John D. O'Toole
Vice President

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October 22, 1985

Re: Indian Point Unit No. 2
Docket No. 50-247

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

ATTN: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing

Dear Mr. Varga:

This letter is in response to your letters of October 26, 1984 and August 27, 1985 which transmitted a list of questions resulting from staff's review of the Indian Point Unit No. 2 Inservice Testing Program Summary submitted by letter dated February 16, 1984.

Enclosure 1 to this letter provides our response to each of the staff questions. As a result of our ongoing review of overall program implementation, the need for clarification, revision and in certain instances, additional relief requests has become apparent. Consequently, Enclosure 2 to this letter lists several changes we plan to implement as Revision 1 to the program summary submitted February 16, 1984. Both Con Edison-initiated changes and changes necessitated by our response to the staff's questions are identified therein. New Con Edison-initiated relief requests are contained in enclosure 3. Upon receipt of NRC concurrence we will submit a revised IST program summary to reflect these proposed changes.

Should you or your staff have any additional questions, please contact us.

Very truly yours,

for J. O'Toole

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Enclosure 1

Response to NRC's October 26, 1984
Questions on the Indian Point No. 2
Pump and Valve Inservice Testing Program

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October, 1985

General Question and Comments

1. Valves that have been identified as Passive in the IST program do not require a request for relief from exercising according to IWV-3700.

Response:

Acknowledged. Please disregard any relief requests in this category. We will retain these in the program for information only at this time. If they are not required in subsequent updates they will be eliminated at that time.

2. Provide the documentation that ensures that IWV-3300 is being met. (Remote position indication verification).

Response:

A copy of a sample data sheet used to document the verification is provided in Attachment A to this enclosure. The visual observation requirement is under administrative control to assure verification at least once every two years.

3. Provide the maximum value of limiting stroke time for all power operated valves in the IST program.

Response:

The limiting stroke times used for power operated valves (given in seconds) are contained in Attachment B to this enclosure. These stroke times are being provided for information only. Consistent with IWV-3413, limiting valve stroke times are to be specified by the owner; as such, they are subject to change under the requirements of 10 CFR 50.59 and other applicable criteria.

4. Auxiliary coolant relief requests No. 1,5 and 6 and CVCS relief requests No. 4 and 5 may have to be revised if the reactor coolant pumps are not secured each cold shutdown because the alternate testing proposed does not specify a test interval.

Response:

Reactor Coolant pump seal operating pressure and flow requirements preclude operating these pumps at cold shutdown. The alternate testing should be interpreted as cold shutdown with no other qualifications.

Valves

A. Air Ejector to Containment (9321-F-2025)

1. Review the safety function of valves PCV-1231 and PCV-1233 to determine if they should be categorized A.

Response:

Valves PCV-1231 and PCV-1233 provide pressurization air from the Penetration and Liner Weld Joint Channel System to the interspace between containment isolation valves PCV-1229 and PCV-1230 on the Steam Jet Air Ejector Discharge Line to containment. Valves PCV-1231 and PCV-1233 are not containment isolation valves (per the IP#2 FSAR and Tech. Specs.) hence they have no seat leakage limits and need not be categorized as category A.

The function of the Penetration and Liner Weld Joint Channel System is to maintain an air seal at the containment isolation valves at a pressure in excess of containment accident pressure thereby providing a leak tight barrier to the release of fission products. On receipt of a Phase A containment isolation signal, valves PCV-1231 and PCV-1233 will receive an open signal permitting air from the Penetration and Liner Weld Joint Channel System to pressurize the interspace between valves PCV-1229 and PCV-1230.

Since valves PCV-1229 and PCV-1230 are normally closed during reactor operation, valves PCV-1231 and PCV-1233 are necessarily normally open and supplying penetration pressurization air to the interspace between PCV-1229 and PCV-1230. As such, valves PCV-1231 and PCV-1233 are normally maintained in the position required for their safety function and are appropriately classifed as B-passive valves on Pg 5 of the Penetration and Liner Weld Joint Channel System summary with no testing required.

Although valves PCV-1229 and PCV-1230 are normally closed during reactor operation, under certain circumstances, plant operation may proceed with these valves open. In that situation valves PCV-1231 and PCV-1233 would not be passive and their safety function would be to close. Accordingly we will revise the testing requirements for these valves to stroke, time and fail-safe quarterly.

B. Auxiliary Coolant System (A227781-0) (9321-F-2720-39)

1. What is the P&ID location of valve 793?

Response:

The valve identified as 795 on P&ID A227781-0 at coordinate F2 is in fact valve 793. A revised drawing is being prepared.

2. Why are valves 744, 743, and 1870 designated NTR (no testing required per IWV-3700) and then exercised at an alternate frequency?

Response:

As used in these instances, the NTR designation was meant to imply only that no testing of fail safe provisions is required for these valves. As these valves are all motor operated and fail as-is, no such testing is applicable. A corrected summary sheet will be provided.

3. What is the normal position of valves 730 and 731? Are these valves stroke timed when they are exercised?

Response:

Table entries for the normal position of valves 730 and 731 (Pg 6, Auxiliary Coolant System) are incorrect. As indicated in relief request No. 11 these valves are closed during normal plant operation and are required to open when placing the plant onto RHR cooling to reach cold shutdown. These valves are timed when stroked at cold shutdowns. A corrected summary sheet will be provided.

4. What is the normal position of valves 746 and 747?

Response:

Table entries for the normal position of valves 746 and 747 (Pg 6, Auxiliary Coolant System) are incorrect. As indicated in relief request No. 9, these valves are maintained closed during normal plant operation and required to open upon receipt of a safety injection signal. In addition, at least one of these valves will be open when the plant is in the RHR cooldown mode. A corrected summary sheet will be provided.

5. Should valves identified as 782B, 783C and 784D actually be 781B, 781C and 781D?

Response:

Yes. The designations 782B, 783C and 784D (Pg 8, Auxiliary Coolant System) are in fact 781B and 781C and 781D. A corrected summary sheet will be provided.

6. Provide a more detailed technical justification for not full-stroke exercising valves 738A&B during cold shutdowns.

Response:

By design these valves are full-stroke exercised when placing the plant onto RHR cooling to reach cold shutdown. Accordingly they are full-stroke exercised at cold shutdowns. A revised summary sheet and relief request will be provided.

7. Can valve 744 be full-stroke exercised when entering or leaving the cold shutdown condition?

Response:

It is physically possible to full-stroke exercise valve 744 when entering or leaving the cold shutdown condition. However, its failure in the closed position during such an exercise would preclude reinitiating RHR cooling. Such a failure would render the RHR system inoperable, requiring that decay heat removal be accomplished by alternate and inherently less reliable means. Since valve 744 is normally deenergized open and aligned for LHSI/RHR flow we believe such exercising at cold shutdown will increase the risk of losing decay heat removal capability and as such, is unnecessary and unwarranted. Full-stroke testing valve 744 at refuelings will provide adequate assurance that this valve will remain operable.

8. What is the safety function of valves 744A,B,C&D?

Response:

There are no valves at Indian Point Unit No. 2 identified as 744A,B,C&D. If this request is referring to valves 774A,B,C&D (Auxiliary Coolant Relief Request No. 10), the safety function of those valves is to remain open to supply cooling water to the Reactor Coolant Pump thermal barrier heat exchanger for those events requiring the operation of those pumps.

C. Boiler Feedwater (9321-F-2019-31)

1. Should BFD-72 be included in the IST program?

Response:

BFD-72 at coordinate location H-2 on drawing no. 9321-F-2019-31 is a manual gate valve in the drain from the turbine driven auxiliary feedwater pump. This valve is normally open to permit the return of cooling water from the turbine driven auxiliary feedwater pump to the condensate storage tank. This valve is considered to be a passive valve and hence no testing is required. For purposes of completeness we will add this valve to the summary (Pg 6 of Boiler Feedwater) with no testing required. A revised summary sheet will be provided.

D. Chemical and Volume Control System (9321-F-2736-31) (A208168-2)

1. In reference to Relief Requests 7, 8, and 10; what are the consequences of "upsetting the normal plant conditions"?

Response:

Valves LCV-112B and 290 (Relief Requests 8 and 10 respectively) are associated with the emergency boration path from the refueling water storage tank. Valve 333 (Relief Request 7) is associated with the emergency boration path from the boric acid storage tanks. Both the refueling water storage tank and boric acid storage tanks contain high concentrations of borated water for emergency shutdown purposes. Cycling LCV-112B, 290 or 333 would result in aligning these sources of high concentrated boric acid solution to the charging pump suction. Charging pump flow must be maintained to provide injection flow to the reactor coolant pump seals. Hence cycling any of these valves would result in a reactivity transient due to the injection of high concentrated boric acid solution which, if left unchecked, would cause a reactor shutdown. Such cycling during power operation is undesirable, hence cold shutdown cycling has been proposed. Cold Shutdown testing will provide assurance that these valves will function as required.

2. Provide a more detailed technical explanation why valve 292 cannot be exercised during power operation?

Response:

Valve 292 is a check valve in the suction line from the Volume Control Tank to the Charging Pumps. As the charging pumps must function continuously during power operation to maintain injection flow to the reactor coolant pump seals, any test that would cycle valve 292 closed would cause a loss of suction to the charging pumps with potential RCP seal damage. Alternate suction supplies are from the various emergency boration paths which are unacceptable for use during normal operation as they contain high concentrations of borated water which, if injected, would result in a reactivity transient and subsequent reactor shutdown by boric acid addition independent of control rods.

