. "TAG" NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:

- "TAG NO. 1-5105D-1" APPEARS AS: 1-5105D-1

3. INSTRUMENT ROOT VALVE MARK "N" IS NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:

- FOR SINGLE IMULSE VALVE/STREAM: 1-5105D-1
- FOR DOUBLE IMULSE VALVE/STREAM: 1-5105D-1

DATE	NO.	APPROVED
5-17-67	29	100-100

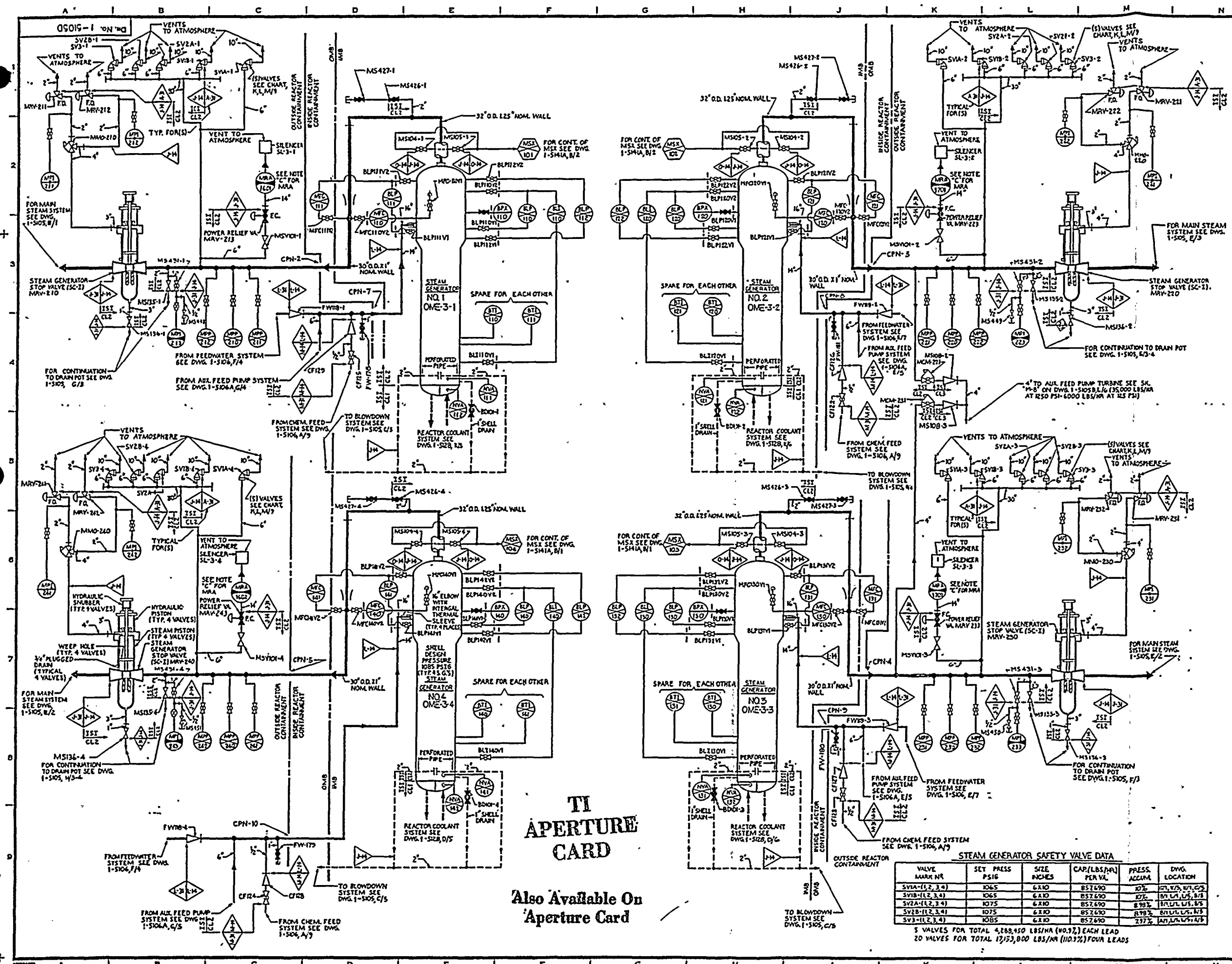
FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

INDIANA & MICHIGAN ELECTRIC
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN

FLOW DIAGRAM MAIN STEAM UNIT NO. 1 SHEET 1 OF 3

DWG. NO. 1-5105-29



GENERAL NOTES

LEGEND

- MAIN STEAM
- FEEDWATER
- REACTOR COOLANT
- AUX. PPM
- BLOWDOWN

FOR VALVE INSTRUMENT SAMPLING PPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG. AND FOR MARK NUMBER CODES, SEE DWG. 12-5103 & 12-5104.

NOTE "A"
ALL EQUIPMENT S.C. 3 EXCEPT AS NOTED.

NOTE "B"
FOR CODE CLASS 2 INSTRUMENT (SAMPLE CONNECTIONS) THE IS BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE.

NOTE "C"
DETECTOR IS IN PROXIMITY TO PIPE BUT NOT PHYSICALLY ATTACHED FOR DETAIL. SEE DWG. 1-5104, 5" X 6" & 12" X 18".

MANO OPERATED VALVE IDENTIFICATION MARKERS
1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCM) NUMBERS.
2. "DG" NUMBERS LISTED FOR DRAWING USE AS FOLLOWS:
 a. NO. 2 & 3: NO. 2-5105-W APPEARS AS "2-5105-W"
 b. INSTRUMENT ROOT VALVE MARK NO'S NOT SHOWN ON DRAWING. SEE VALVE IDENTIFICATION LIST DERIVED BY ADDING TO INSTRUMENT NUMBER:
 FOR SINGLE IMPULSE: V1
 FOR DOUBLE IMPULSE: V2
 FOR TRIP: V3
 FOR SHUT-OFF: V4
 FOR STOP: V5
 FOR START: V6
 FOR RESET: V7
 FOR LOCK: V8
 FOR UNLOCK: V9
 FOR RELEASE: V10
 FOR HOLD: V11
 FOR RELEASE: V12
 FOR HOLD: V13
 FOR RELEASE: V14
 FOR HOLD: V15
 FOR RELEASE: V16
 FOR HOLD: V17
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 FOR RELEASE: V92
 FOR HOLD: V93
 FOR RELEASE: V94
 FOR HOLD: V95
 FOR RELEASE: V96
 FOR HOLD: V97
 FOR RELEASE: V98
 FOR HOLD: V99
 FOR RELEASE: V100

NOTES:
THE UNIT PREPARE DESIGNATION FOR EACH COMPONENT IDENTIFICATION NO. IS "1" UNLESS OTHERWISE NOTED.

DATE	NO.	APPROVED
11-1-56	1	CLL

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING.

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN MICHIGAN

**FLOW DIAGRAM
STEAM GENERATING
SYSTEM
UNIT NO. 1**

DWG. NO. 1-5105D-1

VALVE MARK NO.	SET PRESS. PSIG	SIZE INCHES	CAP. (LBS./HR.) PER VAL.	PRESS. ACCUM.	DWG. LOCATION
SV2A-1 (2, 3, 4)	1065	6.1X0	857,600	10%	ST, 1/2, 1/2, 1/2, 1/2
SV2B-1 (2, 3, 4)	1065	6.1X0	857,600	10%	ST, 1/2, 1/2, 1/2, 1/2
SV2C-1 (2, 3, 4)	1075	6.1X0	857,600	8.98%	ST, 1/2, 1/2, 1/2, 1/2
SV2D-1 (2, 3, 4)	1075	6.1X0	857,600	8.98%	ST, 1/2, 1/2, 1/2, 1/2
SV3-1 (2, 3, 4)	1085	6.1X0	857,600	2.37%	ST, 1/2, 1/2, 1/2, 1/2

5 VALVES FOR TOTAL 4,285,450 LBS./HR. (NO. 9%) EACH LEAD
20 VALVES FOR TOTAL 17,153,800 LBS./HR. (NO. 9%) FOUR LEADS

TI
APERTURE
CARD

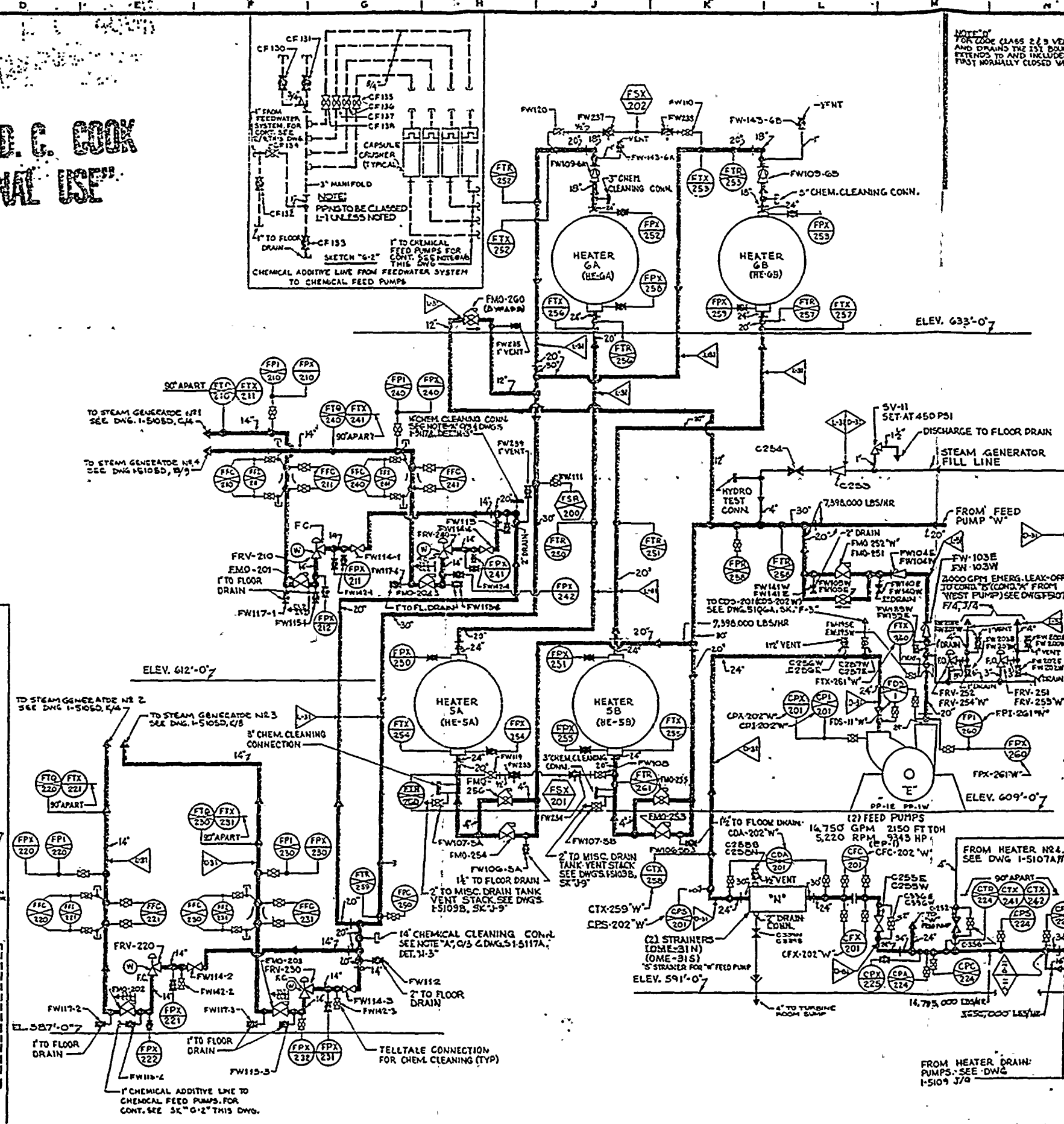
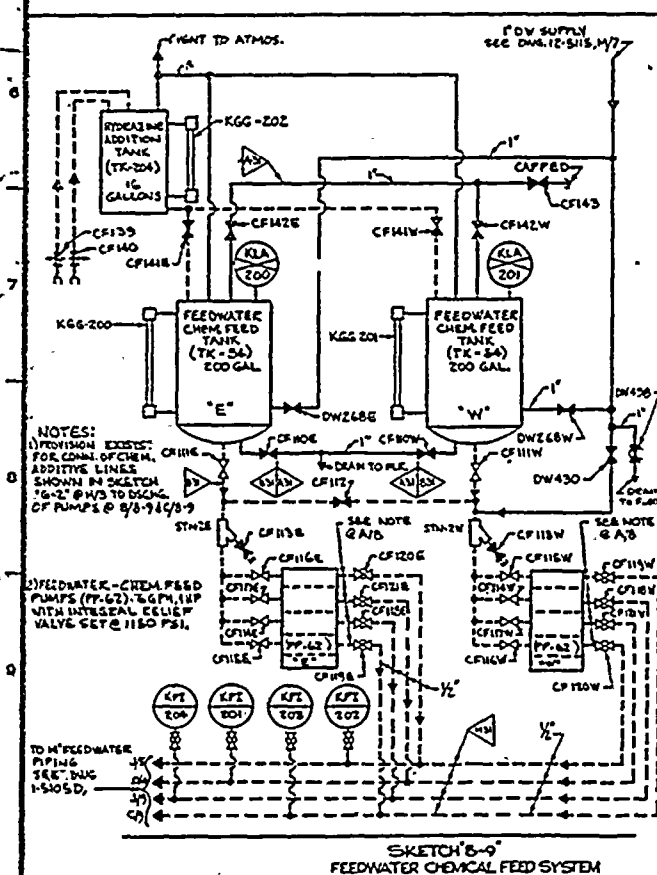
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1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

**Also Available On
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"NOT FOR E. C. COOK
OPERATIONAL USE"



GENERAL NOTES

LEGEND

 FEEDWATER
 AUX. PIPING
 CHEM. FEED PIPING

FOR VALVE, INSTRUMENT,
SAMPLING, PIPE MATERIAL
AND OTHER SYMBOLS NOT
EXPLAINED ON THIS DWG.,
AND FOR MARK NUMBER
CODES, SEE DWG B104.


NOTE:
ALL EQUIPMENT SEISMIC
CLASS III EXCEPT AS
NOTED

QUANTITIES PER G.E. CO.
HEAT BALANCE 371HB136
V.V.O. REVISED 3-25-68
& B.B. CO. HEAT BALANCE
DJ0240/0 DATED 12-17-68
AT MAX. REACTOR POWER

NOTE: A: H/S, G/S
CHEMICAL CLEANING CONNECTIONS
PROVIDED FOR CONDENSATE
FEEDWATER SYSTEM CHEMICAL
CLEANING.

SEE DWG 1-S109B FOR MISC. CONT'G. &
HEATERS (e.g. VENTS, DRAINS, ETC.).

SYMBOLS

 QUICK-DISCONNECT
COUPLING

NOTE 8
FOR CODE CLASS 2 INSTRUMENT CONNECTIONS, THE ISI BOUNDARY EXTENDS TO AND INCLUDES THE FIRST FOOT VALVES.
THE PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS "N" UNLESS OTHERWISE NOTED.

NOTE:
THIS DRAWING MADE UNIQUE
FOR UNIT 41 FROM DRAWING
C-12-8100-REV 12

HAND OPERATED VALVE
IDENTIFICATION NUMBERS

1. ONLY UNIQUE VALVE NUMBERS*
APPEAR ON THIS DRAWING SEE
SEPARATE VALVE IDENTIFICATION
LIST FOR EQUIVALENT DESIGN
(MCR) NUMBERS.

2. "TAG" NUMBERS MODIFIED FOR
DRAWING USE AS FOLLOWS:
TAG NO: 2-KSP-VTOS-W

APPEARS AS: KSYWOW
INSTRUMENT ROOT VALVE MARK
NOT SHOWN ON DRAWING (SEE

VALVE IDENTIFICATION LIST)
DERIVED BY ADDING TO
INSTRUMENT NUMBER:

FOR SINGLE IMPULSE VI
FOR DOUBLE IMPULSE VI
VELOCITY

7-14-82	35	Howell
DATE	NO.	APPROVED

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK -
NUCLEAR PLANT

BRIDGMAN
BRIDGMAN
FLOW DIAGRAM

-FEEDWATER
UNIT NO. 3 SHEET 3 OF 3

ORL NO. 1-5106-35

NAME	DATE	SIGNATURE	INITIALS
J. B.		<i>[Signature]</i>	<i>[Initials]</i>

[illegible]

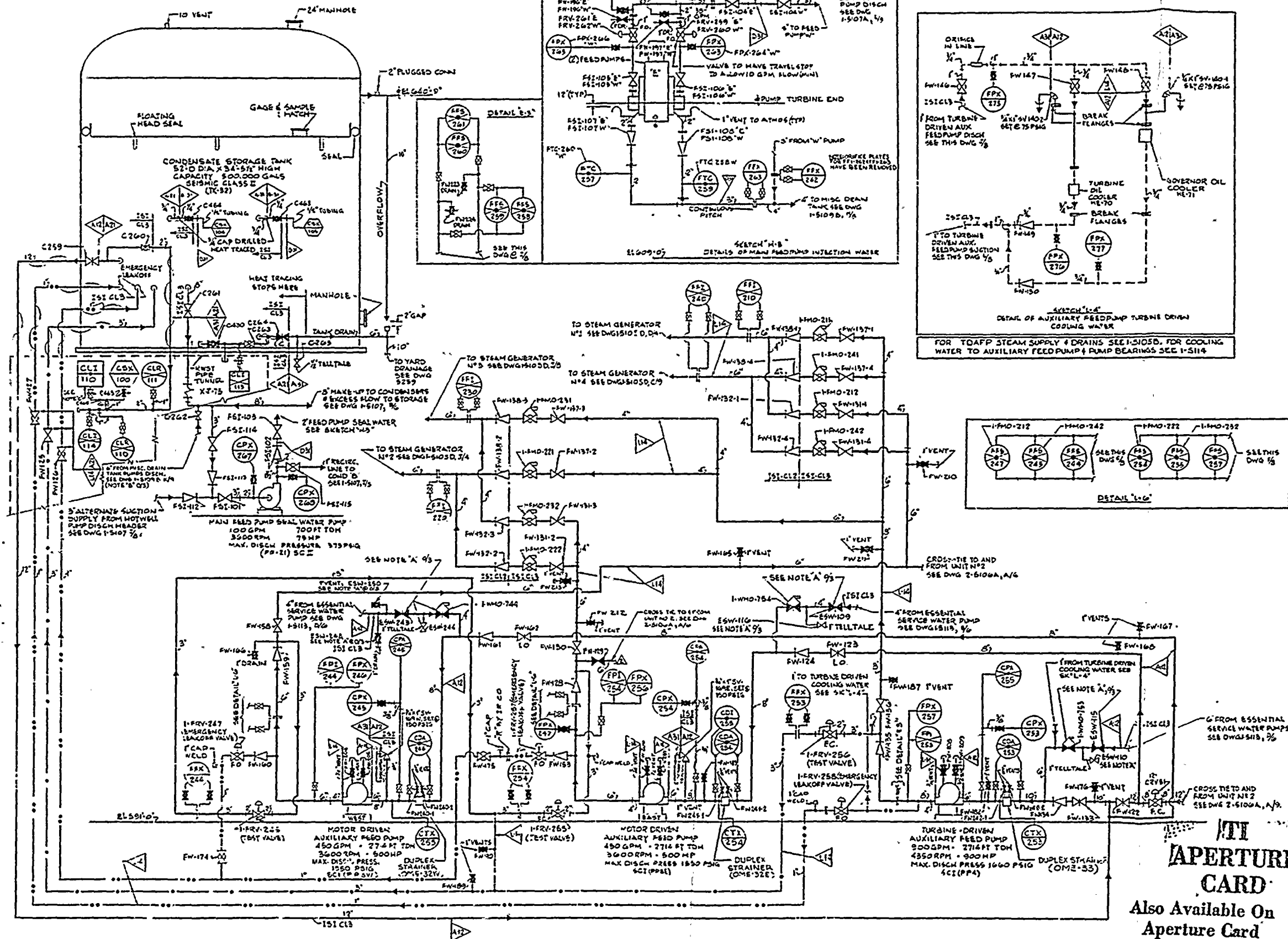
AMERICAN ELECTRIC POWER SERVICE CO.
5 BROADWAY NEW YORK

1 9

8710130267-04

"NOT FOR D. C. COOK OPERATIONAL USE"

49015-1 ON 70



GENERAL NOTES

- AUX FEEDWATER
- AUX. PIPING
- COOLING WATER
- TEST LINE
- EMERGENCY LEAKOFF

(V) BY WESTINGHOUSE
FOR VALVE, INSTRUMENT, SAMPLING
PIPE MATERIAL AND OTHER
SYMBOLS NOT EXPLAINED ON
THIS DWG. AND FOR MAKE NUMBER
CODES SEE DWG. 12-5103 &
12-5104.
THE UNIT PREFIX DESIGNATION
FOR EACH COMPONENT
IDENTIFICATION NUMBER IS
"1" UNLESS OTHERWISE NOTED.