The backflow prevention function of valve 292 is not a safety function, but rather one of equipment protection. As long as water is available at the charging pump suction, injection will occur. If valve 292 failed in the open position when emergency boration is required, water from the RWST and/or boric acid storage tanks would fill the suction piping to a level considerably higher than the charging pump suction (El. 82'), thus assuring a positive supply of injection water even with valve 292 in the open position. Accordingly we are deleting valve 292 from the IST program along with relief request no. 11. A revised summary sheet will be provided.

3. Provide a more detailed technical explanation why valves 4000, 4001, 4002, 4003, 4004 and 4005 cannot be exercised at the code specified frequency.

Response:

These are check valves on the charging pump discharge. Their safety function is to open to permit the charging pumps to inject high concentrated boric acid solution when emergency boration is required. The open position of these valves will be verified in conjunction with the charging pump test on a quarterly basis by verifying adequate charging pump flow through the valves. Accordingly, we are deleting relief request 14 for these valves. A revised summary sheet will be provided.

4. What is the P&ID location of valves 240A, 240B, 240C, 240D?

Response:

The 240 designation is a typographical error. The valves in question are valves 249A, B, C & D at coordinates A5 on drawing no. 9321-F-2736-31. These valves are manual block valves on either side of the reactor coolant pump seal injection filters. A revised summary sheet will be provided. Valves 240A, B, C & D are instrument root valves for the reactor coolant pump seal flow instrumentation; not required to be included in the IST program.

5. What is the safety function of valve HCV-142?

Response:

HCV-142 is a hand controlled regulating valve in the charging pump discharge path. It's function is to permit balancing the flow between the charging path to the loops and the RC pump seal injection path. In practice, HCV-142 is maintained in the open position. Charging flow to the loops is adjusted by changing charging pump speed. HCV-142 is in the flow path for emergency boration. However, since HCV-142 is open during power operation, and its safety function with respect to the capablity to emergency borate is to remain open, it is considered to be a passive valve, and as such no testing has been required. HCV-142 has no containment isolation function; containment isolation is provided by valves 205, 226 and 227 for the charging line.

6. Has a method been selected to verify closure of valves 251A-H?

Response:

Upon review, we have concluded that valves 251A through H do not meet the criteria for pressure isolation valves (i.e., they do not form a boundary between high and low pressure systems), and that as such leakage testing is not required. The charging pumps and connected seal injection piping including valve 251A-H, are rated for the same pressure as the Reactor Coolant System. Accordingly, a revised summary sheet will be provided, relief request 17 will be deleted, and relief request 16 will be revised.

7. Provide a more detailed technical explanation why valves 204A and 204B cannot be exercised during power operation.

Response:

Valves 204 A&B can be exercised quarterly during power operation. A revised summary sheet (Pg 7 of Chemical and Volume Control) providing for quaterly stroking, timing and fail safe verification will be provided. Relief request no. 18 for these valves will be deleted.

8. How are valves 210 A&B verified shut during cold shutdown?

Response:

We have concluded that the only safety function of these valves is to open to provide for emergency boration . This is contrary to relief request no. 19, which suggested closure to prevent backflow in the event of a charging line break as a safety function. These lines are seismic Class I; accordingly they are assumed to remain intact under any design basis event. Valves 210 A&B will be stroked (forward flow) on a quarterly basis in conjunction with the stroke of valves 204 A&B during the charging pump test. A revised summary sheet will be provided. Relief request no. 19 will be deleted.

9. Review the safety function of valves 200A, 200B and 200C to determine if they perform a containment isolation function.

Response:

We have reviewed the safety function of valves 200A, 200B and 200C. These valves are located on the letdown line inside containment. Containment isolation for the letdown line is provided by valves 201 and 202 outside containment. This is confirmed by a review of the IP#2 FSAR and Tech. Specs. These valves do, however, receive a containment isolation signal to close in order to prevent discharge through relief valve 203 in the event of a spurious safety injection or containment isolation signal and closure of valves 201 and 202.

10. Provide a more detailed technical justification for not full-stroke exercising valve LCV-112C during power operation.

Response:

Valve LCV-112C is in the suction line to charging pumps which provide for reactor coolant makeup and seal injection flow. The reactor coolant pump seals require injection flow whenever the pumps are operating. Stroking LCV-112C closed during normal operation would require realigning the charging pump suction to an alternate supply. Available alternate supplies from the refueling water storage tank and boric acid storage tanks both contain high concentrations of borated water which if injected, would result in a reactivity transient and eventual plant shutdown. Cold shutdown testing will provide assurance that these valves will function as required.

11. Provide the specific technical justification for not exercising valves 332 and 4924 at the Code specified frequency?

Response:

As noted in relief request no. 12 and no. 15, these check valves can only be exercised when the emergency boration path is operating. These valves are in the emergency boration path from the boric acid storage tanks. These tanks contain highly concentrated boric acid solution which if injected during normal operation would result in a reactivity transient and eventual plant shutdown. Cold shutdown testing, as proposed, will provide assurance that these valves will function as required.

12. Is the jogging frequency of the boric acid pumps sufficient to full-stroke exercise valves 362A&B at the code specified frequency.

Response:

Relief request no. 13 for valves 362A&B will be deleted. These valves will be forward flow exercised at the code frequency during the quarterly boric acid transfer pump test. A revised summary sheet will be provided.

E. Condensate and Boiler Feed Pump (9321-F-2018-20)

1. Has a method been selected to verify operability of valves CT-25, CT-28, and CT-31?

Response:

As indicated in Relief Request No. 2 (Condensate and Boiler Feed Pump), valves CT-25, 28 and 31 are check valves in the supply line from the city water supply to the auxiliary feedwater pumps. The city water supply serves as a back-up (unlikely to be called upon) to the inventory in the condensate storage tank. The condensate storage tank is the primary source of auxiliary feedwater. The supply line from the condensate storage tank to the auxiliary feedwater pumps is independent of the city water supply line and hence does not require the use of either CT-25, 28 or 31. No credit is taken for the city water supply to the auxiliary feedwater pumps in the FSAR safety analyses. In addition, there are other sources of auxiliary feedwater available that do not require the use of CT-25, 28 or 31, these include large inventories available in the condenser hotwells and the Indian Point Unit No. 1 water factory.

We have reviewed the physical piping arrangement to determine whether the installation of test connections to facilitate part-stroke testing is feasible. Due to valving arrangement the installation of such connections is impractical. Recognizing the several sources of alternate supplies of auxiliary feedwater, the high likelihood that the city water supply will never be called upon, and the hardship that would be imposed in order to accomplish full flow testing, we believe that periodic disassembly of these valves at five year intervals, sufficient to verify disk freedom of movement, is a practical alternative. A revised summary sheet and relief request are being provided.

2. Provide the specific technical justification for not full-stroke exercising valves CT-26, 29 and 32 any time other than refueling outages? (Reference Relief Request 1).

Response:

Full stroke exercising these auxiliary feedwater pump suction check valves requires that the associated auxiliary feedwater pump be operating. Operating these pumps during normal operation would interfere with automatic steam generator level control, likely causing a plant trip. The auxiliary feedwater pumps normally operate during start-up and shutdown however, the pump flow rate (and hence the degree to which the suction check valves are exercised) is largely dependent on the conditions associated with the particular heatup or cooldown (e.g., the required heatup/cooldown rate and the particular auxiliary feedwater pumps that are operable and/or operating). In practice, during a typical heatup or cooldown auxiliary feedwater flow will be sufficient to full stroke exercise the suction check valves, however this cannot be guaranteed for all heatup and cooldowns. Accordingly, credit is taken for only part-stroke exercising these valves at cold shutdowns. We wish to note that in addition to part-stroke exercising these valves during heatup/cooldown and full stroke exercising at refuelings, we also part-stroke these valves quarterly during the auxiliary feedwater pump miniflow test. Flow rate through the suction check valves during the pump mini-flow tests is limited to a part-stroke exercise due to the size of the mini-flow test recirculation line. We believe the exercise program that these valves are subject to between refuelings provides adequate assurance that these valves will function as required.

F. Containment Purge (9321-F-2726-22)

1. Is the stroke time of valves 1170, 1171, 1172, and 1173 measured when they are exercised?

Response:

The stroke time of these valves is measured when they are stroked. A revised summary sheet will be provided.

G. <u>Fan Cooler Filter Units</u> (9321-F-40022-18)

1. Why is relief requested for FCV-25-14 and FCV-25-15 and not for FCV-25-13?

Response:

The relief requests noted against FCV-25-14 and FCV-25-15 are not required. A revised summary sheet will be provided.

H. Isolation Valve Seal Water System (9321-F-2746-17)

1. Has a method been selected to verify operability of all the check valves in this system?

Response:

Yes. Test connections have been installed. These connections will facilitate verification of check valve stroke. A revised summary sheet and relief request will be provided to require testing at refuelings.

I. Main Steam System (9321-F-2017-27)

1. Provide a more detailed technical explanation why valves MS-1-21, MS-1-22, MS-1-23, and MS-1-24 cannot be full-stroke exercised during cold shutdowns?

Response:

These valves will be full-stroke exercised at cold shutdowns. A revised summary sheet and relief request will be provided.

2. Do the valves downstream of MS-1-21, MS-1-22, MS-1-23 and MS-1-24 perform a safety function?

Response:

The MS-2 check valves (immediately downstream of the MS-1's) are normally open during power operation and have a safety function to close to prevent backflow from the intact steam generators in the event of a steamline break upstream of any MS-2. There is no method of verifying the ability of these valves to close during power operation. However, these valves can be verified in the closed position by visual observation at cold shutdowns. A revised summary sheet and associated relief request to include such visual observation will be provided.

The four turbine stop valves (downstream of the MS-1's at the turbine) serve to shut off steam supply to the turbine in the event of a mechanical or redundant electrical overspeed protection signal. Insofar as the generation of turbine missiles could potentially damage safety-related equipment, the turbine stop valves serve a safety function. The turbine stop and control valves are currently exercised per Technical Specifications. The control system for these valves incorporates a hydraulic test circuit that permits slow and controlled exercising of these valves, in a manner that minimizes the potential for turbine trip and subsequent reactor trip. Because of the test circuit arrangement, valve stroke timing would serve no useful purpose since valve stroke time is dependent upon operator action to increase/decrease the test circuit hydraulic pressure. For purposes of completeness the turbine stop valves will be added to the IST program with a relief request to permit exercising in accordance with Technical Specifications, and requesting relief from timing on the basis noted herein.

J. Penetration and Liner Weld Joint Channel System

1. The valves listed in this system are not located on drawing 9321-F-7052-10, sheet 5, therefore, we are unable to review this system.

Response:

The subject valves are located on drawing 9321-F-2726. The latest revision of this drawing is enclosed. Revised summary sheets reflecting the proper drawing are being provided.

K. Personnel Airlock

1. P&ID 9321-F-7052-9 was not supplied, therefore we are unable to review the valves listed in this system.

Response:

FSAR figure 5.2-27 enclosed depicts the subject valves. A revised summary sheet referencing this figure will be provided.

L. Safety Injection (9321-F-2735-48)

1. What alternate methods have been considered to full-stroke exercise valves 895-A-D?

Response:

A test has been developed that will produce an average velocity through each accumulator check valve of approximately 8 feet per second. Based on information supplied by the valve manufacturer, these valves will be fully open when flow velocity exceeds 5-6 feet per second. Accordingly, these valves will be full flow tested at refuelings as described above, by partial discharge of the accumulators so as to assure calculated flow velocity exceeds 6 feet per second. A revised summary sheet and relief request will be provided.

2. Has a method been selected to verify operability of valves 879A&B?

Response:

Yes. Currently Tech. Specs. require that we check for blockage of the containment spray nozzles at five year intervals by conducting an airflow test. As indicated in Relief Request No. 20, spring loaded check valves 879A&B branch off the containment spray headers. Airflow through 879A&B was verified via a downstream test connection during the containment spray nozzle airflow test conducted during the cycle 6/7 refueling outage. This method of flow verification is not amenable to quantification, hence we are considering it a part-stroke verification.

It should be noted that the charcoal filters are but one of the methods available for post-LOCA atmospheric cleanup. The two containment spray system trains with their large supply of borated water provide atmospheric cleanup capability and are considered up to eight times more effective than charcoal filters for this purpose. Given the necessarily low probability of a LOCA occuring simultaneously with the failure of a Fan Cooler Unit fan causing charcoal filter temperatures sufficiently high to require dousing, we believe that extraordinary measures to demonstrate the operability of these valves are unnecessary and unwarranted.

A revised relief request to reflect part-stroke exercising at five year intervals consistent with the containment spray nozzle airflow test will be provided.

3. What alternate methods have been considered to full-stroke exercise valves 886A&B

Response:

As indicated in safety injection valve Relief Request No. 15, the only means of establishing full flow through these valves in order to accomplish a full stroke exercise is to activate the recirculation pumps for the reasons discussed in Relief Request No. 15 and pump Relief Request No. 1. The two recirculation pumps and their discharge check valves (886A&B) are redundant to the two RHR pumps with respect to the low head recirculation safety function. The operation of any one of these four pumping trains is all that is required to satisfy safety analysis assumptions with regard to post-LOCA recirculation flow rate. Since the RHR pumps together with their pump discharge check valves are full flow tested, we believe that full-stroke exercising of recirculation pump discharge check valves 886A&B represents an undue hardship when viewed against the installed redundant systems that are tested consistent with IWP. Accordingly, we believe that part-stroke exercising valves 886A&B at refuelings as requested will adequately assure continued safe plant operation.

4. What alternate methods have been considered to full-stroke exercise valves 1838A and 1838B?

Response:

As indicated in Safety Injection valve Relief Request No. 11, spray additive tank discharge check valves 1838A&B will be part-stroke exercised in conjunction with the containment spray pump mini-flow test at approximately 40 to 50 gpm versus a full-flow flow rate of 65 gpm. Sodium hydroxide addition from the spray additive tank facilitates iodine reduction under post-LOCA conditions, however this function is relatively independent of time. As such, if a maximum spray additive flow rate under post-LOCA conditions of 40 to 50 gpm is postulated, as demonstrated by the quarterly part-stroke exercise, no significant change in iodine removal rate is anticipated compared to the 65 gpm full flow rate. Accordingly, the benefits of full flow exercising are considered insignificant when viewed against the hardship involved in accomplishing such a full flow test. The part-stroke exercise will adequately assure continued safe plant operation.

5. Do the RHR pumps deliver enough flow to full-stroke exercise valves 897A,B,C&D?

Response:

A single RHR pump (3000 gpm design capacity) satisfies FSAR criteria for post-accident recirculation. While this may not result in a velocity of 5-6 ft/sec (manufacturer's requirements for full flow) through each of these four parallel valves, it does demonstrate "full flow" with respect to the low pressure recirculation safety function. Note that these valves are also required to open to permit injection flow from the accumulators along with check valves 895A,B,&D. The full stroke tests developed for valves 895A-D, which require partially discharging each accumulator individually at refuelings, will necessarily result in a full stroke exercise of the 897A,B,C&D check valves (in excess of 6 ft/sec flow rate through each valve). See response to question L.1. above.

M. <u>Sampling System</u> (9321-F-2745-20) (A22718-1)

1. Review the isolation function of valves 951, 953, 955A and 955B to determine if they should be categorized A.

<u>Response</u>:

These valves are neither containment isolation valves nor pressure isolation valves. Accordingly, they are appropriately categorized as category B.

N. Service Water System (9321-F-2722-35) (A209762-4)

1. Should valves SWN-2, SWN-2-1, SWN-2-3, SWN-2-4, SWN-2-5, SWN-62 and SWN-62-1 be categorized B-Passive?

Response:

These valves are B-Passive. A revised summary sheet will be provided.

O. Post-Accident Containment Venting

1. Are valves EA-1, FCV-1308, and FCV-1309 fail safe tested in accordance with Section XI?

Response:

Valve EA-1 is fail safe tested. A revised summary sheet will be provided. Valves FCV-1308 and FCV-1309 are manually operated hand control valves. A new relief request will be provided for these valves deleting the timing requirements, accordingly fail safe testing is not applicable. See new Post-Accident Containment Venting Relief No. 1 (Enclosure 2).

Pumps

1. Can the charging pumps be full-flow tested during cold shutdowns?

Response:

The quarterly testing described in Relief Request No. 8 for the charging pumps constitutes, for all practical purposes, a full flow test. Each charging pump has a design flow rate of 98 gpm. The 75 gpm minimum operability criteria is based on experience with the variable flow demands placed on the charging pumps. It should be noted that unlike later Westinghouse NSSS designs, the charging pumps at IP2 do not serve the high pressure safety injection function. The IP#2 charging pumps are intended for non-LOCA transient mitigation only. In addition, it would be difficult to assure that any fixed resistance path that might be used to facilitate cold shutdown testing for the charing pumps could be reestablished at subsequent cold shutdowns such that these tests are repeatable from one test to the next.

2. Have alert and action ranges been established for the charging pump parameters?

Response:

Yes, we have established alert and actions ranges for the charging pumps. Relief Reqest No. 8 will be retained for information only.

3. Can the flow rate of the fuel oil transfer pumps be calculated?

Response:

The test circuit employed provides only for recirculating fuel oil back to the fuel oil storage tank. As such no change in tank level will occur when the pumps are tested. We are unaware of any method that would permit the calculation of flow rate. We believe the testing methods proposed in relief request no. 9 will adequately demonstrate pump operability.

4. Can the flow rate of the boric acid transfer pumps be calculated.

Response:

As for item 3 above, the test circuit provides only for recirculating the boric acid solution back to the storage tank, as such, no change in level occurs when the pumps are tested. We believe that the test method proposed in Relief Request No. 9 will adequately demonstrate pump operability.

5. The code test frequency discussed at the top of page 3 of 3, Request for Relief No. 1, is incorrect for the edition of the Code currently utilized.

Response:

The reference will be corrected from monthly to quarterly. A page revision will be provided.

6. The current NRC position is lack of installed instrumentation is not a suitable long term justification for not performing the required Section XI testing. Pump relief request 9 may be affected by this position.

Response:

By using the same test circuit, aligned in the same manner from test to test, system resistance is effectively fixed. Pump degradation is readily observed by trending delta-p across the pump. Since delta-p varies as the flow squared ($\Delta p=kQ^2$), changes in ΔP are an earlier indicator of pump degradation than are changes in flow. Although flow cannot be recorded and trended, the test procedure proposed for these pumps satisfies the intent of the code, which is to identify changes in performance. These procedures together with alert and action range trending will assure that information sufficient to assess pump condition and the need for repair are readily available.