NOTE "A"
VALVES ALSO SHOWN (AND
NUMBERED) ON DWG. 5115.
NOT TO BE DUPLICATED.

NOTE "B"
FROM MISC DRAIN PUMP, USED
FOR HEATING SYSTEM OPERATION
DURING CONSTRUCTION AND ON
OCCASIONS WHEN BOTH UNITS
ARE IN OPERATION.

THIS DWG. MADE UNIQUE
FOR UNIT 1 FROM DWG.
12-5106A REV. 25

NOTE "C"
EQUIPMENT SEISMIC
CLASSIFICATION AS NOTED

NOTE "D"
INSTRUMENT AND ISOLATION
VALVE IN TURBINE DRIVEN AUX
FEED PUMP ROOM.

NOTE:
1. FOR CODE CLASS 2 & 3
MOUNT CONNECTIONS, THE 251
BOUNDARY EXTENDS TO AND
INCLUDES THE FIRST ROOT VALVE
2. FOR CODE CLASS 2 & 3
VENTS &
DRAINS, THE 251 BOUNDARY
EXTENDS TO AND INCLUDES THE
FIRST NORMALLY CLOSED VALVE

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "UNIQUE VALVE NUMBERS"
APPEAR ON THIS DRAWING. SEE
SEPARATE VALVE IDENTIFICATION
LIST FOR EQUIPMENT DESIGN
(V-CR) NUMBERS.
2. TAG NUMBERS MODIFIED FOR
DRAWING USE AS FOLLOWS:
TAG NO. 11-10-10-10-10-10
APPEARS AS 11-10-10-10-10-10
3. INSTRUMENT ROOT VALVE MARK
IS NOT SHOWN ON DRAWING.
(SEE VALVE IDENTIFICATION LIST)
DERIVED BY ADDING TO
INSTRUMENT NUMBERS
A-C GUILDS IMPROVING
FOR COOLING WATER PUMP
(SEE DWG. 5115, 1/2)

4-15-57 28

DATE 10 10 1957
APPROVED

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AND IS TO BE RETURNED UPON REQUEST."

INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN MICHIGAN

**FLOW DIAGRAM
AUX-FEED WATER**

UNIT 1

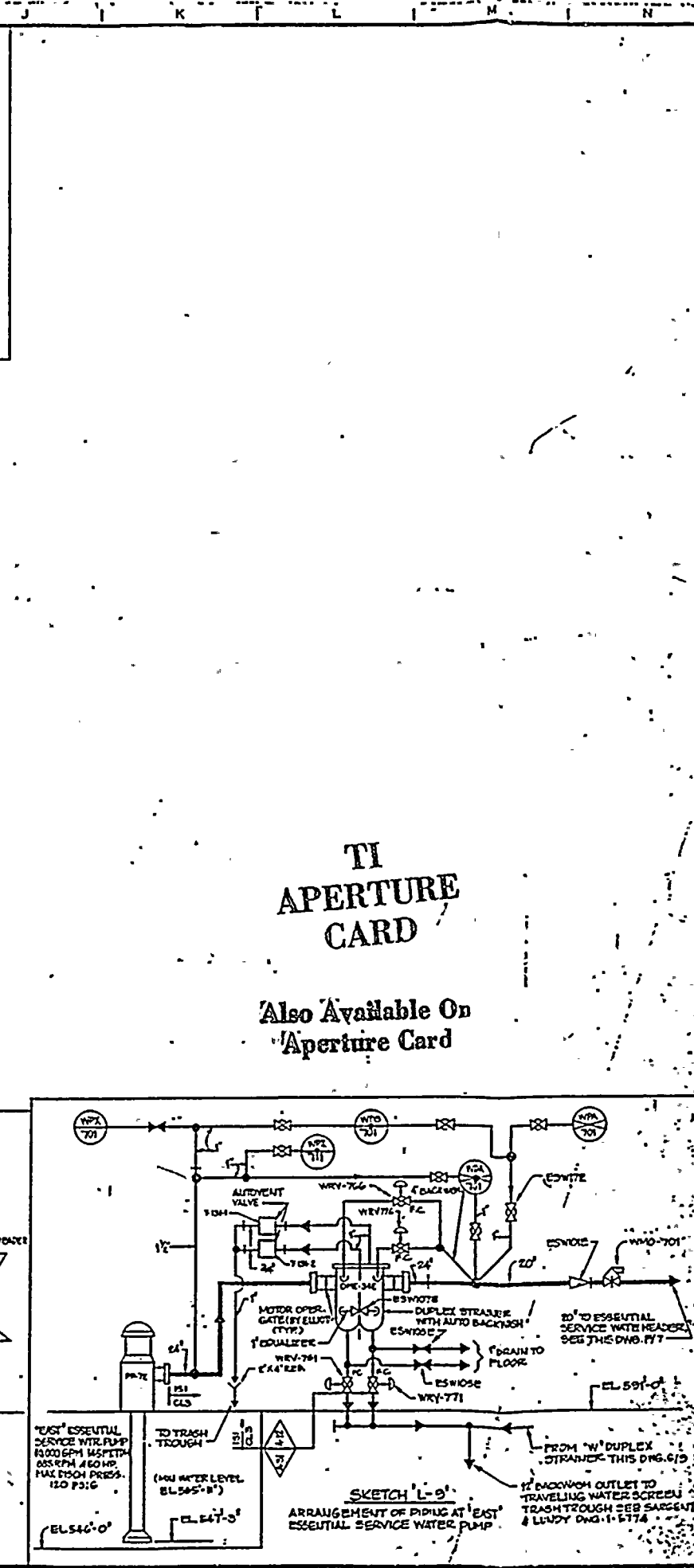
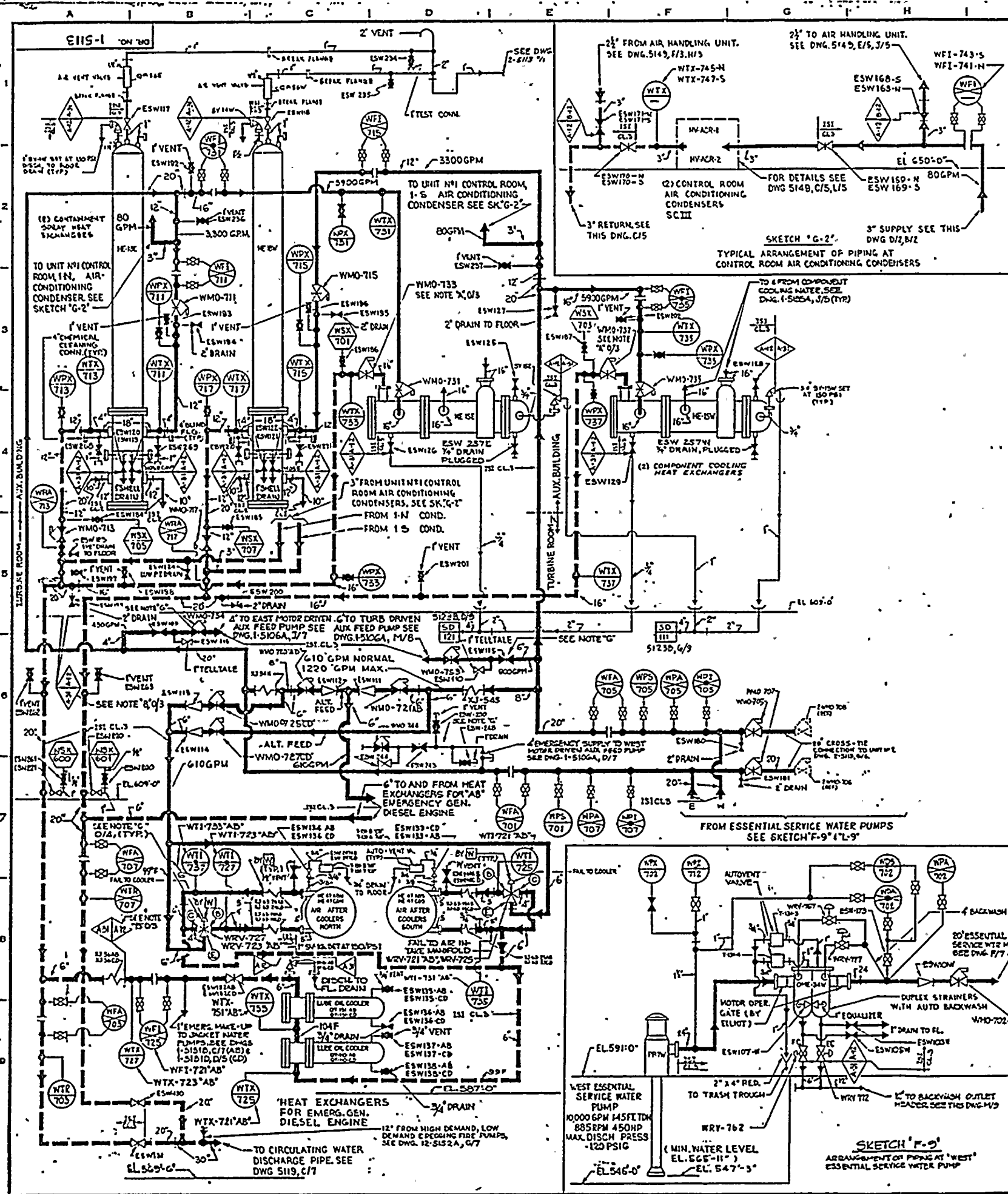
DR. NO. 12-5106A-28

SCALE	DATE	BY	CHKD	APPD
AS SHOWN	10/10/57	W. J. HARRIS	W. J. HARRIS	W. J. HARRIS
DESIGN	10/10/57	W. J. HARRIS	W. J. HARRIS	W. J. HARRIS
FIELD	10/10/57	W. J. HARRIS	W. J. HARRIS	W. J. HARRIS
CONSTR.	10/10/57	W. J. HARRIS	W. J. HARRIS	W. J. HARRIS
OUT	10/10/57	W. J. HARRIS	W. J. HARRIS	W. J. HARRIS

AMERICAN ELECTRIC POWER SERVICE CORP.

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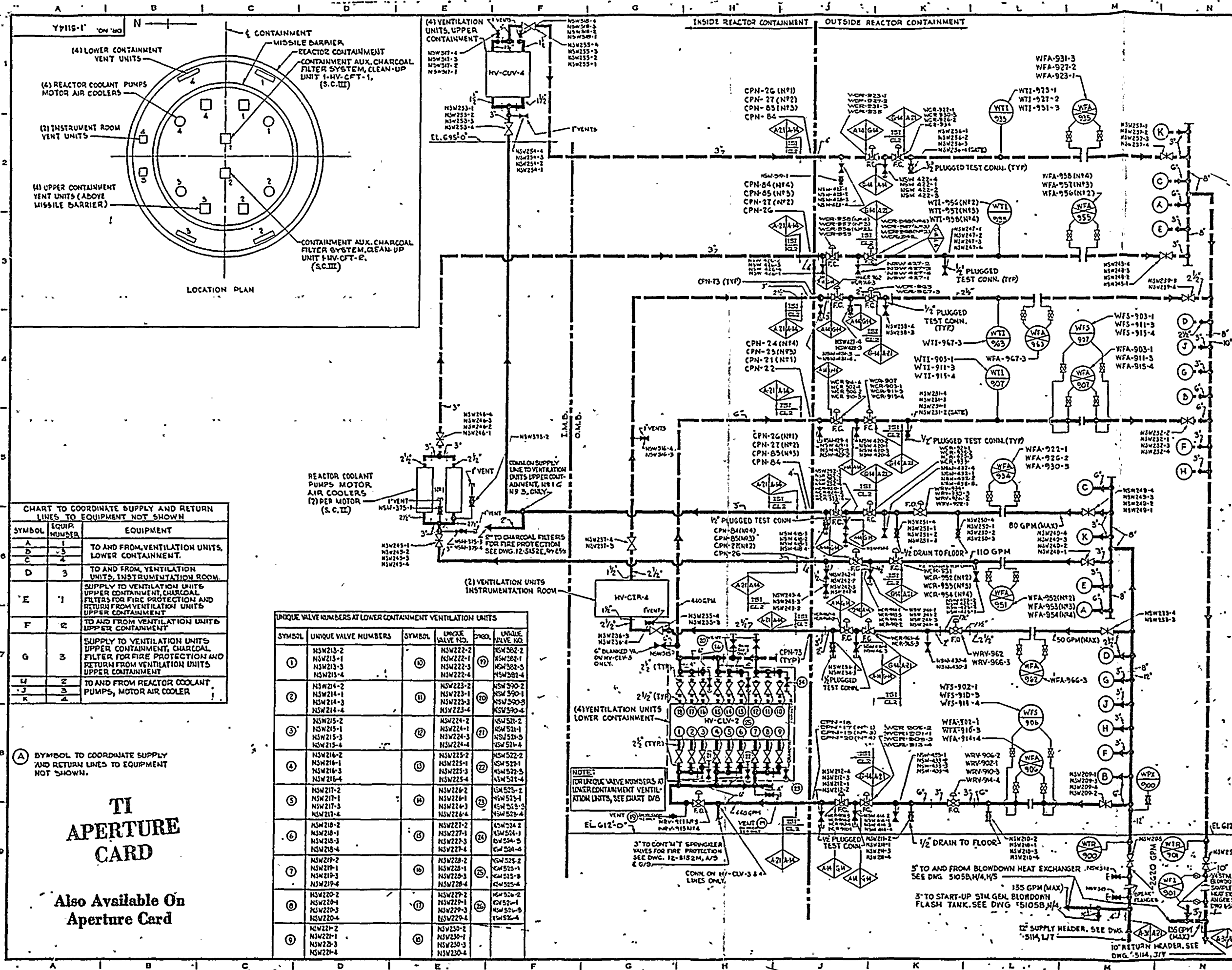


GENERAL NOTES.			
LEGEND			
—	SUPPLY PIPING		
—	RETURN PIPING		
—	AUX. PIPING		
ALL PIPING CLASS A-12 UNLESS NOTED			
ALL EQUIPMENT SEISMIC CLASS I. EXCEPT AS NOTED.			
FOR VALVE, INSTRUMENT, SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG., AND FOR MARK NUMBER CODES, SEE DWG. 5104			
SYMBOL: BY WORTHINGTON			
NOTE 'A': C/3, E/3 WMO-733, 737 TO HAVE INTERMEDIATE LIMIT SWITCH TO LIMIT FLOW ON SAFETY INJECTION SIGNAL			
NOTE 'B': B/5, RETURN PIPING CHANGES FROM CLASS I (AUX. BLDG) TO CLASS III (TURB. ROOM)			
NOTE 'C': B/7, E/7, ENCLOSED LETTERS ARE SHOWN FOR ORIENTATION OF VALVE IN PIPING. THESE LETTERS REFLECT SIMILAR MARKINGS ON VALVE BODY			
NOTE 'D': THIS DWG. MADE UNLESS AND SUPPLEMENTED DWG. 12-5104-121			
NOTE 'E': FOR CODE CLASS 145, THE 145 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST CLOSED VALVE.			
NOTE 'F': FOR CODE CLASS 145, THE 145 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST NORMALLY CLOSED VALVE.			
NOTE 'G': VALVES ALSO SHOWN (AND NUMBERED) ON DWG. 1-5106A.			
NOTE: THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS 'P' UNLESS OTHERWISE NOTED.			
HAND OPERATED VALVE IDENTIFICATION NUMBERS			
1. ONLY 'UNIQUE' VALVE NUMBERS APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (WCR) NUMBERS.			
2. 'TAG' NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS: TAG NO. 2-NSW-V05-W APPEARS AS: NSWV05W			
3. INSTRUMENT ROOT VALVE MARKING IS NOT SHOWN ON DRAWING (SEE SEPARATE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER: FOR SINGLE IMPLUSE: V FOR DOUBLE IMPLUSE: V2			
1-5113-41	DATE	NO.	APPROVED
FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING			
THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED TO YOU FOR YOUR INFORMATION. IT IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE AEP SERVICE CORP. OR FOR ANY PURPOSE OTHER THAN THAT SPECIFIED, AND IS TO BE RETURNED UPON REQUEST.			
INDIANA & MICHIGAN ELECTRIC CO. DONALD C. COOK NUCLEAR PLANT			
BRIDGMAN HOBOKEN			
FLOW DIAGRAM ESSENTIAL SERVICE WATER UNITS NO. 1			
DR. NO.	1-5113-41		
SCALE	AS SHOWN		
DATE	12/1/67		
BY	W. J. B. / J. S. B.		
CHECKED	W. J. B. / J. S. B.		
APPROVED	W. J. B. / J. S. B.		
AMERICAN ELECTRIC POWER SERVICE CORP. 1 BROADWAY, NEW YORK			

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GENERAL NOTES

LEGEND

SUPPLY PIPING
RETURN PIPING
AUXILIARY PIPING

FOR VALVE, INSTRUMENT, SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG., AND FOR MARK NUMBER CODES, SEE DWG. 5104.