ATTACHMENT A

Documentation for Direct Observation
of Valve Position Indication

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October, 1985

PT-Q13 DATA SHEE[illegible]0   VALVE #887B   SCH DATE______ [illegible]ATE DATE______

INSERVICE VALVE TEST
TYPE OF TEST: Full Stroke and Time
*DIRECT OBSERVATION OF STEM TRAVEL REQUIRED: YES   NO

____
Test Engineer or Designee/Date

SYSTEM AND FUNCTION: SIS-SI Pump #22 Alternate Suction
DESCRIPTION: Motor Operated Valve
PRECAUTIONS AND LIMITATIONS: Valve available for stroking.

PERMISSION TO PERFORM TEST:______________ INFORM SRO:______________
SWS / Date   SRO /Date

EQUIPMENT: Stopwatch ______________
Serial # / Cal Due

PROCEDURE:

1. Obtain RWP (if required).
*2. If direct observation is required, establish communication between the Control Room and the Observer at the valve who shall observe stem travel.
3. Timing should normally be done at the indicating lights when possible. Use other indication as necessary (for stroking or timing) if indicating lights are not functioning.
4. The component was found locked.   YES   NO

   NOTE: Step 6 may be completed prior to Step 5 depending on "AS FOUND" valve position.

5. Open the valve from the full closed position.
   Red open light goes on at beginning of travel.   YES   NO
   Green closed light goes out when the valve is fully open.   YES   NO
   Time to open ____________(seconds).
6. Close the valve from the full open position.
   Green closed light goes on at the beginning of travel.   YES   NO
   Red open light goes off at end of travel.   YES   NO
   Time to close ____________(seconds).
7. Did the valve stroke full open and closed?   YES   NO

AS LEFT CONDITION: O   O/C   C   ______________
**LO   LO/LC   LC   Init./Init./Date

SRO INFORMED: ______________
SRO / DATE

DISCREPANCIES OR ABNORMALITIES: Describe in detail or write "NONE". All abnormalities should have a WO prepared. Include any WO numbers if issued.______________________________

____

____

______________________________   ______________________________
Timing Performed By/Date   Visual Observation By/Date (Enter "none" if Visual Inspection not required)

** = Locked

ATTACHMENT B

Documentation for Maximum Value
of Power Operated Valve Stroke Time

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October, 1985

SECTION XI TIMING LIMITS

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
1410	60.0	60.0
1413	60.0	60.0
1702	15.0	10.0
1705	15.0	10.0
1723	10.0	10.0
1728	10.0	10.0
1786	15.0	10.0
1787	15.0	10.0
1788	15.0	10.0
1789	15.0	10.0
1802A	150.0	150.0
1802B	150.0	150.0
1810	120.0	120.0
1821	10.0	10.0
1822A	10.0	10.0
1822B	10.0	10.0
1831	10.0	10.0
1870	120.0	120.0
200A	30.0	30.0
200B	30.0	30.0
200C	30.0	30.0
201	10.0	10.0
202	10.0	10.0
204A	30.0	30.0
204B	30.0	30.0
205	120.0	120.0
222	10.0	10.0
226	120.0	120.0
250A	120.0	120.0
250B	120.0	120.0
250C	120.0	120.0
250D	120.0	120.0
333	15.0	15.0
3416	2.0	2.0
3417	2.0	2.0
3418	2.0	2.0
3419	2.0	2.0
3420	2.0	2.0
3421	2.0	2.0
3422	2.0	2.0
3423	2.0	2.0
3500	2.0	2.0
3501	2.0	2.0
3502	2.0	2.0
3503	2.0	2.0
3504	2.0	2.0
3505	2.0	2.0
3506	2.0	2.0
3507	2.0	2.0
3508	2.0	2.0
3509	2.0	2.0
3510	2.0	2.0
3511	2.0	2.0
3512	2.0	2.0
3513	2.0	2.0

SECTION XI TIMING LIMITS

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
3514	2.0	2.0
3515	2.0	2.0
3516	2.0	2.0
3517	2.0	2.0
3518	2.0	2.0
3519	2.0	2.0
4399	10.0	10.0
4925	120.0	120.0
4926	120.0	120.0
4927	120.0	120.0
4928	120.0	120.0
5018	2.0	2.0
5019	2.0	2.0
5020	2.0	2.0
5021	2.0	2.0
5022	2.0	2.0
5023	2.0	2.0
5024	2.0	2.0
5025	2.0	2.0
5046	120.0	10.0
5047	120.0	10.0
5048	120.0	10.0
5049	120.0	10.0
5050	120.0	10.0
5051	120.0	10.0
5052	120.0	10.0
5053	120.0	10.0
5132	10.0	10.0
5153	10.0	10.0
5154	10.0	10.0
519	60.0	10.0
535	15.0	15.0
536	15.0	15.0
548	10.0	10.0
549	60.0	10.0
552	60.0	10.0
625	10.0	10.0
730	240.0	240.0
731	240.0	240.0
732	N/A	N/A
743	120.0	120.0
744	120.0	120.0
745A	120.0	120.0
745B	120.0	120.0
746	15.0	15.0
747	15.0	15.0
769	15.0	15.0
784	10.0	10.0
786	10.0	10.0
789	10.0	10.0
791	60.0	10.0
793	60.0	10.0
796	60.0	10.0
797	15.0	15.0
798	60.0	10.0

SECTION XI TIMING LIMITS

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
822A	150.0	150.0
822B	150.0	150.0
842	120.0	120.0
843	120.0	120.0
850A	120.0	120.0
850B	120.0	120.0
851A	120.0	120.0
851B	120.0	120.0
856A	10.0	10.0
856B	10.0	10.0
856C	10.0	10.0
856D	10.0	10.0
856E	10.0	10.0
856F	10.0	10.0
863	N/A	N/A
866A	15.0	15.0
866B	15.0	15.0
866C	15.0	15.0
866D	15.0	15.0
869A	120.0	120.0
869B	120.0	120.0
876A	30.0	30.0
876B	30.0	30.0
880A	15.0	15.0
880B	15.0	15.0
880C	15.0	15.0
880D	15.0	15.0
880E	15.0	15.0
880F	15.0	15.0
880G	15.0	15.0
880H	15.0	15.0
880J	15.0	15.0
880K	15.0	15.0
882	20.0	20.0
885A	150.0	150.0
885B	150.0	150.0
887A	120.0	120.0
887B	120.0	120.0
888A	120.0	120.0
888B	120.0	120.0
889A	120.0	120.0
889B	120.0	120.0
898	N/A	N/A
951	30.0	30.0
953	30.0	30.0
955A	120.0	120.0
955B	120.0	120.0
956A	15.0	10.0
956B	15.0	10.0
956C	15.0	10.0
956D	15.0	10.0
956E	15.0	10.0
956F	15.0	10.0
956G	15.0	10.0
956H	15.0	10.0

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
958	15.0	15.0
959	10.0	10.0
990A	10.0	10.0
990B	10.0	10.0
990D	N/A	N/A
BFD-2-21	120.0	60.0
BFD-2-22	120.0	60.0
BFD-74	N/A	N/A
BV-10A	2.0	2.0
BV-10B	2.0	2.0
BV-11A	2.0	2.0
BV-11B	2.0	2.0
BV-12A	2.0	2.0
BV-12B	2.0	2.0
BV-5A	2.0	2.0
BV-5B	2.0	2.0
BV-6A	2.0	2.0
BV-6B	2.0	2.0
BV-7A	2.0	2.0
BV-7B	2.0	2.0
BV-8A	2.0	2.0
BV-8B	2.0	2.0
BV-9A	2.0	2.0
BV-9B	2.0	2.0
DA-24	N/A	N/A
DA-24-1	N/A	N/A
DA-24-2	N/A	N/A
DA-24-3	N/A	N/A
DA-24-4	N/A	N/A
DA-24-5	N/A	N/A
E-1	10.0	10.0
E-2	10.0	10.0
E-3	10.0	10.0
E-5	10.0	10.0
EA-1	10.0	10.0
FCV-1111	N/A	N/A
FCV-1112	N/A	N/A
FCV-1121	20.0	20.0
FCV-1123	20.0	20.0
FCV-1170	60.0	2.0
FCV-1171	60.0	2.0
FCV-1172	60.0	2.0
FCV-1173	60.0	2.0
FCV-1176	10.0	30.0
FCV-1176A	10.0	30.0
FCV-1308	N/A	N/A
FCV-1309	N/A	N/A
FCV-1A	N/A	N/A
FCV-1B	N/A	N/A
FCV-21-1	60.0	60.0
FCV-21-2	60.0	60.0
FCV-21-3	60.0	60.0
FCV-22-4	60.0	60.0
FCV-22-5	60.0	60.0
FCV-22-6	60.0	60.0

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
FCV-23-7	60.0	60.0
FCV-23-8	60.0	60.0
FCV-23-9	60.0	60.0
FCV-24-10	60.0	60.0
FCV-24-11	60.0	60.0
FCV-24-12	60.0	60.0
FCV-25-13	60.0	60.0
FCV-25-14	60.0	60.0
FCV-25-15	60.0	60.0
FCV-2A	N/A	N/A
FCV-2B	N/A	N/A
FCV-405A	N/A	N/A
FCV-405B	N/A	N/A
FCV-405C	N/A	N/A
FCV-405D	N/A	N/A
FCV-406A	N/A	N/A
FCV-406B	N/A	N/A
FCV-406C	N/A	N/A
FCV-406D	N/A	N/A
FCV-417	60.0	8.0
FCV-417L	60.0	8.0
FCV-427	60.0	8.0
FCV-427L	60.0	8.0
FCV-437	60.0	8.0
FCV-437L	60.0	8.0
FCV-447	60.0	8.0
FCV-447L	60.0	8.0
HCV-1118	N/A	N/A
HCV-3100	120.0	120.0
HCV-3101	120.0	120.0
HCV-638	10.0	10.0
HCV-640	10.0	10.0
IV-1A	2.0	2.0
IV-1B	2.0	2.0
IV-2A	2.0	2.0
IV-2B	2.0	2.0
IV-3A	2.0	2.0
IV-3B	2.0	2.0
IV-5A	2.0	2.0
IV-5B	2.0	2.0
LCV-112B	30.0	30.0
LCV-112C	10.0	10.0
LCV-1158	120.0	120.0
LCV-1207A	N/A	N/A
LCV-1207B	N/A	N/A
LCV-1208A	N/A	N/A
LCV-1208B	N/A	N/A
LCV-1209A	N/A	N/A
LCV-1209B	N/A	N/A
MS-1-21	N/A	5.0
MS-1-22	N/A	5.0
MS-1-23	N/A	5.0
MS-1-24	N/A	5.0
MS-41	N/A	N/A
MS-42	N/A	N/A