NOTES:

A. ALL EQUIPMENT SEISMIC CLASS 2 EXCEPT AS NOTED.

B. FOR CODE CLASS 2 INSE CONNS THE 151 BOUNDARY EXTENDS TO & INCLUDES THE FIRST ROOT VALVE.

C. FOR CODE CLASS 2 VENTS & DRAINS, THE 151 BOUNDARY EXTENDS TO & INCLUDES THE FIRST NORMALLY CLOSED VALVE.

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS "1" UNLESS OTHERWISE NOTED.

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

2. TAG NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
TAG NO. 2-NOW/105-W APPEARS AS: NSW105W

3. INSTRUMENT ROOT VALVE MARK NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:
FOR SINGLE IMPULSE: V
FOR DOUBLE IMPULSE: V/STREAM
V/2DOWNSTREAM

FOR MICROFILM STATUS SEE SEPARATE RECORD FOR THIS DWG.

DATE: 3/1/74
NO. 31
APPROVED: CH

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

**FLOW DIAGRAM
NON-ESSENTIAL
SERVICE WATER
UNIT NO. 1**

DWG. NO. 1-5114 A-31

AMERICAN ELECTRIC POWER SERVICE CORP.
2 BROADWAY
NEW YORK

CHART TO COORDINATE SUPPLY AND RETURN LINES TO EQUIPMENT NOT SHOWN

SYMBOL	EQUIP. NUMBER	EQUIPMENT
A	1	TO AND FROM VENTILATION UNITS, LOWER CONTAINMENT.
B	2	TO AND FROM VENTILATION UNITS, INSTRUMENTATION ROOM.
C	3	SUPPLY TO VENTILATION UNITS UPPER CONTAINMENT, CHARCOAL FILTERS FOR FIRE PROTECTION AND RETURN FROM VENTILATION UNITS UPPER CONTAINMENT.
D	4	TO AND FROM VENTILATION UNITS UPPER CONTAINMENT.
E	5	SUPPLY TO VENTILATION UNITS UPPER CONTAINMENT, CHARCOAL FILTER FOR FIRE PROTECTION AND RETURN FROM VENTILATION UNITS UPPER CONTAINMENT.
F	6	TO AND FROM REACTOR COOLANT PUMPS, MOTOR AIR COOLER.

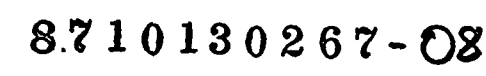
UNIQUE VALVE NUMBERS AT LOWER CONTAINMENT VENTILATION UNITS

SYMBOL	UNIQUE VALVE NO.	SYMBOL	UNIQUE VALVE NO.	SYMBOL	UNIQUE VALVE NO.
1	NSW213-1	11	NSW222-1	21	NSW302-1
2	NSW213-2	12	NSW222-2	22	NSW302-2
3	NSW213-3	13	NSW222-3	23	NSW302-3
4	NSW213-4	14	NSW222-4	24	NSW302-4
5	NSW213-5	15	NSW222-5	25	NSW302-5
6	NSW213-6	16	NSW222-6	26	NSW302-6
7	NSW213-7	17	NSW222-7	27	NSW302-7
8	NSW213-8	18	NSW222-8	28	NSW302-8
9	NSW213-9	19	NSW222-9	29	NSW302-9
10	NSW213-10	20	NSW222-10	30	NSW302-10
11	NSW213-11	21	NSW222-11	31	NSW302-11
12	NSW213-12	22	NSW222-12	32	NSW302-12
13	NSW213-13	23	NSW222-13	33	NSW302-13
14	NSW213-14	24	NSW222-14	34	NSW302-14
15	NSW213-15	25	NSW222-15	35	NSW302-15
16	NSW213-16	26	NSW222-16	36	NSW302-16
17	NSW213-17	27	NSW222-17	37	NSW302-17
18	NSW213-18	28	NSW222-18	38	NSW302-18
19	NSW213-19	29	NSW222-19	39	NSW302-19
20	NSW213-20	30	NSW222-20	40	NSW302-20
21	NSW213-21	31	NSW222-21	41	NSW302-21
22	NSW213-22	32	NSW222-22	42	NSW302-22
23	NSW213-23	33	NSW222-23	43	NSW302-23
24	NSW213-24	34	NSW222-24	44	NSW302-24
25	NSW213-25	35	NSW222-25	45	NSW302-25
26	NSW213-26	36	NSW222-26	46	NSW302-26
27	NSW213-27	37	NSW222-27	47	NSW302-27
28	NSW213-28	38	NSW222-28	48	NSW302-28
29	NSW213-29	39	NSW222-29	49	NSW302-29
30	NSW213-30	40	NSW222-30	50	NSW302-30
31	NSW213-31	41	NSW222-31	51	NSW302-31
32	NSW213-32	42	NSW222-32	52	NSW302-32
33	NSW213-33	43	NSW222-33	53	NSW302-33
34	NSW213-34	44	NSW222-34	54	NSW302-34
35	NSW213-35	45	NSW222-35	55	NSW302-35
36	NSW213-36	46	NSW222-36	56	NSW302-36
37	NSW213-37	47	NSW222-37	57	NSW302-37
38	NSW213-38	48	NSW222-38	58	NSW302-38
39	NSW213-39	49	NSW222-39	59	NSW302-39
40	NSW213-40	50	NSW222-40	60	NSW302-40
41	NSW213-41	51	NSW222-41	61	NSW302-41
42	NSW213-42	52	NSW222-42	62	NSW302-42
43	NSW213-43	53	NSW222-43	63	NSW302-43
44	NSW213-44	54	NSW222-44	64	NSW302-44
45	NSW213-45	55	NSW222-45	65	NSW302-45
46	NSW213-46	56	NSW222-46	66	NSW302-46
47	NSW213-47	57	NSW222-47	67	NSW302-47
48	NSW213-48	58	NSW222-48	68	NSW302-48
49	NSW213-49	59	NSW222-49	69	NSW302-49
50	NSW213-50	60	NSW222-50	70	NSW302-50
51	NSW213-51	61	NSW222-51	71	NSW302-51
52	NSW213-52	62	NSW222-52	72	NSW302-52
53	NSW213-53	63	NSW222-53	73	NSW302-53
54	NSW213-54	64	NSW222-54	74	NSW302-54
55	NSW213-55	65	NSW222-55	75	NSW302-55
56	NSW213-56	66	NSW222-56	76	NSW302-56
57	NSW213-57	67	NSW222-57	77	NSW302-57
58	NSW213-58	68	NSW222-58	78	NSW302-58
59	NSW213-59	69	NSW222-59	79	NSW302-59
60	NSW213-60	70	NSW222-60	80	NSW302-60
61	NSW213-61	71	NSW222-61	81	NSW302-61
62	NSW213-62	72	NSW222-62	82	NSW302-62
63	NSW213-63	73	NSW222-63	83	NSW302-63
64	NSW213-64	74	NSW222-64	84	NSW302-64
65	NSW213-65	75	NSW222-65	85	NSW302-65
66	NSW213-66	76	NSW222-66	86	NSW302-66
67	NSW213-67	77	NSW222-67	87	NSW302-67
68	NSW213-68	78	NSW222-68	88	NSW302-68
69	NSW213-69	79	NSW222-69	89	NSW302-69
70	NSW213-70	80	NSW222-70	90	NSW302-70
71	NSW213-71	81	NSW222-71	91	NSW302-71
72	NSW213-72	82	NSW222-72	92	NSW302-72
73	NSW213-73	83	NSW222-73	93	NSW302-73
74	NSW213-74	84	NSW222-74	94	NSW302-74
75	NSW213-75	85	NSW222-75	95	NSW302-75
76	NSW213-76	86	NSW222-76	96	NSW302-76
77	NSW213-77	87	NSW222-77	97	NSW302-77
78	NSW213-78	88	NSW222-78	98	NSW302-78
79	NSW213-79	89	NSW222-79	99	NSW302-79
80	NSW213-80	90	NSW222-80	100	NSW302-80

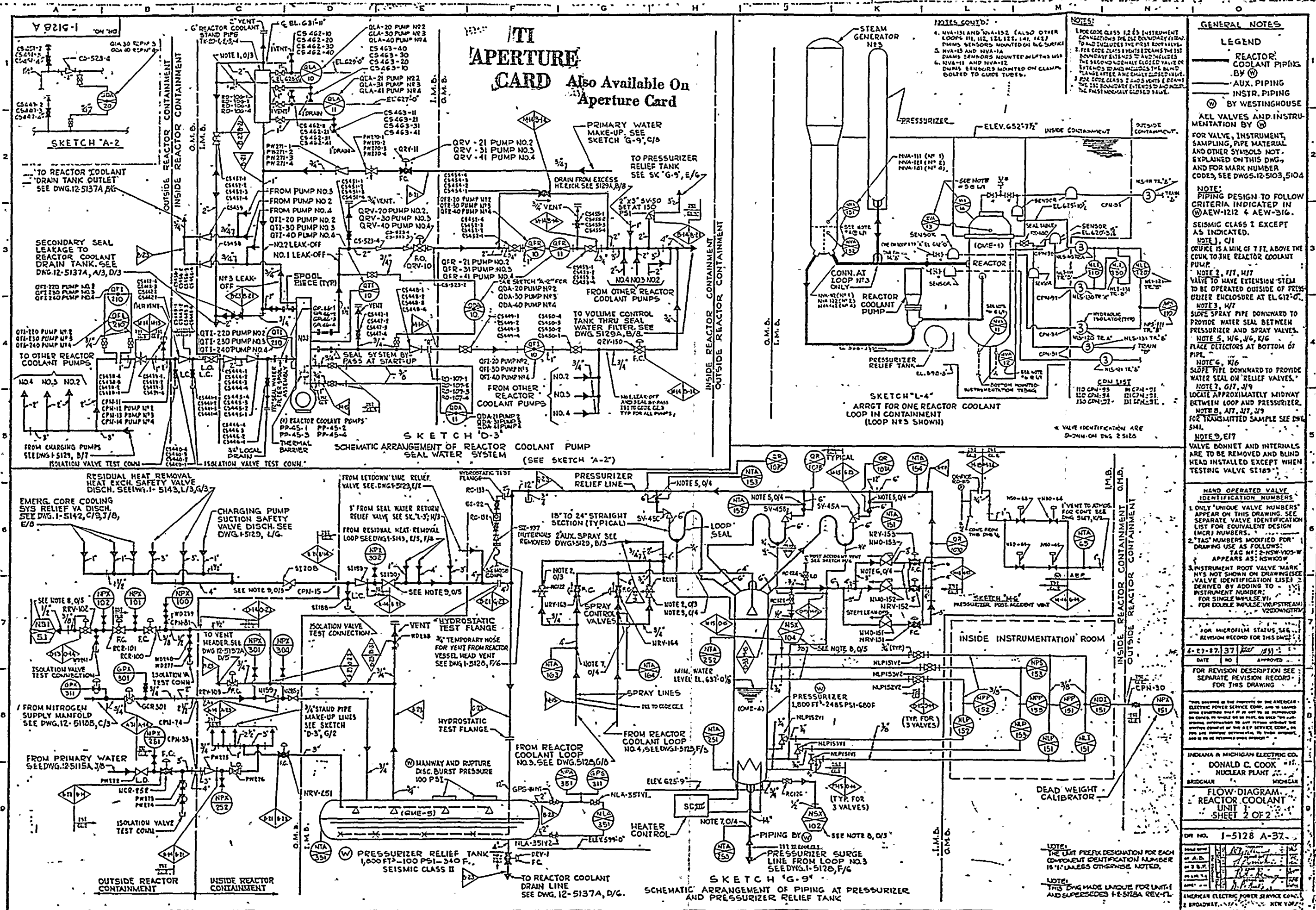
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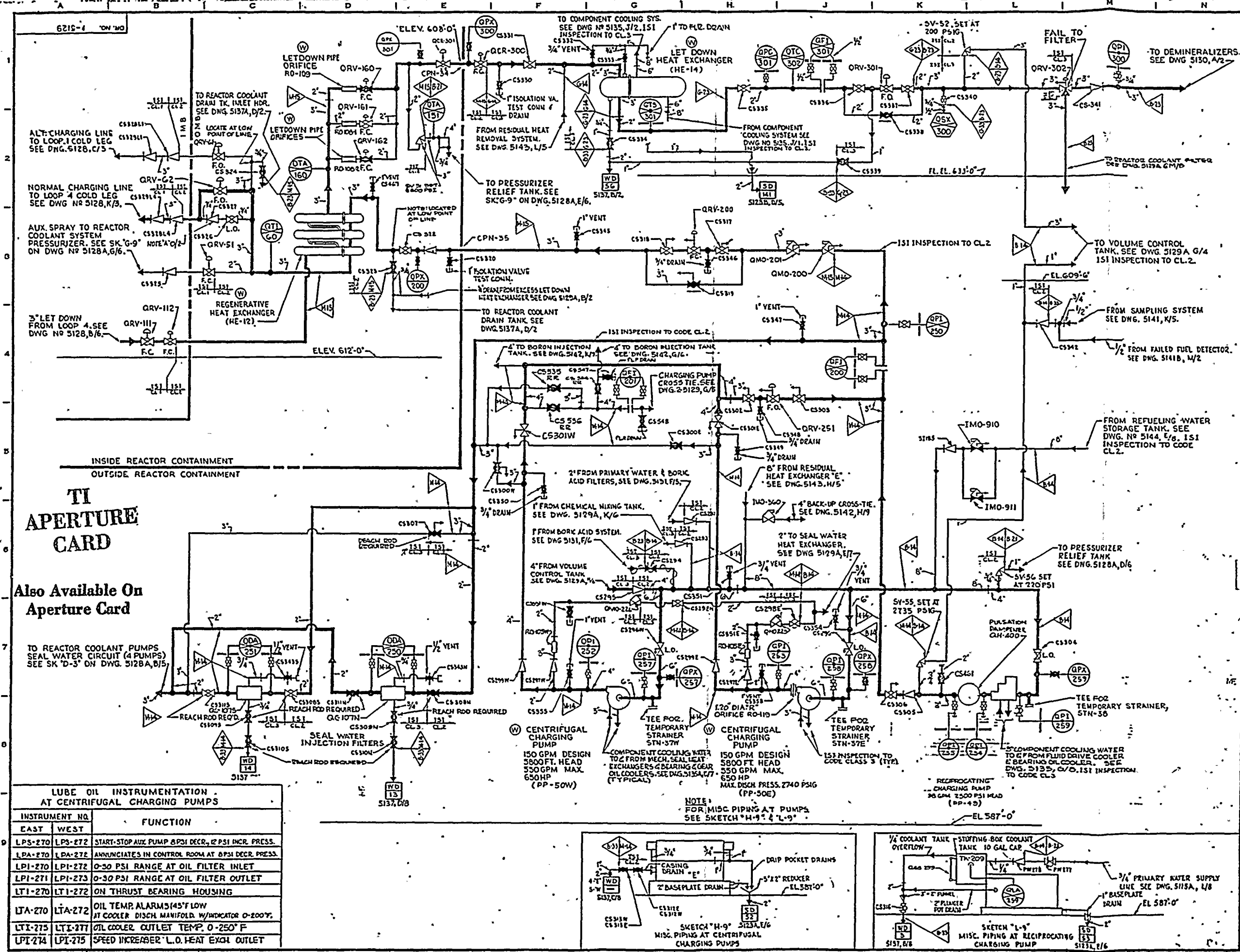


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GENERAL NOTES

LEGEND

— MAIN FLOW
- - - - - AUX. FLOW

FOR VALVE, INSTRUMENT, SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG AND FOR MARK NUMBER CODES SEE DWGS. 12-5103 & 12-5104.

SEISMIC CLASS, EXCEPT AS NOTED

VALVE NOTED 'A' B/S VALVE OPER. AT 500 PSIG

ALL VALVES, BOUQUIN'S SYSTEM NOTATION, SUPPLIED BY (S) (WESTINGHOUSE) EXCEPT AS NOTED

1. FOR CODE CLASS 2 & 3 INSTRUMENT CONNECTIONS, THE 151 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE.

2. FOR CODE CLASS 2 & 3 VENTS & DRAINS, THE 151 BOUNDARY EXTENDS TO & INCLUDES THE FIRST NORMALLY CLOSED VALVE.

3. R.R. INDICATES REACH ROD REQUIRED.

4. THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS UNLESS OTHERWISE NOTED.

NOTES
THIS DWG MADE UNIQUE FOR UNIT #1 AND SUPERSEDES DWGS. 1-2-5129 REV.

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

2. "TAG" NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
TAG #1: 2-NSW-V005-W
APPEARS AS: NSW005W

3. INSTRUMENT ROOT VALVE MARK IS NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:
FOR SINGLE IMPULSE: V
FOR DOUBLE IMPULSE: V2
FOR STREAM: V220W/STRM

17. FOR MICROFILM STATUS SEE REVISION RECORD FOR THIS DWG.

1-11-87 31 HAW AB: ..
DATE NO. APPROVED

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN MICHIGAN

FLOW DIAGRAM
CVCS-REACTOR LETDOWN & CHARGING
UNIT #1 SHEET 104/1

DPL NO. 1-5129-31

DATE 1-11-87

BY HAW AB: ..

CHKD BY ..

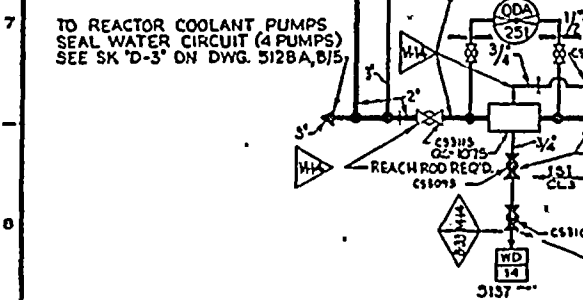
APP'D BY ..