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
PCV-1133	60.0	60.0
PCV-1134	N/A	N/A
PCV-1135	N/A	N/A
PCV-1136	N/A	N/A
PCV-1137	N/A	N/A
PCV-1139	60.0	60.0
PCV-1187	30.0	30.0
PCV-1188	30.0	30.0
PCV-1189	30.0	30.0
PCV-1190	60.0	2.0
PCV-1191	60.0	2.0
PCV-1192	60.0	2.0
PCV-1205A	30.0	30.0
PCV-1213	N/A	N/A
PCV-1214	120.0	10.0
PCV-1214A	120.0	10.0
PCV-1215	120.0	10.0
PCV-1215A	120.0	10.0
PCV-1216	120.0	10.0
PCV-1216A	120.0	10.0
PCV-1217	120.0	10.0
PCV-1217A	120.0	10.0
PCV-1228	30.0	10.0
PCV-1229	15.0	10.0
PCV-1230	15.0	10.0
PCV-1231	60.0	60.0
PCV-1233	60.0	60.0
PCV-1234	10.0	10.0
PCV-1235	10.0	10.0
PCV-1236	10.0	10.0
PCV-1237	10.0	10.0
PCV-1238	60.0	60.0
PCV-1239	60.0	60.0
PCV-1240	60.0	60.0
PCV-1241	60.0	60.0
PCV-1310A	10.0	5.0
PCV-1310B	10.0	5.0
PCV-445C	1.5	1.5
PCV-456	1.5	1.5
SWN-41-1A	120.0	120.0
SWN-41-1B	120.0	120.0
SWN-41-2A	120.0	120.0
SWN-41-2B	120.0	120.0
SWN-41-3A	120.0	120.0
SWN-41-3B	120.0	120.0
SWN-41-4A	120.0	120.0
SWN-41-4B	120.0	120.0
SWN-41-5A	120.0	120.0
SWN-41-5B	120.0	120.0
SWN-44-1A	120.0	120.0
SWN-44-1B	120.0	120.0
SWN-44-2A	120.0	120.0
SWN-44-2B	120.0	120.0
SWN-44-3A	120.0	120.0
SWN-44-3B	120.0	120.0

SECTION XI TIMING LIMITS

VALVE NUMBER	MAX TO OPEN	MAX TO CLOSE
SWN-44-4A	120.0	120.0
SWN-44-4B	120.0	120.0
SWN-44-5A	120.0	120.0
SWN-44-5B	120.0	120.0
SWN-51-1	120.0	120.0
SWN-51-2	120.0	120.0
SWN-51-3	120.0	120.0
SWN-51-4	120.0	120.0
SWN-51-5	120.0	120.0
SWN-71-1A	120.0	120.0
SWN-71-1B	120.0	120.0
SWN-71-2A	120.0	120.0
SWN-71-2B	120.0	120.0
SWN-71-3A	120.0	120.0
SWN-71-3B	120.0	120.0
SWN-71-4A	120.0	120.0
SWN-71-4B	120.0	120.0
SWN-71-5A	120.0	120.0
SWN-71-5B	120.0	120.0
TCV-1104	60.0	60.0
TCV-1105	60.0	60.0

Enclosure 2

Proposed Changes

For

Revision 1 to the Inservice Testing Program
Summary for the Interval July 1, 1984
through June 30, 1994

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October, 1985

The following describes proposed (non-editorial) changes planned for submittal as Revision 1 to the IST program. Asteriked items indicate new relief requests being submitted for the first time.

Item	Tab/Page/Title	Discussion
1*	2A-Pump Tables All Pumps Pgs 1-9 of 9	New Relief Request No. 10 is added to all pumps using instrumentation for pressure measurement-see item No. 5 below
2	2A-Pump Table Recirculation Pumps Pg 2 of 9	Revised flow rate from N/A to measured at refuelings per R-R1
3	2A-Pump Table Boric Acid Transfer Pumps #21 & 22 Pg 9 of 9	Added note to indicate that inlet pressure will be calculated
4	2A - Relief Request No. 8.	Revised to indicate that alert and action ranges have been established based on experience - see response to pump question No. 2, enclosure 1
5*	2B-Relief Request No. 10	Added new Relief Request concerning pressure instrument range and accuracy
6	3A.2-A/C to CCR Pg 1 of 1	Deleted valves WRV-1&2 from program. These are control valves only and do not change position to fullfill a safety function accordingly they are exempt per IWV-1200. In addition the A/C units they supply are being replaced with air cooled units such these valves will no longer be required to function

Item	Tab/Page/Title	Discussion
7	3A.3-Air Ejector to Containment Pg 1 of 1	Deleted valves PCV-1167, 1168 and 1169. These valves provide the normal control action for CIVs PCV-1229 & 1230. The safety function of PCV 1229 & 1230 is to close on a Phase A containment isolation signal. This will occur independent of valves PCV-1167, 1168 and 1169. As such PCV-1167, 1168 and 1169 have no safety function and are therefore exempt from Section XI requirements
8	3A-3-Air Ejector to Containment Pg 1 of 1	Revised normal position of valves PCV-1229 & 1230 to closed from open
9	3A.4-Auxiliary Coolant System Pg 1 of 9	Deleted "NTR" and "None" for valve 744-see response to question B.2 in enclosure 1
11	3A.4-Auxiliary Coolant System Pg 2 of 9	Deleted "NTR" and "None" for valve 743-see response to question B.2 in enclosure 1
12	3A.4-Auxiliary Coolant System Pg 3 of 9	Deleted "NTR" and "None" for valve 1870-see response to question B.2 in enclosure 1
13*	3A.4-Auxiliary Coolant System Pg 3 of 9	Added new Relief Request No. 12 for check valve 755-see item no. 67 below
14	3A.4-Auxiliary Coolant System Pg 6 of 9	Added "4" to alternate testing for valve 741A to indicate part-stroke quarterly in addition to full stroke at cold shutdown

Item	Tab/Page/Title	Discussion
15	3A.4-Auxiliary Coolant System Pg 6 of 9	Added timing at cold shutdowns to valves 730 and 731-see response to question B.3 in enclosure 1 - also revised normal position for these valves to closed
16	3A.4-Auxiliary Coolant System Pg 6 of 9	Revised normal position for valves 746 and 747 to closed-see response to question B.4 in enclosure 1
17	3A.4-Auxiliary Coolant System Pg 8 of 9	Revised valve designations 782B, 783C & 783D to 781B, 781C & 781D-see response to question B.5 in enclosure 1
18	3A.6-Boiler Feedwater Pg 2 of 6	Revised normal position of valves FCV-1121 & 1123 to open (MDAFW recirc. flow control)
19	3A.6-Boiler Feedwater Pg 6 of 6	Added valve BFD-72-see response to question C.1 in enclosure 1
20	3A.7-Chemical and Volume Control Pg. 3 of 9	Revised stroking of valve 290 to cold shutdown see response to question D.1, enclosure 1
21	3A.7-Chemical and Volume Control Pg 3 of 9	Deleted valve292 from program-see response to question D.2 in enclosure 1
22	3A.7-Chemical and Volume Control Pg 3 of 9	Deleted Relief Request No. No. 13 for valves 362A & 362B. These valves will be forward flow tested with the boric acid transfer pump test
23	3A.7-Chemical and Volume Control Pg 3 of 9	Deleted Relief Request No. 14 for valves 4000 through 4005-see response to question D.3 in enclosure 1
24	3A.7-Chemical and Volume Control Pg 4 of 9	Revised valve designations 240A-D to 249A-D-see response to question D.4 in enclosure 1

Item	Tab/Page/Title	Discussion
25	3A.7-Chemical and Volume Control Pg 5 of 9	Deleted "fail safe testing" for HCV-142. This valve is passively open and fails open-see response to question D.5 in enclosure 1
26	3A.7-Chemical and Volume Control Pg 6 of 9	Deleted leak testing and relief request no. 17 for valves 251A-H-see response to question D.6 in enclosure 1
27	3A.7-Chemical and Volume Control Pg 7 of 9	Deleted Relief Requests 18 & 19 for valves 204A&B and 210A&B-see response to questions D.7 and D.8 in enclosure 1
28	3A.8-City Water to Containment Pg 1 of 1	Revised valve designation to MW-17-1
29	3A.9-Condensate and Boiler Feed Pump Pg 2 of 2	Revised alternate testing and test frequency for CT-25, CT-28 and CT-31-see response to question E-1 in enclosure 1
30	3A.10-Containment Purge Pg 1 of 1	Added timing and fail safe requirements for valves 1170 through 1173-see response to question F.1 in enclosure 1
31	3A.11-Containment Rad. Monitors R-11/R-12	Revised normal position for valves 1234 through 1237 to open
32	3A.12-Fan Cooler Filter Units Pg 1 of 3	Revised failure mode for valves FCV-21-3, 22-6 & 23-7, revised normal position for valves FCV-22-4 and 22-6
33	3A.12-Fan Cooler Filter Units Pg 2 of 3	Revised failure mode for valves FCV-23-7, 24-10 and 25-13
34	3A.12-Fan Cooler Filter Units Pg 3 of 3	Deleted Relief Request and alternate frequency for valves FCV-25-14 and 25-15-see response to question G.1 in enclosure 1