AMERICAN ELECTRIC POWER SERVICE CORP.
2 BROADWAY NEW YORK

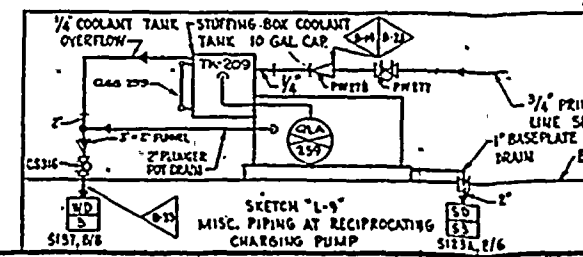
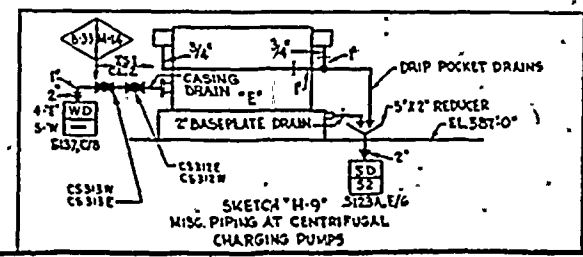
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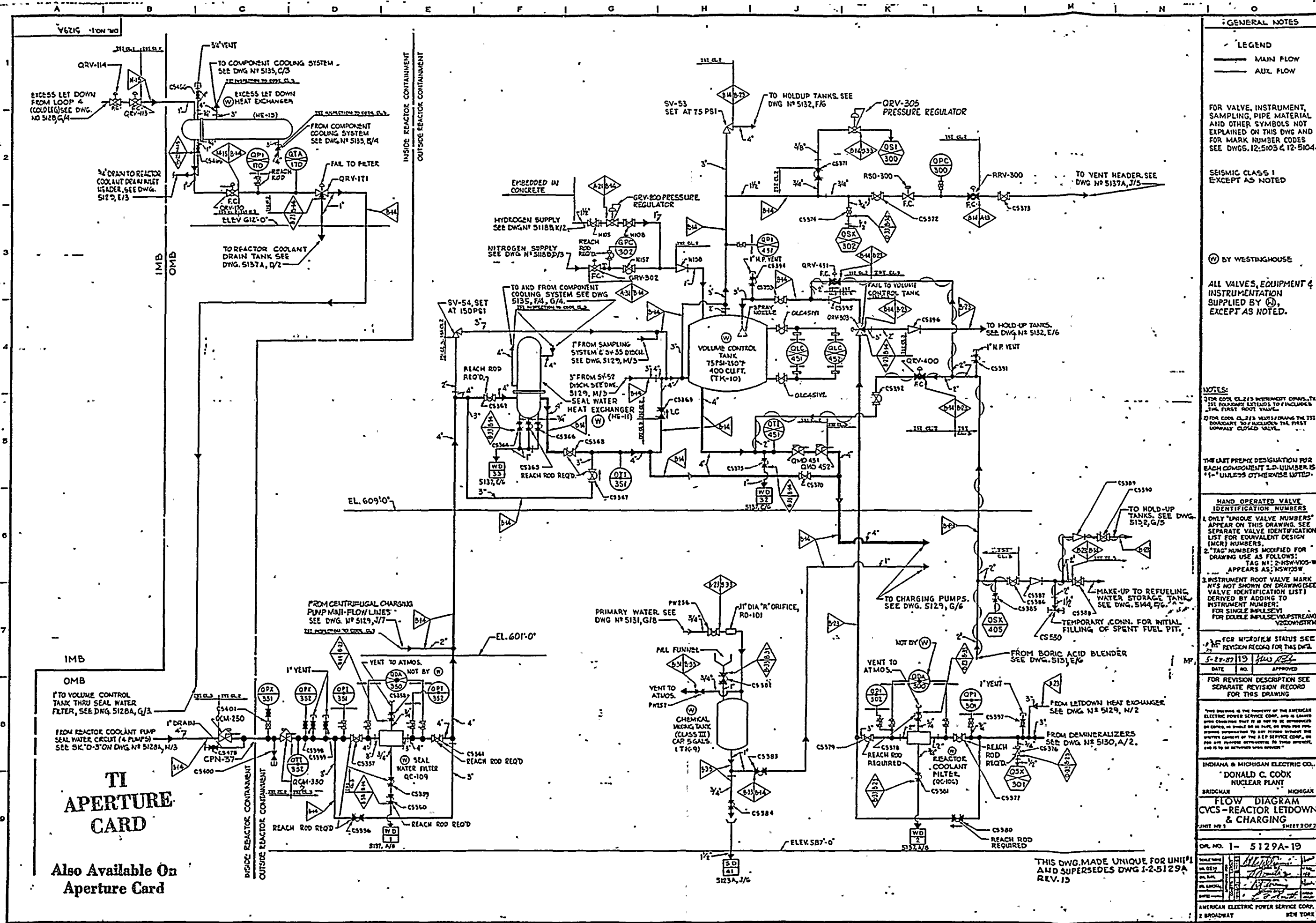
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LUBE OIL INSTRUMENTATION AT CENTRIFUGAL CHARGING PUMPS		
INSTRUMENT NO.		FUNCTION
EAST	WEST	
LPS-270	LPS-272	START-STOP AUX PUMP 8 PSI DECR, 12 PSI INCR. PRESS.
LPA-270	LPA-272	ANNUNCIATES IN CONTROL ROOM AT 8 PSI DECR. PRESS.
LPI-270	LPI-272	0-30 PSI RANGE AT OIL FILTER INLET
LPI-271	LPI-273	0-30 PSI RANGE AT OIL FILTER OUTLET
LT1-270	LT1-272	ON THRUST BEARING HOUSING
LTA-270	LTA-272	OIL TEMP. ALARMS (45°F LOW AT COOLER DISCH. MANIFOLD, W/INDICATOR 0-200°F)
LTI-275	LTI-277	OIL COOLER OUTLET TEMP. 0-250°F
LPI-274	LPI-275	SPEED INCREASER L.O. HEAT EXCH. OUTLET

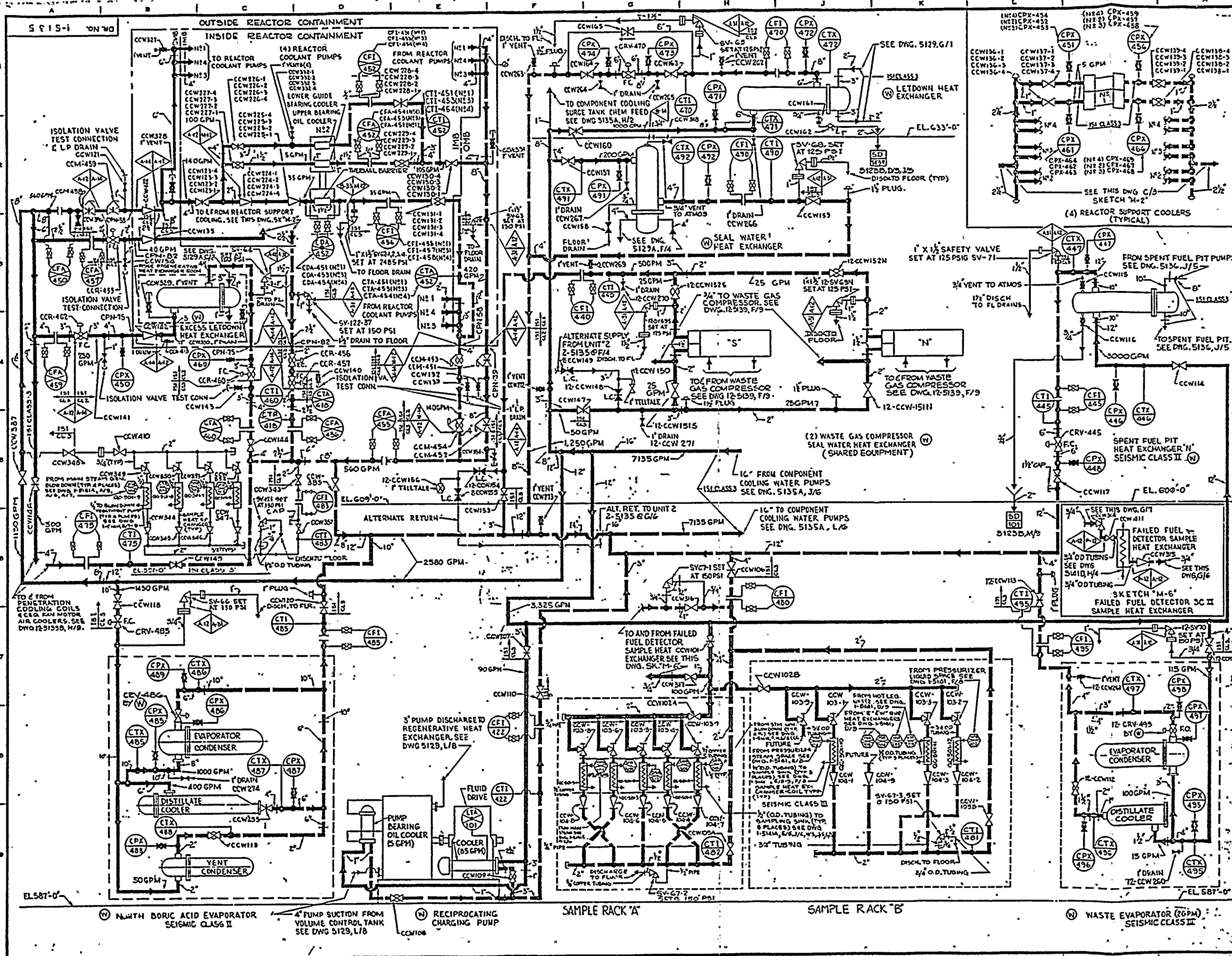


1. What is the purpose of the study?
 2. What are the research questions?
 3. What is the significance of the study?
 4. What are the limitations of the study?
 5. What are the conclusions of the study?



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ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED



GENERAL NOTES

LEGEND

- COMPONENT
- COOLING SUPPLY
- COMPONENT
- COOLING RETURN
- AUXILIARY PIPING

FOR VALVE, INSTRUMENT, SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG, AND FOR MARK NUMBER CODES, SEE DWG 5104

BY WESTINGHOUSE

EQUIPMENT SUPPLIED BY

AS NOTED

ALL PIPING TO BE CLASS A-12

ALL TUBING TO BE CLASS P-12

EXCEPT AS NOTED

ALL EQUIPMENT SEISMIC CLASS I EXCEPT AS NOTED

FOR CODE CLASS 2 AND 3 INSTRUMENTS, THE 151 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE.

FOR CODE CLASS 2 (3 VENTS) DRAINS THE 151 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE, UNLESS OTHERWISE NOTED.

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS "1-" UNLESS OTHERWISE NOTED.

NOTE

THIS DWG MADE UNIQUE FOR UNIT #1 AND SUPERSEDES DWG. 1-2-5135 REV. 17

HAND OPERATED VALVE IDENTIFICATION NUMBERS

ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

"TAG" NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:

TAG #1: 2-NSW-VIOW-W APPEARS AS: NSWVOW

3. INSTRUMENT ROOT VALVE MARK NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:

FOR SINGLE IMPULSE: V FOR DOUBLE IMPULSE: V2

FOR MICROFILM STATUS SEE REVISION RECORD FOR THIS DWG

DATE	NO.	APPROVED
9-21-86	29	CH

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

MODULAR MODULAR

FLOW DIAGRAM COMPONENT COOLING UNIT NO. 1

SHEET 1 OF 3

DR. NO. 1-5135-29

NAME	DATE	BY	CHKD
CH	9-21-86	CH	CH

AMERICAN ELECTRIC POWER SERVICE CORP.
2 BROADWAY
NEW YORK

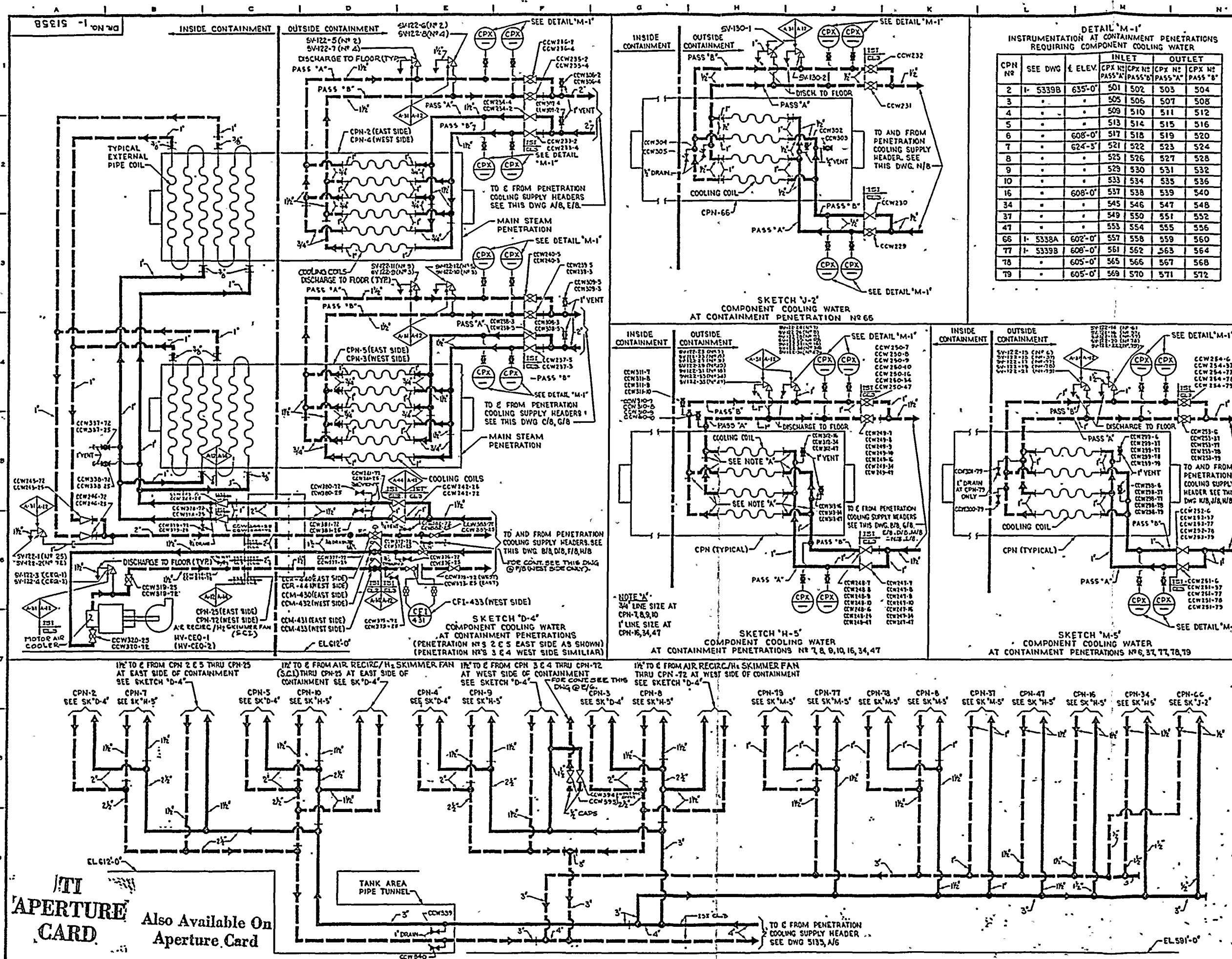
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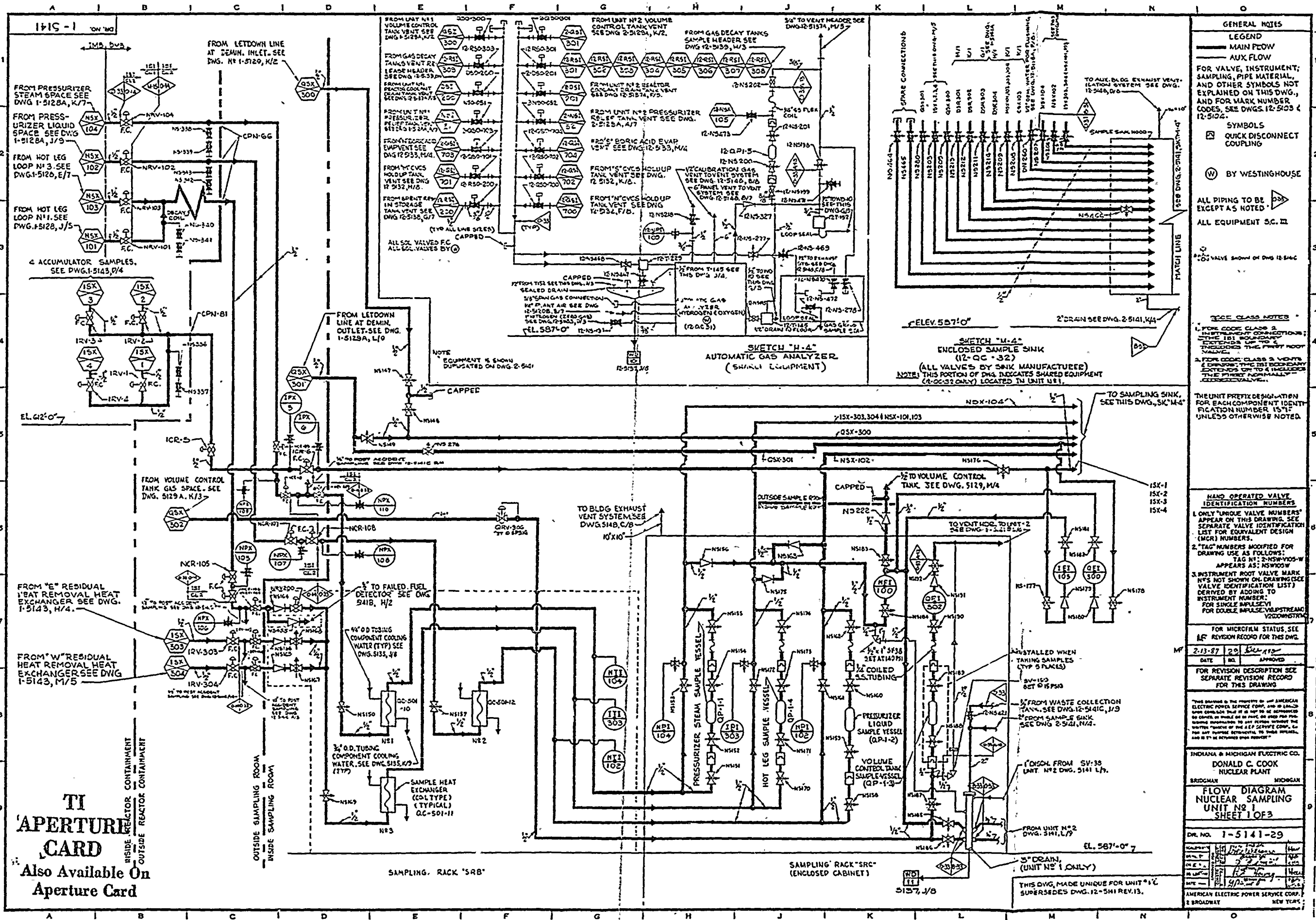


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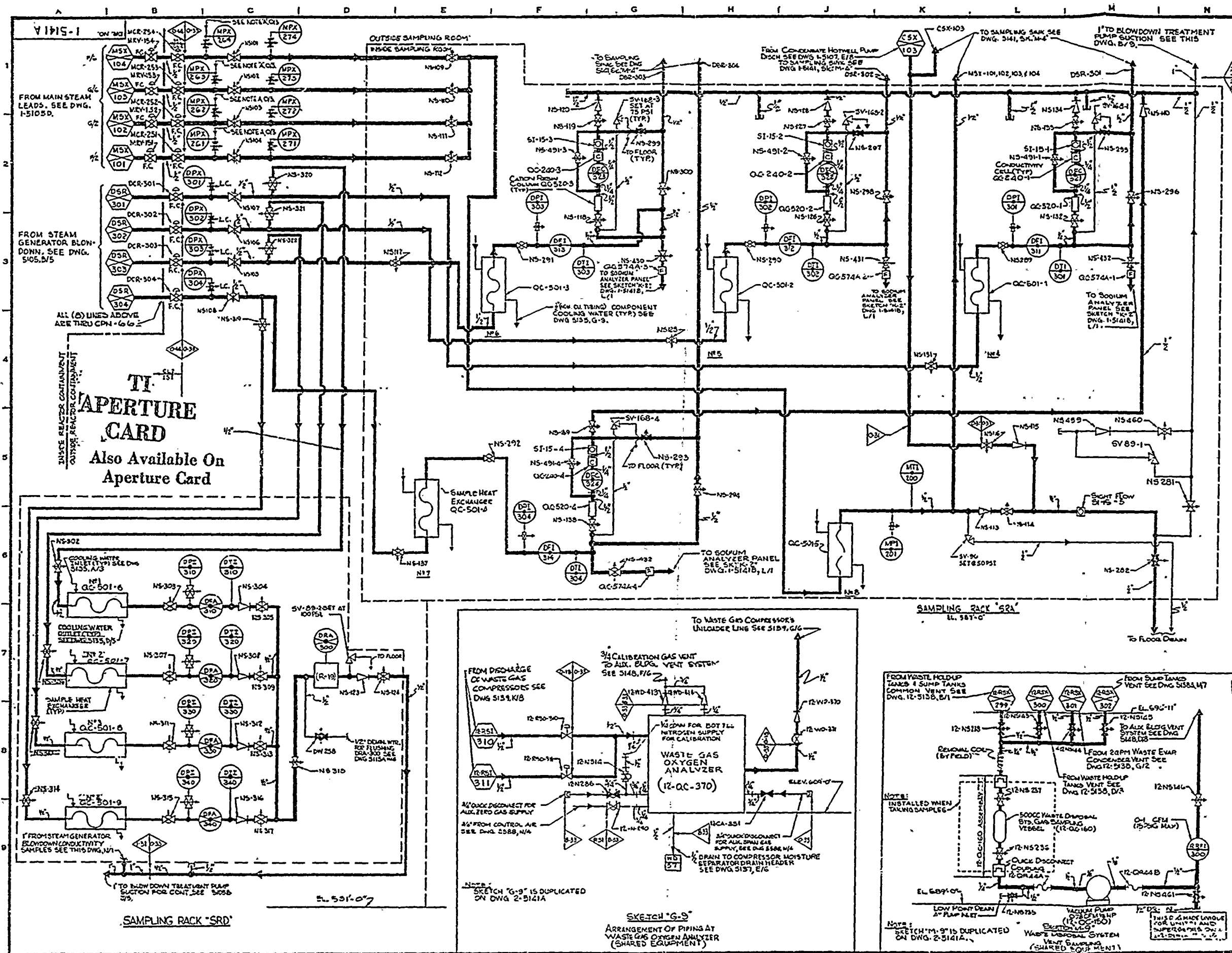
VINEY HORTON 1904
VINEY HORTON 1904

NOT FOR U. G. COOK

OPERATIONAL USE



**"NOT FOR D.C. COCK
OPERATIONAL USE"**



GENERAL NOTES:

LEGEND
 — MAIN FLOW
 - - - AUX. FLOW

FOR VALVE, INSTRUMENT SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG., AND FOR MARK NUMBER CODES SEE DWGS 12-5103 & 5104.

ALL PIPING TO BE EXCEPT AS NOTED

ALL EQUIPMENT S.C. II

NOTE: C1, C2, 1/2" NPT SUPPLY FOR DRAINING STEAM GENERATORS FOR CONTINUATION SEE DWG. 5105, 5106

NOTE "B"
 THIS SYMBOL DE- NOTES A FILTER

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS "1" UNLESS OTHERWISE NOTED.

HAND OPERATED VALVE IDENTIFICATION NUMBERS
 1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.
 2. "TAG" NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
 TAG #1: 2-NSW-VOS-W APPEARS AS: NSWVOSW
 3. INSTRUMENT ROOT VALVE MARK NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:
 FOR SINGLE IMPULSE: V
 FOR DOUBLE IMPULSE: VV
 FOR DOUBLE IMPULSE: VV2

DATE: 3-5-57
 NO. 32
 APPROVED: [Signature]

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

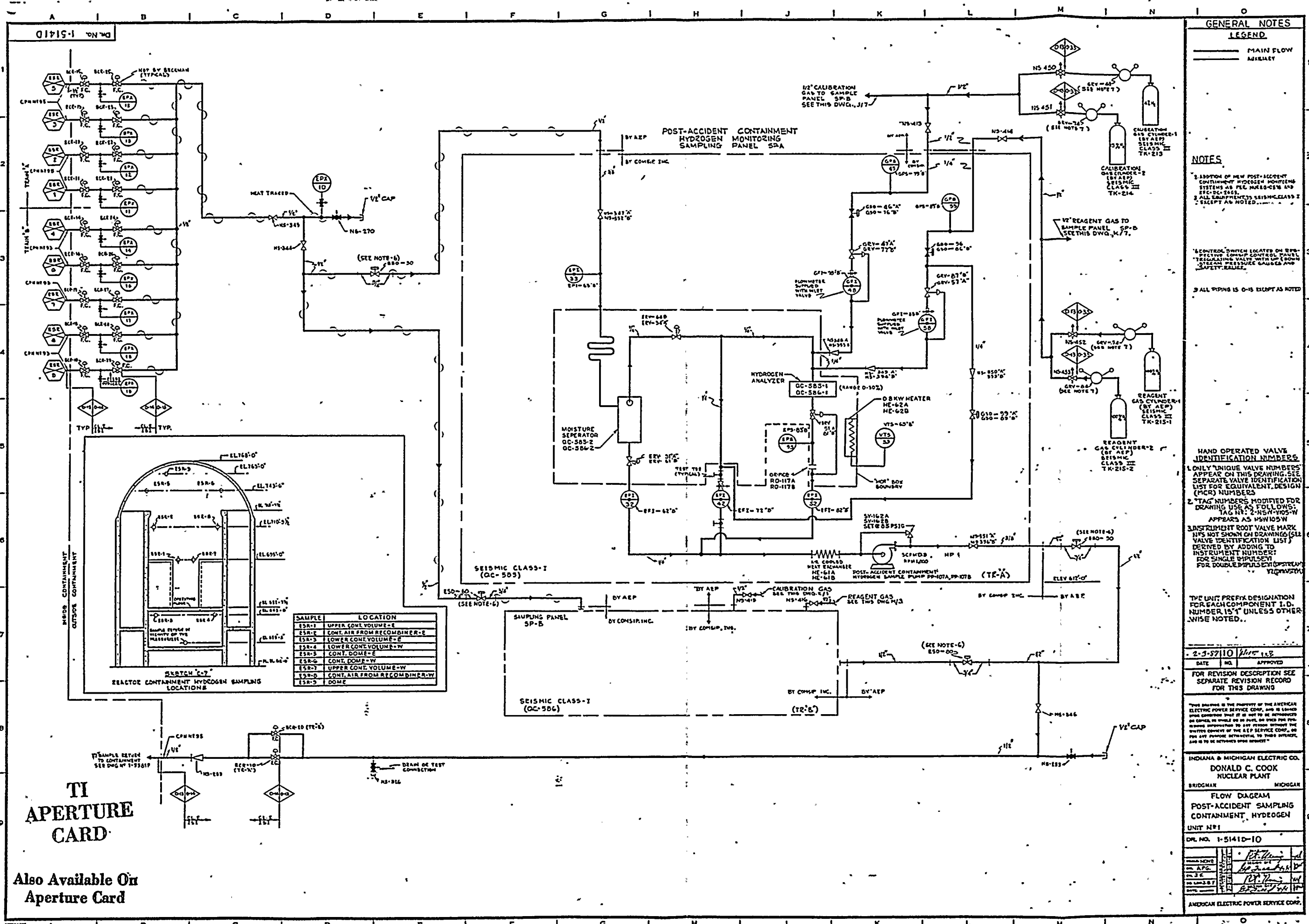
INDIANA & MICHIGAN ELECTRIC CO.
 DONALD C. COOK
 NUCLEAR PLANT

FLOW DIAGRAM
 NUCLEAR SAMPLING
 UNIT NO. 1
 SHEET 2 OF 3

DR. NO. 1-5141A-32

DATE: 3-5-57
 NAME: [Signature]
 TITLE: [Signature]
 IN CHARGE: [Signature]
 APPROVED: [Signature]

INDIANA & MICHIGAN ELECTRIC CO. NEW YORK

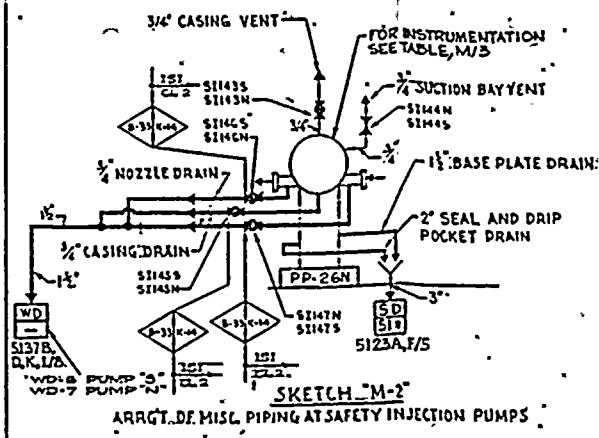
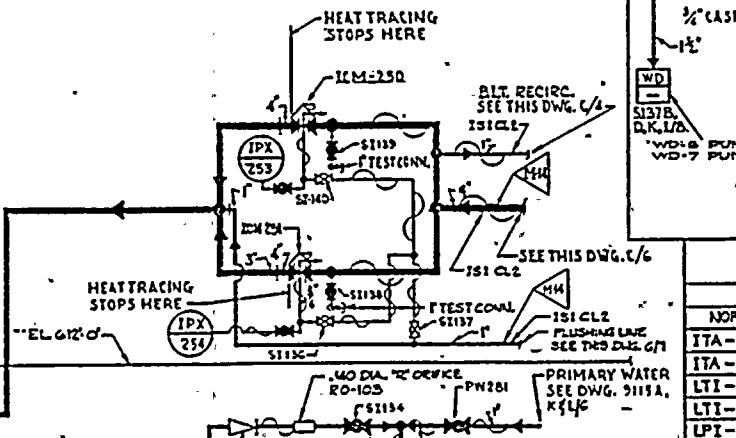
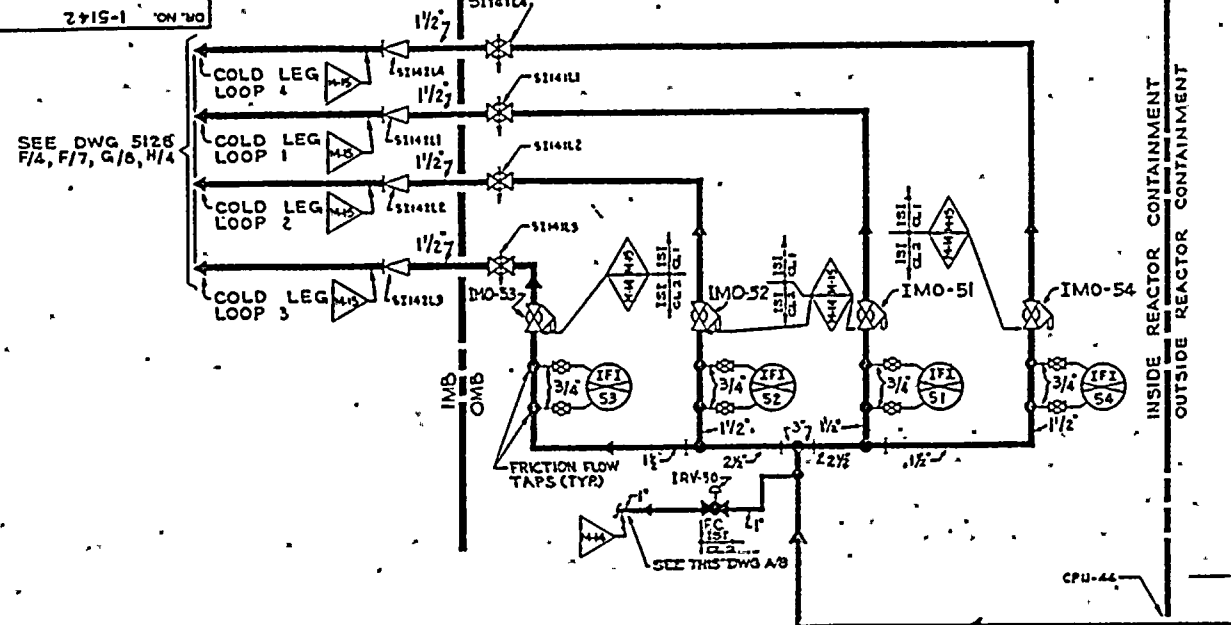


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**TI
APERTURE
CARD**

Also Available On
Aperture Card

[illegible]



PUMPS		FUNCTION
NORTH	SOUTH	
ITA-251	ITA-253	INBOARD SEAL HOUSING HIGH TEMP. ALARM AT 170°F
ITA-252	ITA-254	OUTBOARD SEAL HOUSING HIGH TEMP. ALARM AT 170°F
LTI-260	LTI-262	ON OIL COOLER DISCHARGE MANIFOLD, 30-240°F RANGE
LTI-261	LTI-263	ON THRUST BEARING HOUSING, 30-240°F RANGE
LPI-260	LPI-262	AT THRUST BEARING HOUSING OIL INLET, 0-30 PSI

GENERAL NOTES.

LEGEND

— MAIN FLOW
--- AUXILIARY FLOW

FOR VALVE, INSTRUMENT, SAMPLING PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG. AND FOR MARK NUMBER CODES SEE DWG 12-5103 & 12-5104

NOTE 1A. ALL EQUIPMENT, VALVES AND INSTRUMENTS SUPPLIED BY WESTINGHOUSE EXCEPT AS NOTED.

NOTE 1B. ALL EQUIPMENT CLASS 2 EXCEPT AS NOTED.

NOTE 1C. FOR CODE CLASS 2 INSTRUMENT CONNECTIONS THE 1ST BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE.

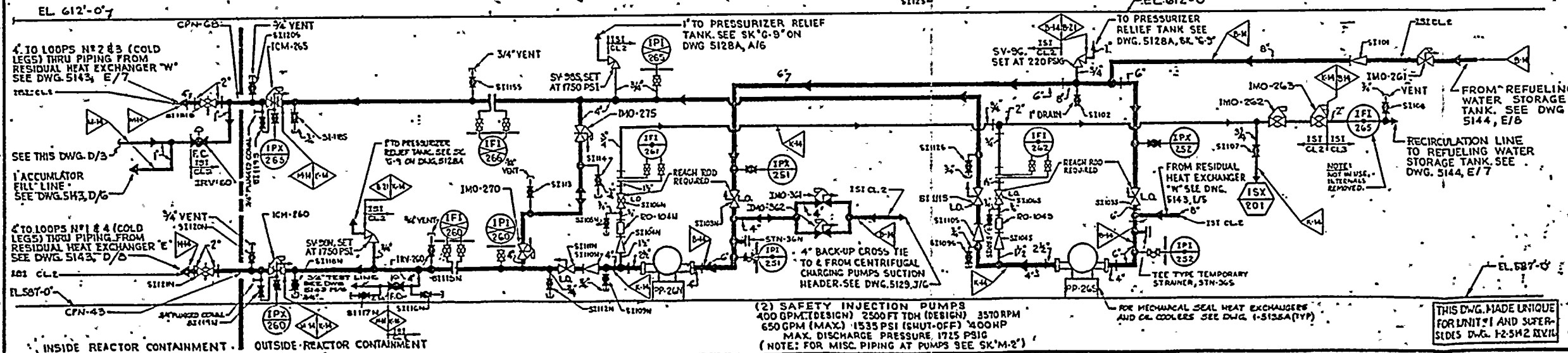
NOTE 1D. FOR CODE CLASS 2 VALVES AND DRAINS THE 1ST BOUNDARY EXTENDS TO AND INCLUDES THE FIRST NORMALLY CLOSED VALVE.

NOTE 1E. REFERENCE TO DWG. 12-5104 FOR PORTIONS OF PIPING CONTAINED WITHIN LEAK DETECTION ENCLOSURES.

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION IS "H" UNLESS OTHERWISE NOTED.

**TI
APERTURE
CARD**

Also Available On
Aperture Card



(2) SAFETY INJECTION PUMPS
400 GPM (DESIGN) 2500 FT TDH (DESIGN) 3570 RPM
650 GPM (MAX) 1535 PSI (SHUT-OFF) 400 HP
MAX. DISCHARGE PRESSURE 1725 PSIG
(NOTE: FOR MISC. PIPING AT PUMPS SEE SK-M-2)

THIS DWG. MADE UNIQUE
FOR UNIT 1 AND SUPER-
SIDES DWG. 12-5142 R121

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

2. TAG NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
TAG NO. 2-NSW-V005-W APPEARS AS: NSW005W

3. INSTRUMENT ROOT VALVE MARK NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST). DERIVED BY ADDING TO INSTRUMENT NUMBER:
FOR SINGLE IMPULSE: V
FOR DOUBLE IMPULSE: VDP
FOR DOWNSTREAM: D

FOR MICROFILM STATUS SEE MF REVISION RECORD FOR THIS DWG.

DATE	BY	APPROVED
2-7-87	25	

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN MICHIGAN

**FLOW DIAGRAM
EMERG. CORE COOLING (ECC)
UNIT NO. 1**

DWG. NO. 1-1-5142-25

DATE	BY	APPROVED
2-7-87	25	

AMERICAN ELECTRIC POWER SERVICE CORP.
2 BROADWAY NEW YORK

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THE AMERICAN
HISTORICAL SOCIETY

TI APERTURE CARD

Also Available On
Aperture Card

**"NOT FOR D. C. COOK
OPERATIONAL USE"**

GENERAL NOTES

LEGEND

— MAIN FLOW
— AUXILIARY FLOW

FOR VALVE, INSTRUMENT, SAMPLING PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DRAWING AND FOR MARK NUMBER CODES SEE DWG 5123A, 5123B.

NOTE A
ALL EQUIPMENT SHOWN CLASS 1 EXCEPT AS NOTED.

NOTE B
ALL EQUIPMENT, VALVES (EXCEPT SUPPLIED BY WESTINGHOUSE EXCEPT AS NOTED).

NOTE C
VALVE MARK NPS

NOTE D
VALVE MARK NPS

NOTE E
VALVE MARK NPS

NOTE F
VALVE MARK NPS

NOTE G
FOR COOK CLASS 1 & 2 INSTRUMENT CONNECTIONS, THE 121 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE.