Item	Tab/Page/Title	Discussion
45	3A.18-Main Steam System Pg 4 of 4	Added valves MS-2-21 through MS-2-24 and four turbine stop valves with new relief requests. see response to question I.2, enclosure 1
46	3A.19-Penetration and Liner Weld Joint Channel Pgs 1 through 5 of 6	Revised drawing reference see response to question J.1, enclosure 1
47	3A.19-Penetration and Liner Weld Joint Channel Pg. 5 of 5	Added qtly testing for valves PCV-1231 & 1233 - see response to question A.1, enclosure 1
48	3A.19-Penetration and Liner Weld Joint Channel Pg 5 & 6 of 6	Added valves PCV-1238,1239 1240&1241 for qtly testing (WC&PPS Supply to R-11 & R-12)
49	3A.20-Personnel Airlock Pg 1 of 1	Revised drawing reference-see response to question K.1, enclosure 1
50	3A.21-Post Accident Containment Air Sampling Pg 2 of 3	Added quarterly designation to timing and fail safe testing for valve 5025
51	3A-22 Post-Accident Containment Venting Pg 1 of 2	Added fail safe test quarterly for valve EA-1
52*	3A.22-Post-Accident Containment Venting Pgs 1 and 2 of 2	Added Relief Request No. 1 for valves FCV-1308 and 1309, deleted timing requirement
53	3A.23-Reactor Coolant System Pg 1 and 2 of 3	Added General Relief Request B to valves SOV-3418 and SOV-3419
54	3A.23-Reactor Coolant System Pg 2 of 3	Added General Relief Request A to valve 518
55	3A.24-Safety Injection Pg 2 of 11	Revised normal position for valves 888A & 888B
56	3A.24-Safety Injection Pg 4 of 11	Revised test frequency for valve 867A

Item	Tab/Page/Title	Discussion
57	3A.24-Safety Injection Pg 5 of 11	Revised relief request and alternate testing for valves 895A-D. see response to question L.1, enclosure 1
58*	3A.24-Safety Injection Pg 7 & 8 of 11	Added new Relief Request No. 24 for valves 880A-K
59	3A.24-Safety Injection Pg 11 of 11	Revised Relief Request No. 20 for valves 879A&B-see response to question L.2, enclosure 1
60	3A.25-Sampling System Pg 2 of 4	Revised actuator type and failure position for valve 956F. Deleted fail safe testing; not required for motor operated valve
61	3A.26-Service Water Pg 2 of 9	Revised valve designation SWN-42 to SWN-42-5. Added General Relief Request A to leak test requirement
62	3A.26-Service Water Pg 8 of 9	Revised categorization to B-Passive for valves SWN-62 & SWN-62-1-see response to question N.1, enclosure 1
63	3A.27-Starting Air to Diesels Pg 1 of 2	Added note to valve timing for diesel start solenoids DA-24 through DA-24-5 to indicate that timing will be verified by observing that diesel cranks upon solenoid energization
64	3A.29-Steam Generator Blowdown Pgs. 1 and 2 of 2	Revised normal position for valves PCV-1214 through PCV-1217A

Valve Relief Requests

Item	Tab/Page/Title	Discussion
65	3B.1-A/C to CCR	Deleted R-R(1) for valves WRV 1&2 - see item 6 above
66	3B.2-Auxiliary Coolant	Revised R-R(4) for valve 741A-see item 14 above
67*	3B.2-Auxiliary Coolant	Added R-R(12) for valve 755-see item 13 above

Item	Tab/Page/Title	Discussion
68	3B.5 Chemical and Volume Control (CVCS)	Revised stroking for valve 290 to cold shutdown - see response to question D.1 -enclosure 1
69	3B.5-Chemical and Volume Control (CVCS)	Deleted R-R(11) for valve 292-see item 21 above, response to question D.2, enclosure 1, valve 292 deleted from program
70	3B.5-Chemical and Volume Control (CVCS)	Revised R-R(12) for valve 332
71	3B.5-(CVCS)	Deleted R-R(13) for valves 362 A&B-see item 22 above
72	3B.5-(CVCS)	Deleted R-R(14) for valves 4000 through 4005, see item 23 above and response to question D.3, enclosure 1
73	3B.5-(CVCS)	Revised R-R(15) for valve 4924
74	3B.5-(CVCS)	Revised R-R(16), deleted R-R(17) for valves 251A-H-see item 26 above and response to question D.6, enclosure 1
75	3B.5-(CVCS)	Deleted R-R(18)&(19) for valves 204A through B and 210A through B-see item 27 above, response to questions D.7 and D.8, enclosure 1
76	3B.6-City Water to Containment	Revised R-R(1) valve designation to MW-17-1
77	3B.7-Condensate and Boiler Feed Pump	Revised R-R(1) for valves CT-26, 29 & 32
78	3B.7-Condensate and Boiler Feed Pump	Revised R-R(2) for valves CT-25, 28 & 31. see item 29 above and response to question E.1, enclosure 1
79	3B.9-Hydrogen Recombiner	Deleted R-R(1) for valves PCV-2, 3A, 3B, 941 and PCV-1 see item 37 above

Item	Tab/Page/Title	Discussion
80	3B.11-Isolation Valve Seal Water System	Revised R-R(1) for valves 1500-1543, 1545-1550, 5602, 1454, 1406 & 1456. see item 40 above and response to question H.1, enclosure 1
81*	3B.11-Isolation Valve Seal Water System	Added new Relief Request No. 3 for valves 3500-3519 see item 39 above
82	3B.13-Main Steam	Revised R-R(1) for valves MS-1-21 through MS-1-24 see item 41 above and response to question I.1, enclosure 1
83*	3B.13-Main Steam	Added new Relief Request No. 5 for valves MS-2-21 through MS-2-24-see item 45 above and response to question I.2, enlosure 1
84	3B.13-Main Steam	Added new Relief Request No. 6 for four turbine stop valves-see item 45 above and response to question I.2, enclosure 1
85	3B.17-Safety Injection	Revised Relief Request No. 19 for valves 895A-D-see item 57 above and response to question L.1, enclosure 1
86	3B.17-Safety Injection	Revised Relief Request No. 20 for valves 879A&B-see item 59 above and response to question L.2, enclosure 1
87*	3B.17-Safety Injection	Added new Relief Request No. 24 for valves 880A-K see item 60 above
88*	3B.21-Post-Accident Containment Vent	Added new Relief Request No. 1 for valves FCV-1308 & FCV 1309 see item 52 above
89	3B.G-General Relief	Added Hydrogen Recombiner Valves 3420 through IV-5B to General Relief Request B see item 36 above

Item	Tab/Page/Title	Discussion
90*	3B.G-General Relief	Added new General Relief Request C for CIV's in all systems to permit leak determinations and leak trending on a zone or penetration basis in lieu of each individual valve

Enclosure 3

New Relief Requests
(Con Edison Initiated)

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October, 1985

Indian Point Unit No. 2

RELIEF REQUEST BASIS

Request for Relief No. 10, R-R (10):

Pumps: All

Test Requirement: IWP-4120

Accuracy ±2%, Range - no more than three times the reference value

Basis for Relief:

Indian Point Unit No. 2 employs pressure instrumentation accurate to 1/4%. Ranges for these instruments are up to eight times the reference value. The higher accuracy of these instruments effectively off-sets the wider ranges than are permitted under IWP-4120. As Indian Point Unit No. 2 was designed and constructed prior to codification of Section XI, instrumentation upgrading to meet Section XI provisions is not required by regulation. Experience has demonstrated that the existing instrumentation is adequate for the detection of changes desired by the code.

Alternative Testing: None required

Indian Point Unit No. 2:

RELIEF REQUEST BASIS

SYSTEM: Auxiliary Coolant

Relief Request No. 12

Valve: 755
Category: C
Quality Group: C

Function: Valve 755 is a normally open check valve in the bypasss line around the auxiliary component cooling pumps. Its safety function is to close upon start-up of the auxiliary component coolng pumps during safeguards actuation.

Test Requirement: IWV-3522 a (Normally open check valve exercise)

Basis for Relief:

There are no absolute or positive means to indicate that the disc of this valve is firmly seated upon reversal of flow. Quarterly tests of the auxiliary component cooling pumps require throttling pump output to specified flow conditions in order to observe changes in head. Head degradation from reference values is indicative of pump degradation and/or flow bypassing valve 755A. Accordingly, acceptable pump test results wil serve to verify acceptable performance of check valve 755.

Aternative Testing:

Quarterly testing of the auxiliary component cooling pumps will serve to verify acceptable check valve performance.

Indian Point Unit No. 2

RELIEF REQUEST BASIS

SYSTEM: Isolation Valve Seal Water

Relief Request No. 3

Valves: 3500-3519
Category: B
Quality Group: N/A

Function: These valves are remote manual solenoids in the lines leading to various CIVs. Their function is to provide a pressurized water or nitrogen seal between the CIVs.