NOTE H
FOR COOK CLASS 1 VALVES AND DRAINS, THE 121 BOUNDARY EXTENDS TO AND INCLUDES THE SECOND NORMALLY CLOSED VALVE OR EXTENDS TO AND INCLUDES THE DRAIN PLUG OR CAP AFTER A NORMALLY CLOSED VALVE.

NOTE I
FOR COOK CLASS 2 & 3 VALVES AND DRAINS, THE 121 BOUNDARY EXTENDS TO AND INCLUDES THE FIRST NORMALLY CLOSED VALVE.

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS UNLESS OTHERWISE NOTED.

THIS DRAWING MADE UNCLASSIFIED AND SUPERSEDED DWG 1-2-0145 REV. 22

HAND OPERATED VALVE IDENTIFICATION NUMBERS

ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

2. TAG NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
TAG NO. 2-NW-1000
APPEARS AS: 2-NW-1000

3. INSTRUMENT ROOT VALVE MARK NPS NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:
FOR SINGLE IMPLUSE: 1
FOR DOUBLE IMPLUSE: 2

FOR "MICROFILM" STATUS SEE REVISION RECORD FOR THIS DWG.

DATE 1-27-87 NO. 36 APPROVED

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

FLOW DIAGRAM
EMERG. CORE COOLING - UNIT NO. 1

DR. NO. 1-5143-36

DATE 1-27-87 NO. 36 APPROVED

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

FLOW DIAGRAM
EMERG. CORE COOLING - UNIT NO. 1

DR. NO. 1-5143-36

DATE 1-27-87 NO. 36 APPROVED

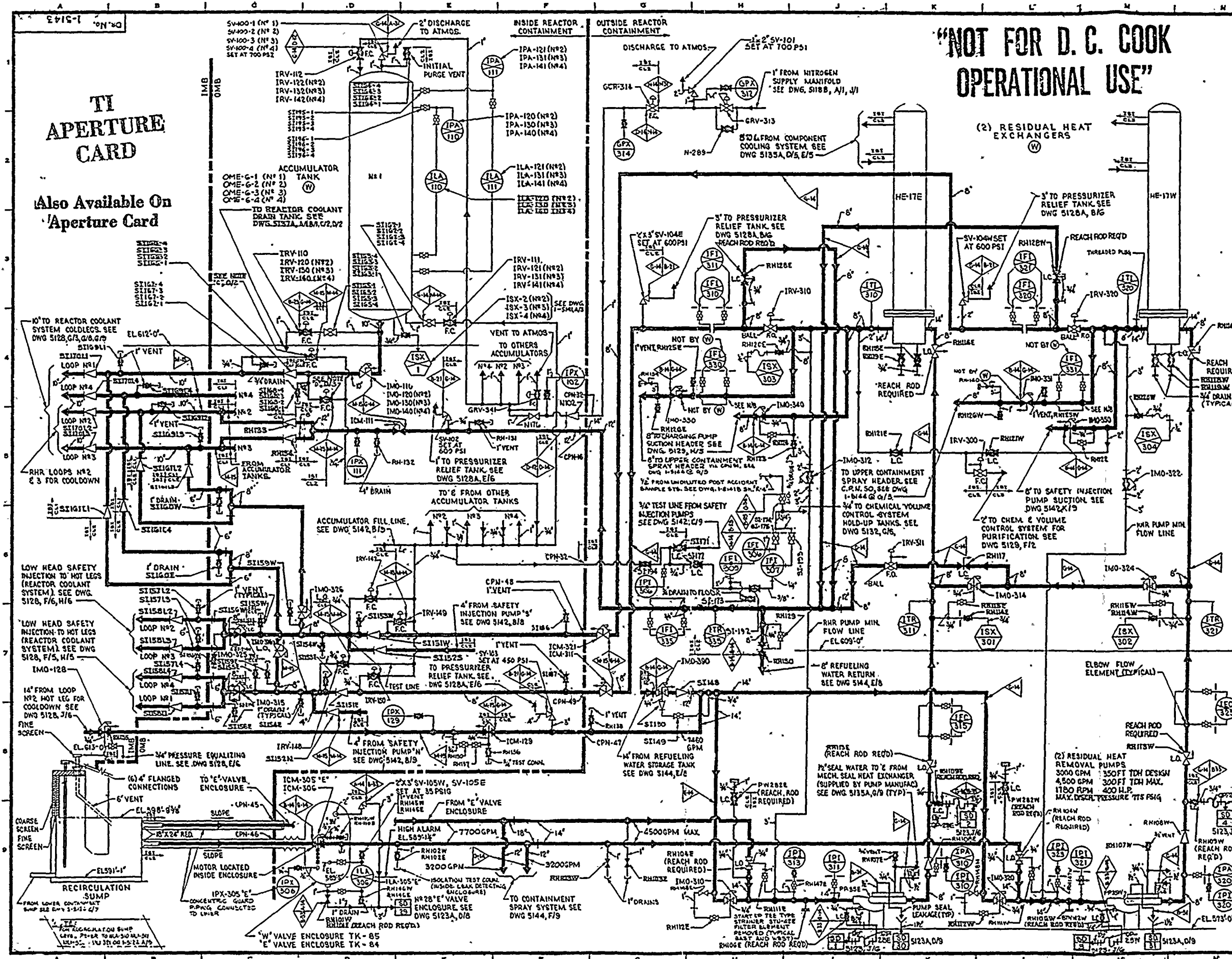
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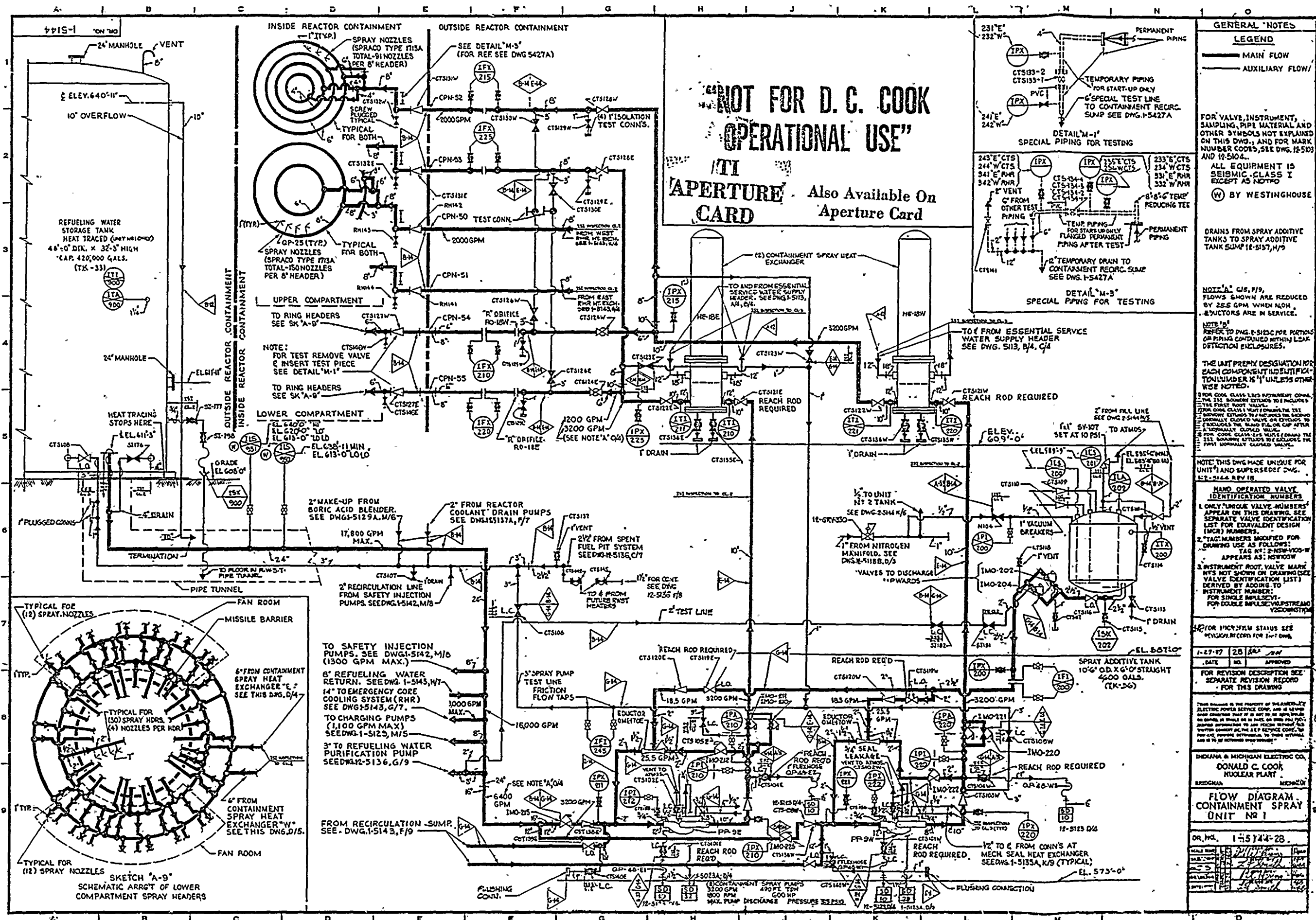
INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

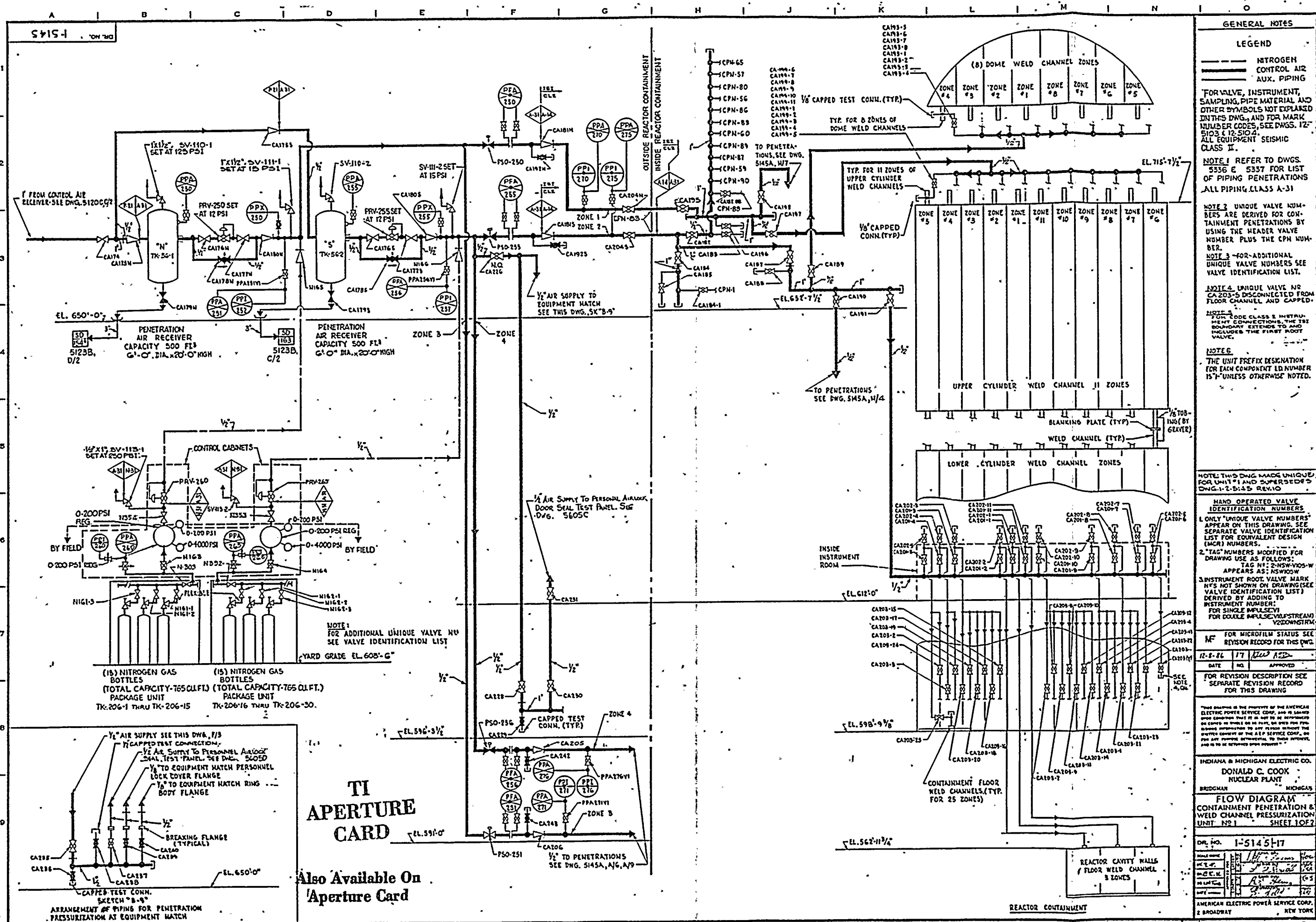
FLOW DIAGRAM
EMERG. CORE COOLING - UNIT NO. 1

DR. NO. 1-5143-36



8710130267-20





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TI APERTURE CARD

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Aperture Card

GENERAL NOTES

LEGEND

ETHYLENE GLYCOL
AIR
AUXILIARY PIPING

FOR VALVE, INSTRUMENT
SAMPLING, PIPE MATERIAL,
AND OTHER SYMBOLS NOT
EXPLAINED ON THIS DWG
AND FOR MARK NUMBER
CODES, SEE DWG 5146-12.

ALL EQUIPMENT VALVES AND
INSTRUMENTATION, BY
WESTINGHOUSE UNLESS
OTHERWISE NOTED

ALL PIPING C-21 EXCEPT
AS NOTED

ALL EQUIPMENT SEISMIC
CLASS II EXCEPT AS NOTED

NOTE: 1" E/2, E/7
GLYCOL PIPING
PENETRATES 125°
END WALL ONLY.

NOTE: 2" B/3, C/3, D/3
GLYCOL CONNECTIONS FOR
ICE BASKET WATER ADDITION
EQUIPMENT SEE PM-5307
AND 1-1, 2-1, 3-1, 4-1, 5-1, 6-1

NOTE: 3" FOR CODE CLASS 1, 2 & 3 INSTRUMENT
CONNECTIONS, THE 1" B/3
BOUNDARY EXTENDS TO AND
INCLUDES THE FIRST ROOT VALVE.

NOTE: 4" FOR CODE CLASS 1 VENTS AND DRAINS
THE 1" B/3 BOUNDARY EXTENDS TO
AND INCLUDES THE SECOND
ADJACENT CLOSED VALVE OR EXTENDS
TO AND INCLUDES THE BUND RAINING
OR CAP AFTER A NORMALLY CLOSED
VALVE.

NOTE: 5" FOR CODE CLASS 2 & 3 VENTS
AND DRAINS THE 1" B/3 BOUNDARY
EXTENDS TO AND INCLUDES THE
FIRST ADJACENT CLOSED VALVE.

NOTE: 6" THE UNIT PREFIX DESIGNATION FOR
EACH COMPONENT IDENTIFICATION
NUMBER IS "1" UNLESS OTHERWISE
NOTED.

HAND OPERATED VALVE
IDENTIFICATION NUMBERS
ONLY "UNIQUE VALVE NUMBERS"
APPEAR ON THIS DRAWING. SEE
SEPARATE VALVE IDENTIFICATION
LIST FOR EQUIVALENT DESIGN
NUMBERS.

2" TAG NUMBERS MODIFIED FOR
DRAWING USE AS FOLLOWS:
TAG NO: 2-NSW-VOS-W
APPEARS AS: NSWVOSW
INSTRUMENT ROOT VALVE MARK
NOT SHOWN ON DRAWING (SEE
VALVE IDENTIFICATION LIST)
DERIVED BY ADDING TO
INSTRUMENT NUMBER:
FOR SINGLE IMPULSE: VIMP
FOR DOUBLE IMPULSE: VIMPST
FOR VIBRATION: VVIB

FOR MICROFILM STATUS "SEE"
REVISION RECORD FOR THIS DWG
1-22-87 24 1/2 1/2

FOR REVISION DESCRIPTION SEE
SEPARATE REVISION RECORD
FOR THIS DRAWING

INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

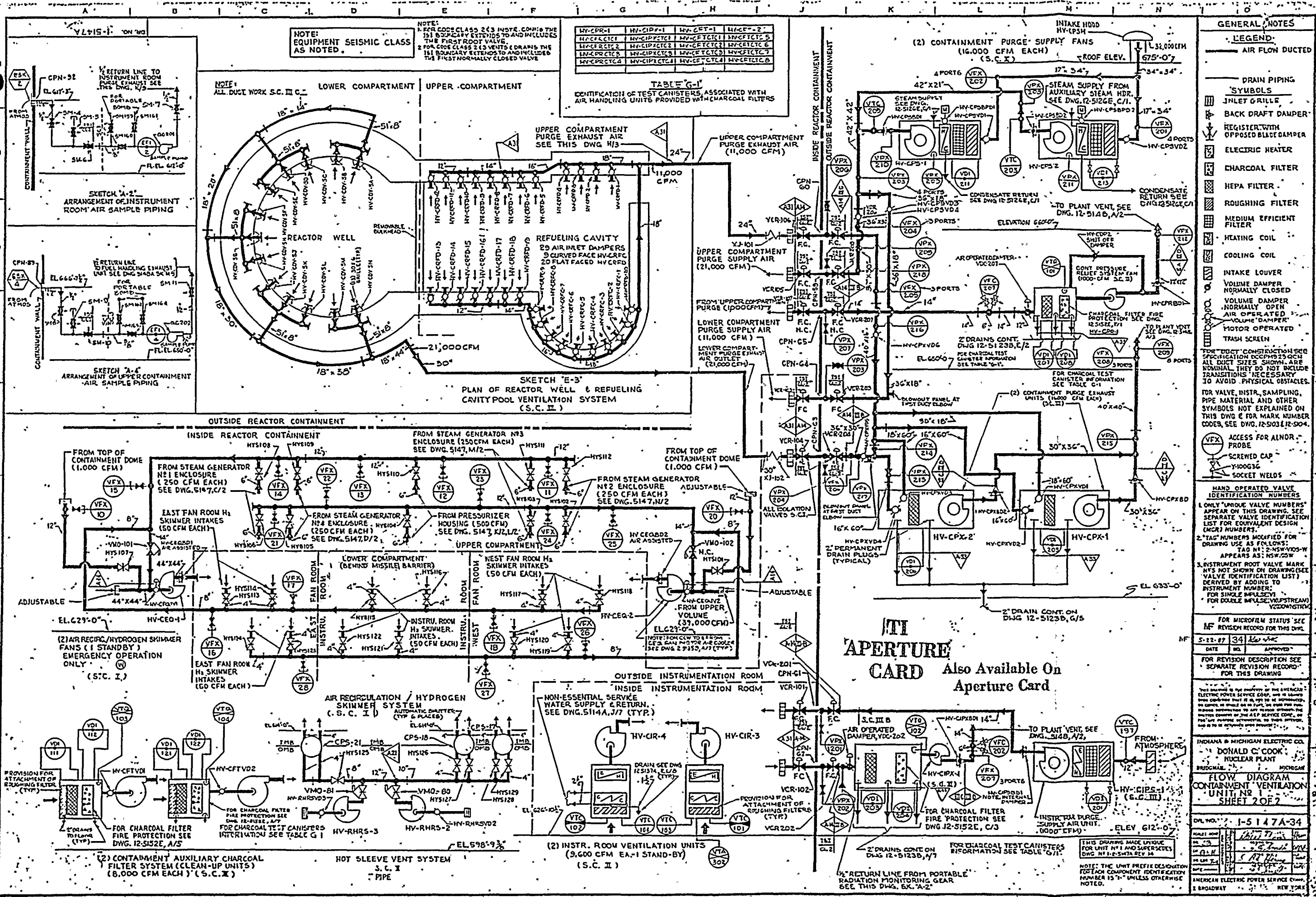
FLOW DIAGRAM
ICE CONDENSER
REFRIGERATION

UNIT NO. 1-5146B-24
DR. NO. 1-5146B-24
1-22-87 24 1/2 1/2
AMERICAN ELECTRIC POWER SERVICE CO.
2 BROADWAY NEW YORK

NOTE: THIS DWG MADE UNIQUE FOR
UNIT 1-5146B-24
DWG 1-2-5146B-12

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GENERAL NOTES

LEGEND:

AIR FLOW DUCTED

DRAIN PIPING

SYMBOLS

INLET GRILLE

BACK DRAFT DAMPER

REGISTER WITH OPPOSED BLADE DAMPER

ELECTRIC HEATER

CHARCOAL FILTER

HEPA FILTER

ROUGHING FILTER

MEDIUM EFFICIENT FILTER

HEATING COIL

COOLING COIL

INTAKE LOUVER

VOLUME DAMPER NORMALLY CLOSED

VOLUME DAMPER NORMALLY OPEN

AIR OPERATED VOLUME DAMPER

MOTOR OPERATED TRASH SCREEN

FOR "DUCT" CONSTRUCTION SEE SPECIFICATION SECTION 2.0. ALL DUCT SIZES SHOWN ARE NOMINAL. THEY DO NOT INCLUDE TRANSITIONS NECESSARY TO AVOID PHYSICAL OBSTACLES.