Testing Requirement: IWV-3300 (Position Indication Verification)
IWV-3410 (Exercise)

Basis for Relief:

These valves are physically sealed making a visual physical verification of valve position impossible. For the reasons noted in R-R1, these valves will be exercised at a refueling frequency by establishing flow through the respective valve.

Alternative Testing:

Exercise at refuelings

Indian Point Unit No. 2

RELIEF REQUEST BASIS

SYSTEM: Safety Injection

Relief Request No. 24

Valve(s): 880A-880K
Category: B
Quality Group: B

Function: Valves 880A through 880K are non-automatic motor operated valves in the line from the Containment Spray header to the charcoal filter fire protection nozzles. These valves are closed during plant operation and are required to open in the unlikely event of a high temperature condition (fire) in a filter unit during a design basis event.

Test Requirement: IWV-3410 (Exercise)

Basis for Relief:

The only function of these valves is to open in the unlikely event that charcoal filter fire occurs. During normal operation these valves are maintained in the closed position to assure that no water enters the charcoal beds which could degrade charcoal performance. The piping arrangement is such that a standing head of water can accumulate behind these valves with no means of draining this water off prior to cycling the valves. Thus quarterly cycling would likely result in water entering the charcoal beds which is unacceptable.

Alternative Testing:

These valves wil be full stroke exercised at refuelings prior to charcoal filter performance testing such that if charcoal filter degradation occurs appropriate corrective action can be instituted prior to return to power operation.

Indian Point Unit No. 2

GENERAL RELIEF REQUEST

SYSTEMS: Safety Injection, Auxiliary Coolant, Chemical and Volume Control, Reactor Coolant, Sampling Post Accident Containment Air Sampling, Hydrogen Recombiner, Steam Generator Blowdown and Sampling, Waste Disposal and certain Miscellaneous CIVs.

General Relief Request - C

Valves:

Safety Injection System

867A	859A	885A
878A	859C	885B

Auxiliary Coolant System

793	798	743
796	791	1870

Chemical and Volume Control

201	4925	250A
202	4926	250B
205	4927	250C
226	4928	250D
227		

Reactor Coolant System

548	519	3419
549	3418	4136
552		

Sampling System

956A	5132
956B	958
956C	959
956C	990A
956D	990B
956E	990B
956F	990B
956G	4399
956H	

Post Accident Air Sampling

5022 5024

Hydrogen Rcombiner

IV-2A IV-2B

Steam Generator Blowdown & Sampling

PCV-1214	PCV-1216
PCV-1214A	PCV-1214A
PCV-1215	PCV-1217
PCV-1215A	PCV-1217A

Waste Disposal System

1786	1705
1787	1728
5459	3416
1789	3417
1702	1788
	1723

Miscellaneous CIVs

PCV-1190	E1	SA-24
PCV-1191	E2	SA-24-1
PCV-1192	E3	MW-17
PCV-1170	E5	MV-17-1
FCV-1171	PCV-1234	
FCV-1172	PCV-1235	
FCV-1173	PCV-1236	
PCV-1229	PCV-1237	
PCV-1230		

Category: A
Quality Group: Various
Function: All valves listed are Containment Isolation Valves

Test Requirement: IWV-3420

Basis for Relief:

Paragraph IWV-3426 requires that a limiting leak rate be established for each valve subject to leak rate testing. Accordingly, each valve would require that it be tested individually to assess its compliance with the limiting leak rate established. Most of the valves listed above are equipped with seal systems to maintain an air or water seal at a presure above the peak containment pressure reached during a DBE. The seal systems are arranged by zones or manifolds. Each zone supplies several CIVs. These zones are used to pressurize the valves served by that zone for purposes of leak rate testing. Accordingly the leak rate obtained is on a zone specific basis and represents a total leak rate for all the valves served by that zone or manifold. This arrangement facilitates testing by reducing exposure to personnel while permitting testing to be accomplished with equipment that would be in service under DBE conditions.

Similarly, for valves not equipped with seal systems that are pressurized for leak testing by applying the test medium in between two CIV's, the overall leak rate is the sum of the leakage for both isolation valves

Alternative Testing:

Leak rates will be determined for the above valves on a zone or penetration basis in lieu of obtaining individual valve leak rates. The zone or penetration leak rate will be trended as required.

Indian Point Unit No. 2

RELIEF REQUEST BASIS

SYSTEM: Post Accident Containment Vent

Relief Request No. 1

Valve: FCV-1308 & FCV-1309
Category: B
Quality Group: N/A

Function: These valves are remotely operated flow control valves in the post-accident containment vent exhaust lines. Their function is to facilitate flow control when post-accident venting is required.

Test Requirement: IWV-3410(b) (Exercise)
IWV-3413 (Time)

Basis for Relief:

The control system for these valves provides for demand position indication only. The valve is physically sealed such that position indication by visual observation is not possible. No direct position indication (e.g. limit switch, indicating lights etc.) is provided to establish stem/disk position. The system requires a delta-p in excess of 2 psig in order to establish flow, this is in exces of the normal operating pressure for containment, precluding position indication on a quarterly or refueling basis. In addition, the rate of valve movement is dependent on the rate of change of the manually operated control system, thus valve timing has no significance.

Alternative Testing:

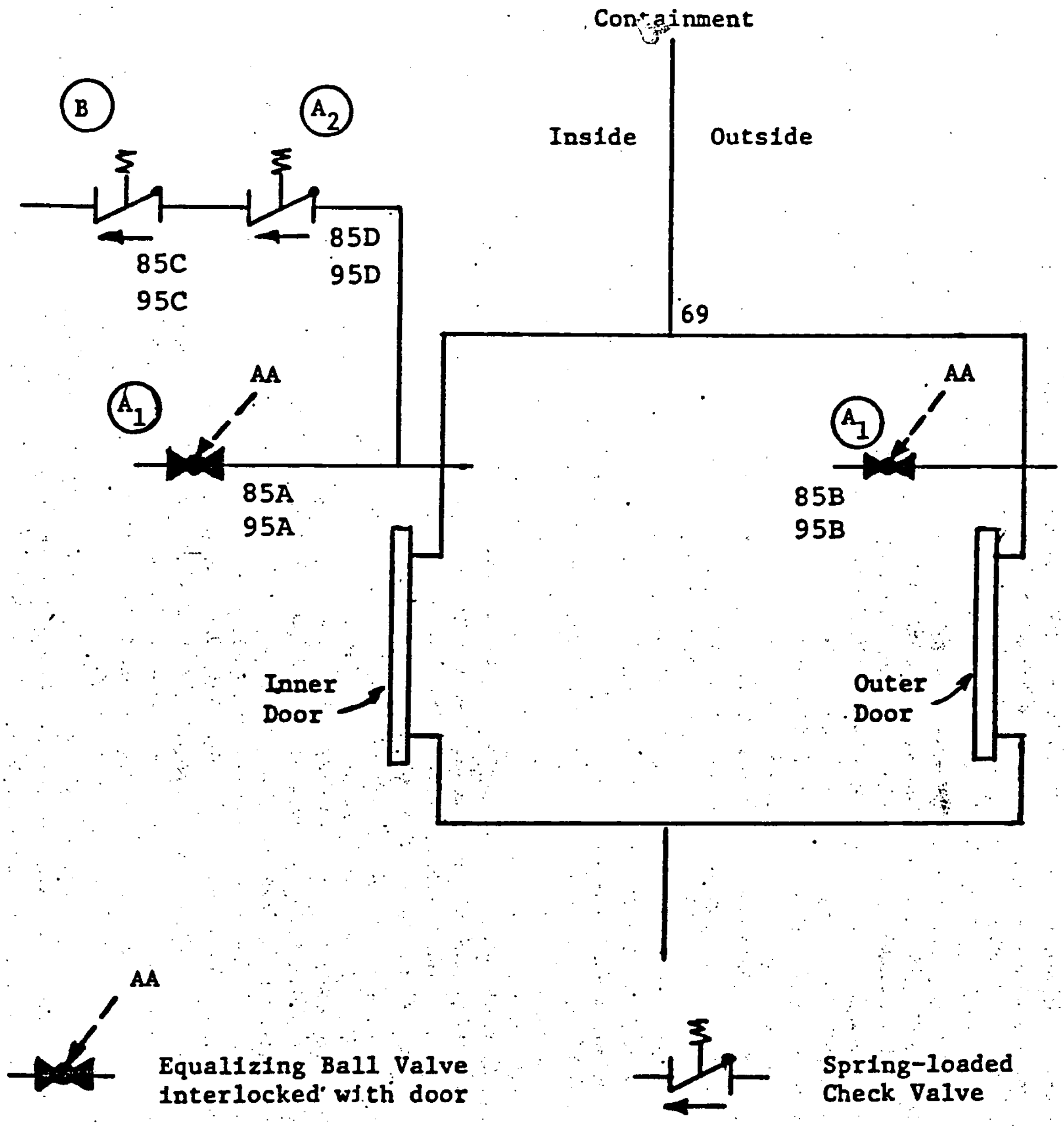
These valves will be exercised quarterly with position indication determined using the demand position. In addition these valves will be exercised during the Type A, ILRT required by 10CFR50, Appendix J, when containment pressure is high enough to establish flow, and position indication established by verifying flow through the valves.

Enclosure 4

Reference Drawings

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October, 1985

Item 69 Personnel Air Lock (2)



Entire system shown is Seismic Class 1 Design.

CONSOLIDATED EDISON CO. INDIAN POINT UNIT 2
Figure 5.2-27 Containment Isolation System Penetration Schematics

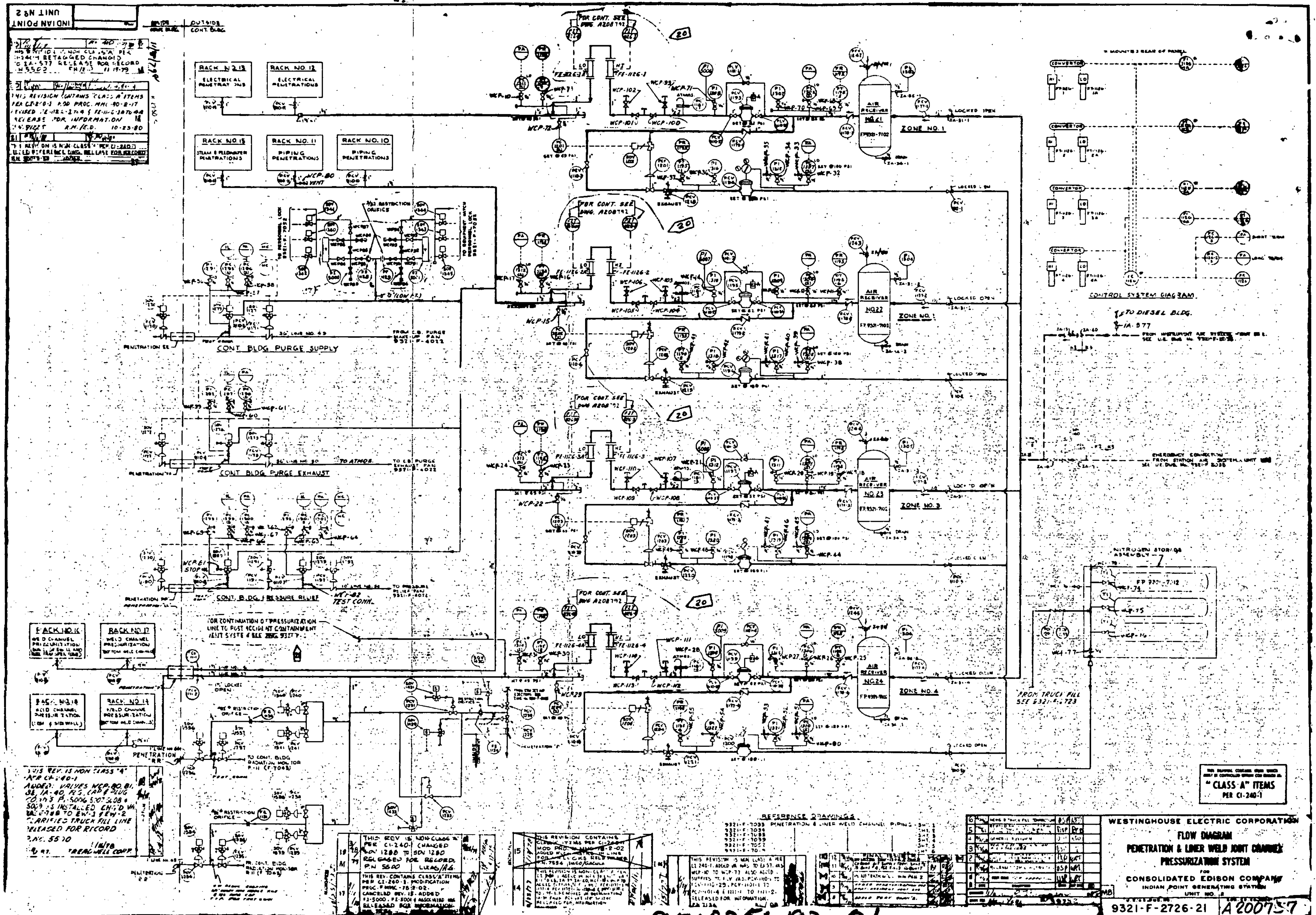
Revision 2

TI APERTURE CARD

Also Available On Aperture Card

INSTRUMENT SYMBOLS

- FLOW ALARM
- FLOW CONTROLLER
- FLOW CONTROL SWITCH
- FLOW CONTROL VALVE
- FLOW ELEMENT
- FLOW INDICATING CONTROLLER
- FLOW INDICATING CONTROL SWITCH
- FLOW INDICATOR
- FLOW RECORDER
- FLOW RATIO CONTROLLER
- FLOW TRANSMITTER
- PRESSURE ALARM
- PRESSURE CONTROL SWITCH
- PRESSURE CONTROLLER
- PRESSURE INDICATING CONTROLLER
- PRESSURE CONTROL VALVE
- PRESSURE INDICATOR
- PRESSURE RECORDER
- PRESSURE TRANSMITTER
- SOLENOID VALVE
- SUPERVISORY RECORDER
- RATIO CONTROL
- INDICATING LIGHT
- HAND CONTROL SWITCH



8510250192-01

FIGURE 1

8510250192-01

INSTRUMENT SYMBOLS

FLOW ALARM
FLOW CONTROLLER
FLOW CONTROL SWITCH
FLOW CONTROL VALVE
FLOW ELEMENT
FLOW INDICATING CONTROLLER
FLOW INDICATING CONTROL SWITCH
FLOW INDICATOR
FLOW RECORDER
FLOW RATIO CONTROLLER
FLOW TRANSMITTER
PRESSURE ALARM
PRESSURE CONTROL SWITCH
PRESSURE CONTROLLER
PRESSURE INDICATING CONTROLLER
PRESSURE CONTROL VALVE
PRESSURE INDICATOR
PRESSURE RECORDER
PRESSURE TRANSMITTER
SOLENOID VALVE
SUPERVISORY RECORDER
RATIO CONTROL
INDICATING LIGHT
HAND CONTROL SWITCH

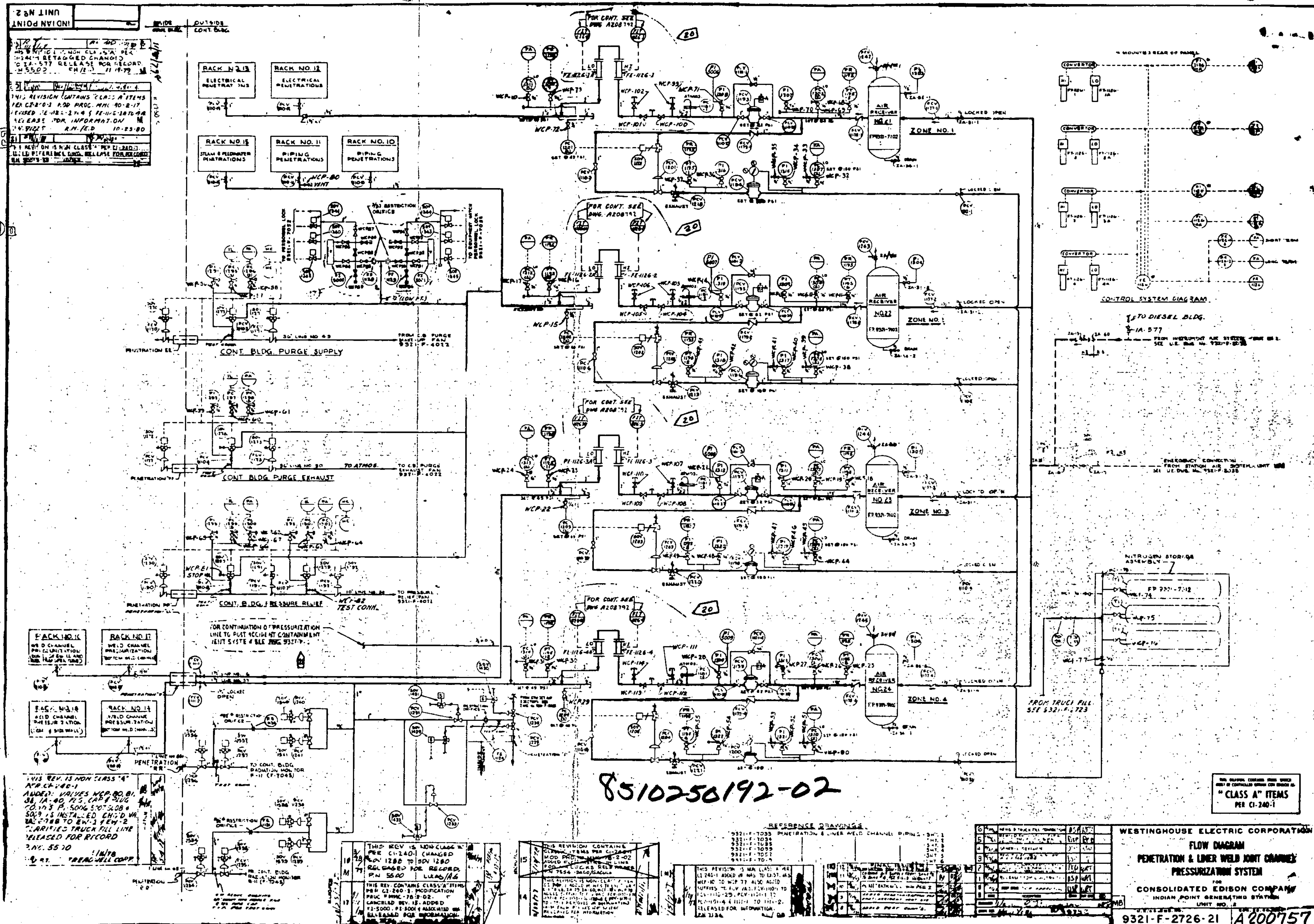


FIGURE I

8510250192-02