FOR VALVE, INSTR. SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG. 2 FOR MARK NUMBER CODES, SEE DWG. 12-5103 & 12-504.

VFX ACCESS FOR ALNOR PROBE

SCREWED CAP

Y-100G36 SOCKET WELDS

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "WHOLE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (UNC) NUMBERS.

2. TAG NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:

3. INSTRUMENT ROOT VALVE MARK "V" IS NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER FOR SINGLE IMPLUSEV FOR DOUBLE IMPLUSEV (V2IMPLUSEV).

FOR MICROFILM STATUS SEE

REVISION RECORD FOR THIS DWG

DATE NO. APPROVED

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

FLOW DIAGRAM
CONTAINMENT VENTILATION
UNIT NR 1
SHEET 2 OF 2

DWG NO. 1-5147A-34

DATE 12-1-74

BY 12-1-74

CHECKED 12-1-74

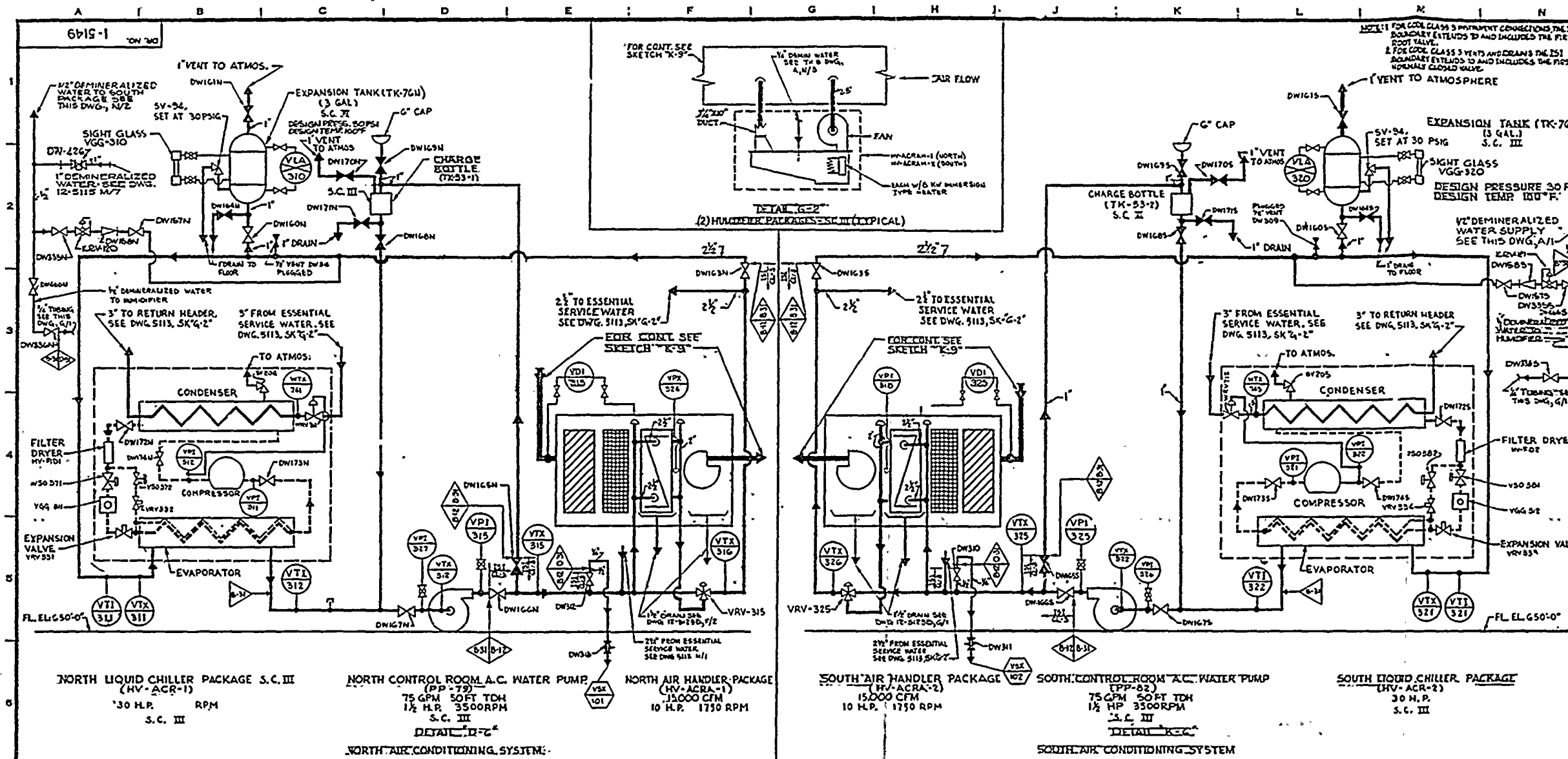
APPROVED 12-1-74

AMERICAN ELECTRIC POWER SERVICE CO.
2 BROADWAY
NEW YORK

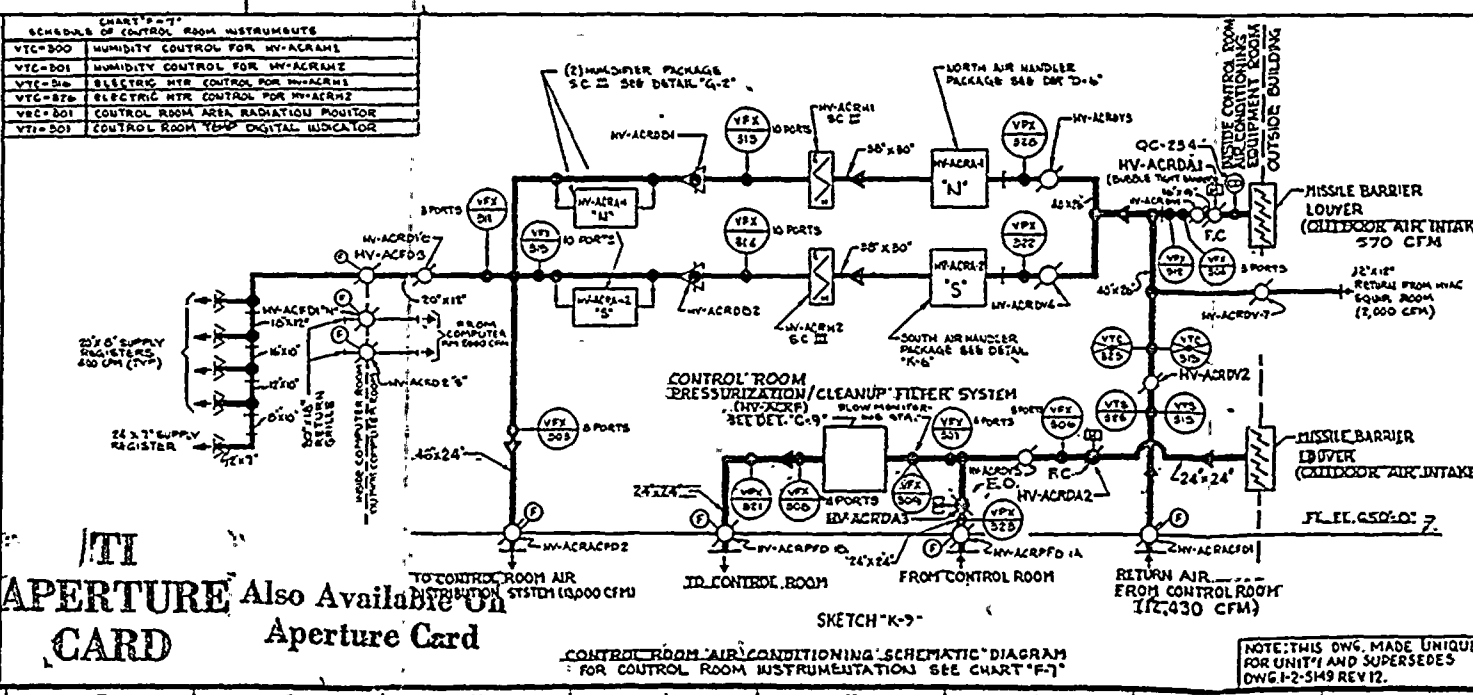
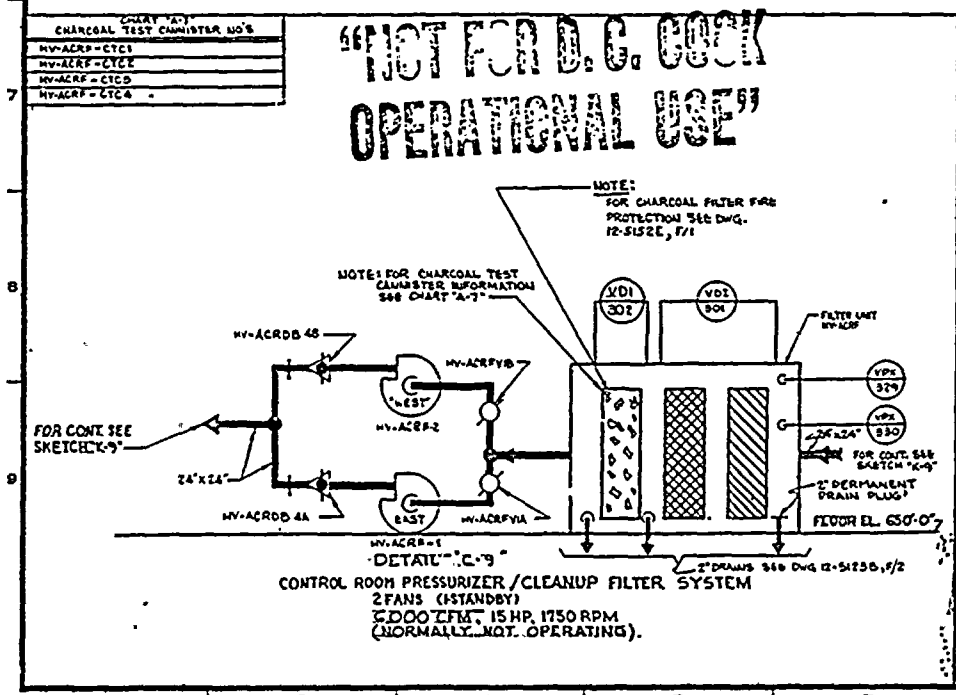
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APERTURE CARD
Also Available On
Aperture Card

YOUNG AMERICAN BOOK
YOUNG AMERICAN BOOK



- GENERAL NOTES**
- LEGEND**
- AIR
 - WATER
 - REFRIGERANT
- FOR VALVE INSTRUMENT, SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS, NOT EXPLAINED ON THIS DWG., AND FOR MARK NO. CODES, SEE DWG. 2-5403 & 2-5404.
- - MANUAL VOLUME DAMPER
 - - NORMALLY OPEN
 - - NORMALLY CLOSED
 - ⊗ - MOTOR OPERATED VOLUME DAMPER
 - ⊕ - BACK DRAFT DAMPER
 - ⊙ - FIRE DAMPER
 - ⊗ - CHLORINE DETECTOR SENSOR
 - ▨ - ROUGHING FILTER
 - ▨ - MEDIUM EFFICIENT FILTER
 - ▨ - ABSOLUTE FILTER
 - ▨ - CHARCOAL FILTER
 - ▨ - CHILLED WATER COIL
 - ▨ - ELECTRIC BOILER HEATER, 2 STAGE, 15 KW EACH STAGE
 - ⊗ - CONTROL OFF - REFRIGERANT LINE TEMPERATURE
 - ⊗ - RETURN AIR REGISTERS
- THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS "1" UNLESS OTHERWISE NOTED.
- ALL EXHIBIT S.C.I. EXCEPT AS NOTED.
- HAND OPERATED VALVE IDENTIFICATION NUMBERS**
1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (H.C.A.) NUMBERS.
2. TAG NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
- TAG NO. 2-NON-VISIBLY APPEARS AS: 15N1000
3. INSTRUMENT ROOT VALVE MARKINGS NOT SHOWN ON DRAWING. SEE VALVE IDENTIFICATION LIST DERIVED BY ADDING TO INSTRUMENT NUMBER, FOR SINGLE SAMPLE, FOR DOUBLE IMPULSE/UPSTREAM/VELOCITY.



FOR MICROFILM STATE: ALL PERSONS 17 AND OVER FOR THE P.A.

DATE: 20/10/67

APPROVED: [Signature]

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN MICROLUX

FLOW DIAGRAM CONTROL ROOM VENTILATION UNIT N21

DR. NO. 1-5149-20

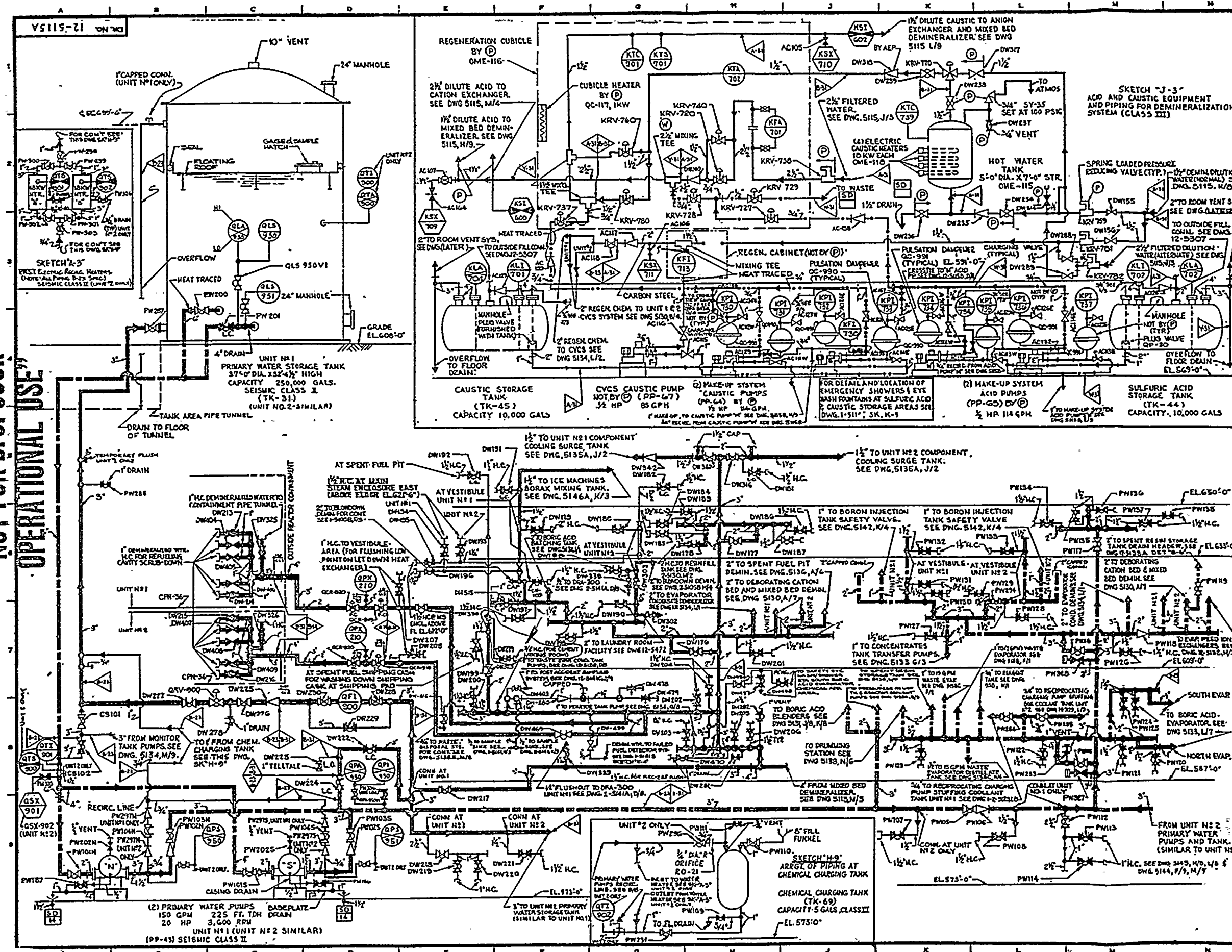
REVISIONS:

NO.	DATE	BY	CHKD.	DESCRIPTION
1	10/10/67	[Signature]	[Signature]	ISSUED
2	10/10/67	[Signature]	[Signature]	REVISION

AMERICAN ELECTRIC POWER SERVICE CORP.
2 BROADWAY NEW YORK

To: Dillip
From: L. Bernardo

"NOT FOR D.C. COOK"
OPERATIONAL USE



GENERAL NOTES

LEGEND

- MAKE-UP WATER
- PRIMARY WATER
- REGEN. PIPING
- CONC. ACID
- CONC. CAUSTIC
- AUXILIARY PIPING

SYMBOLS

- (P) PERMIT
- H.C. HOSE CONNECTIONS
- FOR VALVE, INSTRUMENT SAMPLING PIPE MATERIAL, AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG., AND FOR MARK NUMBER CODES, SEE DWG. 5104.

SKETCH "J-3"
ACID AND CAUSTIC EQUIPMENT AND PIPING FOR DEMINERALIZATION SYSTEM (CLASS III)

SKETCH "H-9"
ARGT. OF PIPING AT CHEMICAL CHARGING TANK (TK-69) CAPACITY 5 GALS. CLASS III

THE UNIT PREFIX DESIGNATION FOR EACH COMPARTMENT IDENTIFICATION IS 12-5115A-41.

HAND OPERATED VALVE IDENTIFICATION NUMBERS

- ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (H.C.) NUMBERS.
- "TAG" NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
TAG NO. 12-5115A-41
APPEARS AS: 12-5115A-41
- INSTRUMENT VALVE MARKING IS NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER FOR SUCCESSIONAL FOR DOUBLE IMPULSE VALVE CONNECTIONS.

DATE 12-2-82 **BY** J. J. J. **APPROVED**

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

FLOW DIAGRAM
MAKE-UP WATER SYSTEM
PRIMARY WATER PUMPS AND TANKS
(SIMILAR TO UNIT NO. 1)
EXCEPTIONS ARE NOTED

DR. NO. 12-5115A-41

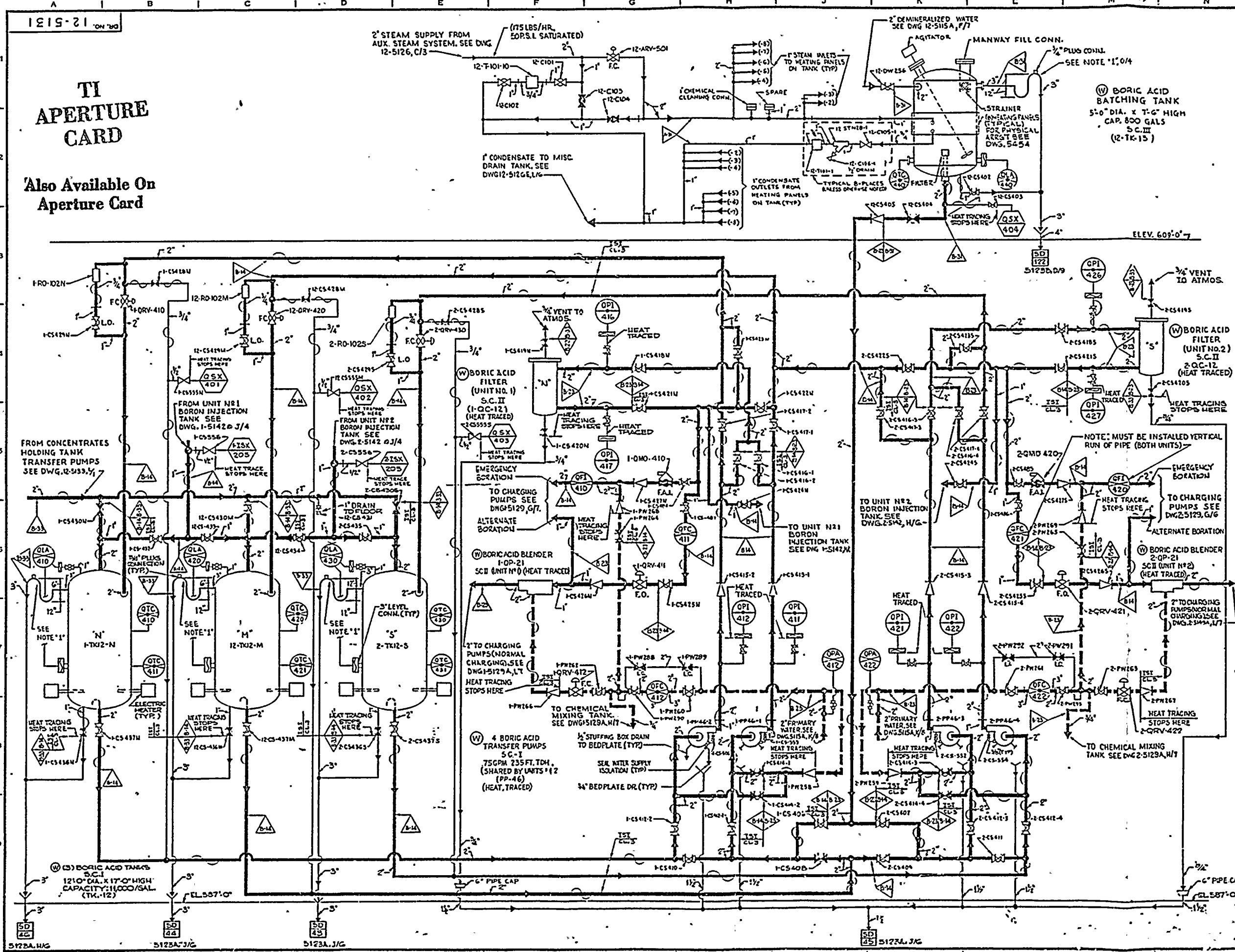
NO.	DATE	BY	APPROVED
1	12-2-82	J. J. J.	
2			
3			
4			
5			
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7			
8			
9			
10			

INDIANA & MICHIGAN ELECTRIC POWER SERVICE CO.
2 BROADWAY
NEW YORK

1215-21

TI APERTURE CARD

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GENERAL NOTES

LEGEND
BORATED WATER
PRIMARY WATER
AUXILIARY PIPING
SYMBOLS
DILPHRAGM SEAL

FOR VALVE, INSTRUMENT, SAMPLING, PIPE MATERIAL AND OTHER SYMBOLS NOT EXPLAINED ON THIS DWG., AND FOR MARK NUMBER, CODES, SEE DWG'S 125103 & 5104.

BY WESTINGHOUSE

ALL VALVES AND INSTRUMENTATION SUPPLIED BY (W) EXCEPT AS NOTED.

EQUIPMENT SUPPLIED BY (W) AS NOTED.

NOTE: 1" A/G, C/G, D/G, L/I OVERFLOW LOOP SEALS TO BE FILLED WITH DEMINERALIZED WATER. WHENEVER TANKS ARE OVERFLOWED, LOOP SEALS ARE TO BE FLUSHED TO PREVENT BORIC ACID CRYSTALLIZATION.

SEISMIC CLASSIFICATION OF EQUIPMENT AS NOTED

NOTES
FOR CLASS-3 INSTRUMENT CONNECTIONS THE 1ST BOUNDARY EXTENDS TO AND INCLUDES THE FIRST ROOT VALVE

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS '12' UNLESS OTHERWISE NOTED

HAND OPERATED VALVE IDENTIFICATION NUMBERS
1. ONLY 'UNIQUE VALVE NUMBERS' APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.
2. 'TAG' NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS:
TAG NO: 2-45W-VI05-W APPEARS AS: 12-45W-VI05
3. INSTRUMENT ROOT VALVE MARK 'RVS' NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER:
FOR SINGLE IMPULSE: VIFPSTREAN/ V200Y6STRV
FOR DOUBLE IMPULSE: VIFPSTREAN/ V200Y6STRV

H FOR MICROFILM STATUS SEE REVISION RECORD FOR THIS DWG

1-2-37 19 1215-21
DATE NO. APPROVED
FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

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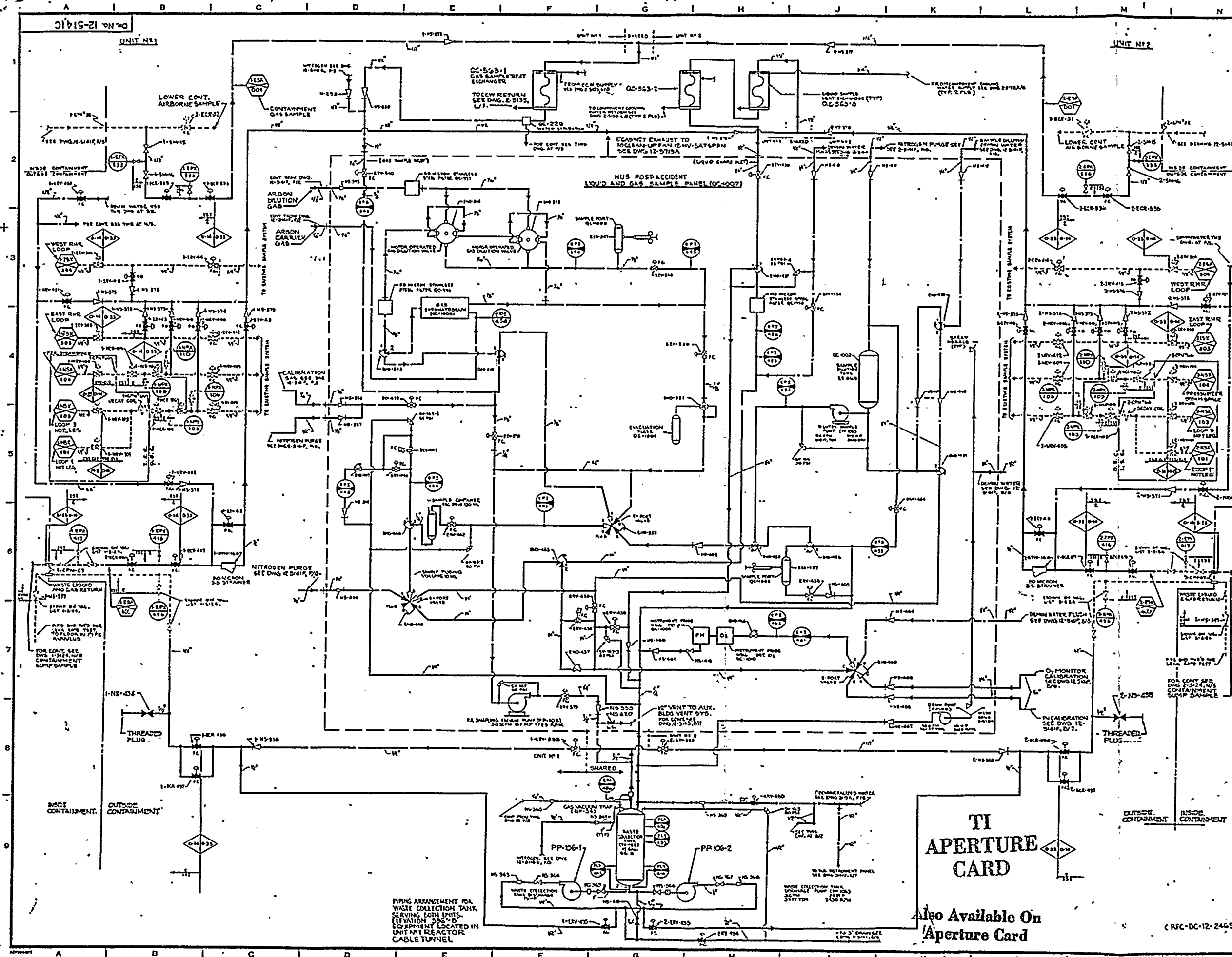
INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT
BRIDGMAN MICHIGAN

FLOW DIAGRAM
CVCS-BORON
MAKE-UP
UNITS NO. 1 & 2

DWG. NO. 12-5131-194

DATE 12/1/67
BY 1215-21
CHECKED 1215-21
APPROVED 1215-21
AMERICAN ELECTRIC POWER SERVICE CORP.
2 BROADWAY

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GENERAL NOTES

LEGEND

- LIQUID PIPING
- STEAM, WATER PIPING
- GAS PIPING
- EXHAUST PIPING

NOTES:

- 0 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 1 FOR DETAILS OF LOWER CONT. AIRBORNE SAMPLE SYSTEM SEE FLOW DIAGRAM 12-5141C-1.
- 2 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 3 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 4 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 5 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 6 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 7 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 8 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
- 9 THE FLOW DIAGRAM AS SHOWN IS FOR THE LOWER CONT. AIRBORNE SAMPLE SYSTEM.
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NOTE: THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION IS 12-5141C-1 UNLESS OTHERWISE NOTED.

HAND OPERATED VALVE IDENTIFICATION NUMBERS: ONLY UNIQUE VALVE NUMBERS APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (MCR) NUMBERS.

TAG NUMBERS MODIFIED FOR DRAWING USE AS FOLLOWS: TAG NUMBERS AS SHOWN APPEAR AS: NSW105W (INSTRUMENT ROOT VALVE MARK NOT SHOWN ON DRAWING. SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER FOR SINGLE IMPULSE: V1 FOR DOUBLE IMPULSE: V1UPSTREAM, V2DOWNSTREAM.

DATE 1-22-87 **BY** B. J. J. **APPROVED**

FOR REVISION DESCRIPTION SEE SEPARATE REVISION RECORD FOR THIS DRAWING

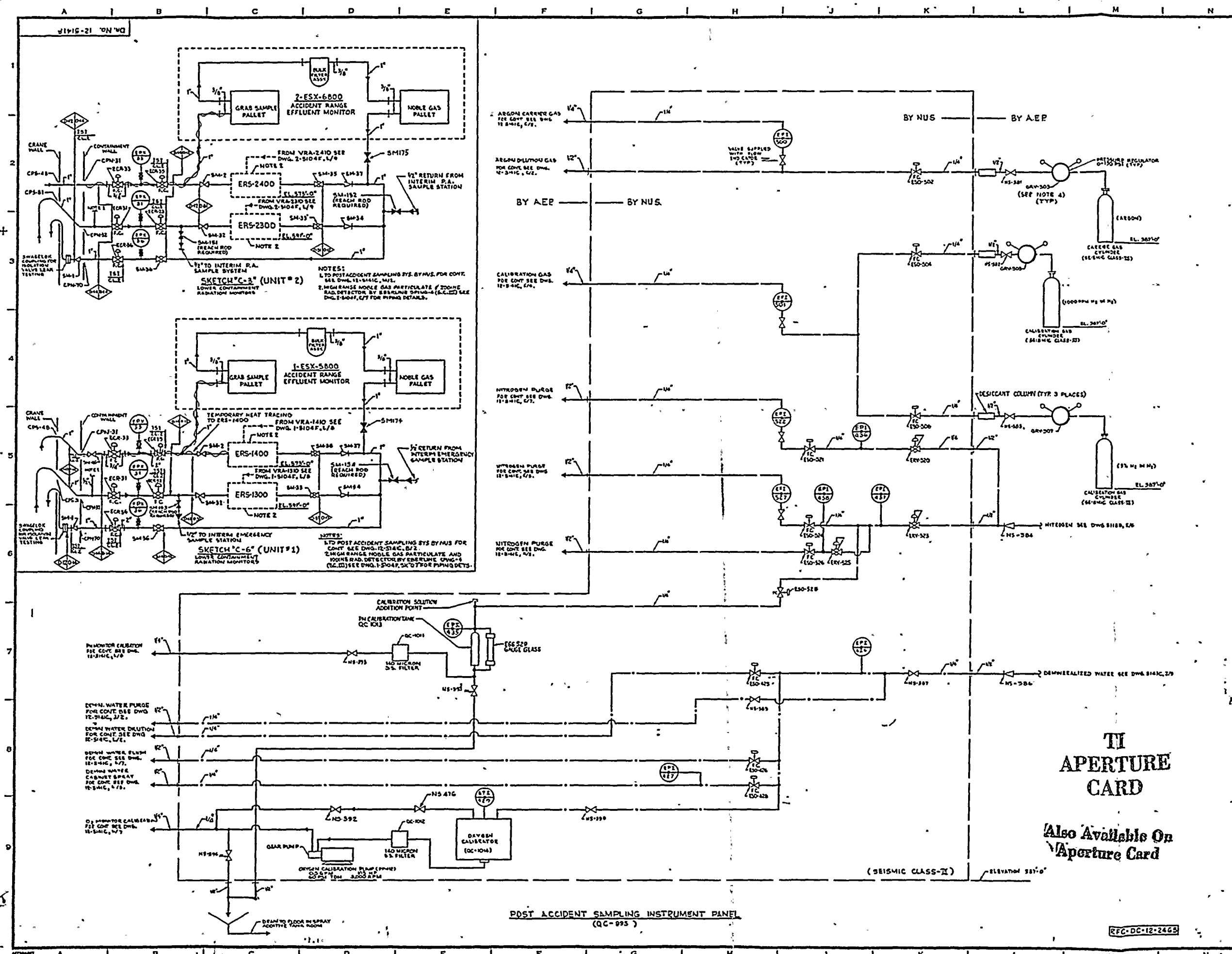
INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK
NUCLEAR PLANT

BRIDGMAN **MICHIGAN**

FLOW DIAGRAM
POST-ACCIDENT LIQUID
AND GAS SAMPLING
UNIT NO. 12-5141C-8

DR. NO. 12-5141C-8

SCALE: NONE
2.5" = 1'-0"
1" = 1'-0"
1/2" = 1'-0"
1/4" = 1'-0"
1/8" = 1'-0"
1/16" = 1'-0"
1/32" = 1'-0"
1/64" = 1'-0"
1/128" = 1'-0"
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GENERAL NOTES

LEGEND

- LIQUID PIPING.
- SEMI-WATER
- GASES
- AUXILIARY

NOTES:

1. ALL EQUIPMENT IS SEISMIC CLASS-II EXCEPT AS NOTED.

2. THIS INSTRUMENT PANEL AS PER SPEC. DC-12-5141F-6 (REV. 1) SHALL BE INSTALLED IN THE POST ACCIDENT SAMPLING INSTRUMENT PANEL ROOM AND SHALL BE PROTECTED BY AN AUTOMATICALLY OPERATING VALVE WITH UP AND DOWN STREAM PRESSURE SENSORS AND SAFETY RELIEF.

THE UNIT PREFIX DESIGNATION FOR EACH COMPONENT IDENTIFICATION NUMBER IS "12" UNLESS OTHERWISE NOTED.

HAND OPERATED VALVE IDENTIFICATION NUMBERS

1. ONLY "UNIQUE VALVE NUMBERS" APPEAR ON THIS DRAWING. SEE SEPARATE VALVE IDENTIFICATION LIST FOR EQUIVALENT DESIGN (NCR) NUMBERS.

2. TAG NUMBERS MODIFIED FOR DEAWING USE AS FOLLOWS:

TAG NO. 2-NSW-V105-W APPEARS AS: NSW105W

3. INSTRUMENT ROOT VALVE MARK HAS NOT SHOWN ON DRAWING (SEE VALVE IDENTIFICATION LIST) DERIVED BY ADDING TO INSTRUMENT NUMBER: FOR SINGLE PULSE: V1 FOR DOUBLE PULSE: V1P (UPSTREAM) V2 (DOWNSTREAM)

1-21-87 6 140 112

DATE IN APPROVED

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