



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

MAR 21 1985

Docket No. 50-397

MEMORANDUM FOR: A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

FROM: John O. Bradfute, Project Manager
Licensing Branch No. 2,
Division of Licensing

SUBJECT: WNP-2 PUMP AND VALVE INSERVICE TESTING

DATE & TIME: April 16 - 17, 1985
7:30 a.m. - 5:00 p.m.

LOCATION: Room P-114
Phillips Building
Bethesda, Maryland

PURPOSE: To discuss preparation of Pumps and Valves Inservice Testing
and Safety Evaluation Report for Washington Nuclear Project
No. 2 (WNP-2). The agenda is enclosed.

| PARTICIPANTS*: | <u>NRC</u> | <u>WNP-2</u> | <u>EG&G</u> |
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| | J. D. Page | T. F. Hoyle | C. Ranson |
| | R. Auluck | M. T. Reis | R. Lyon |
| | J. O. Bradfute | R. P. Wolfgramm | |

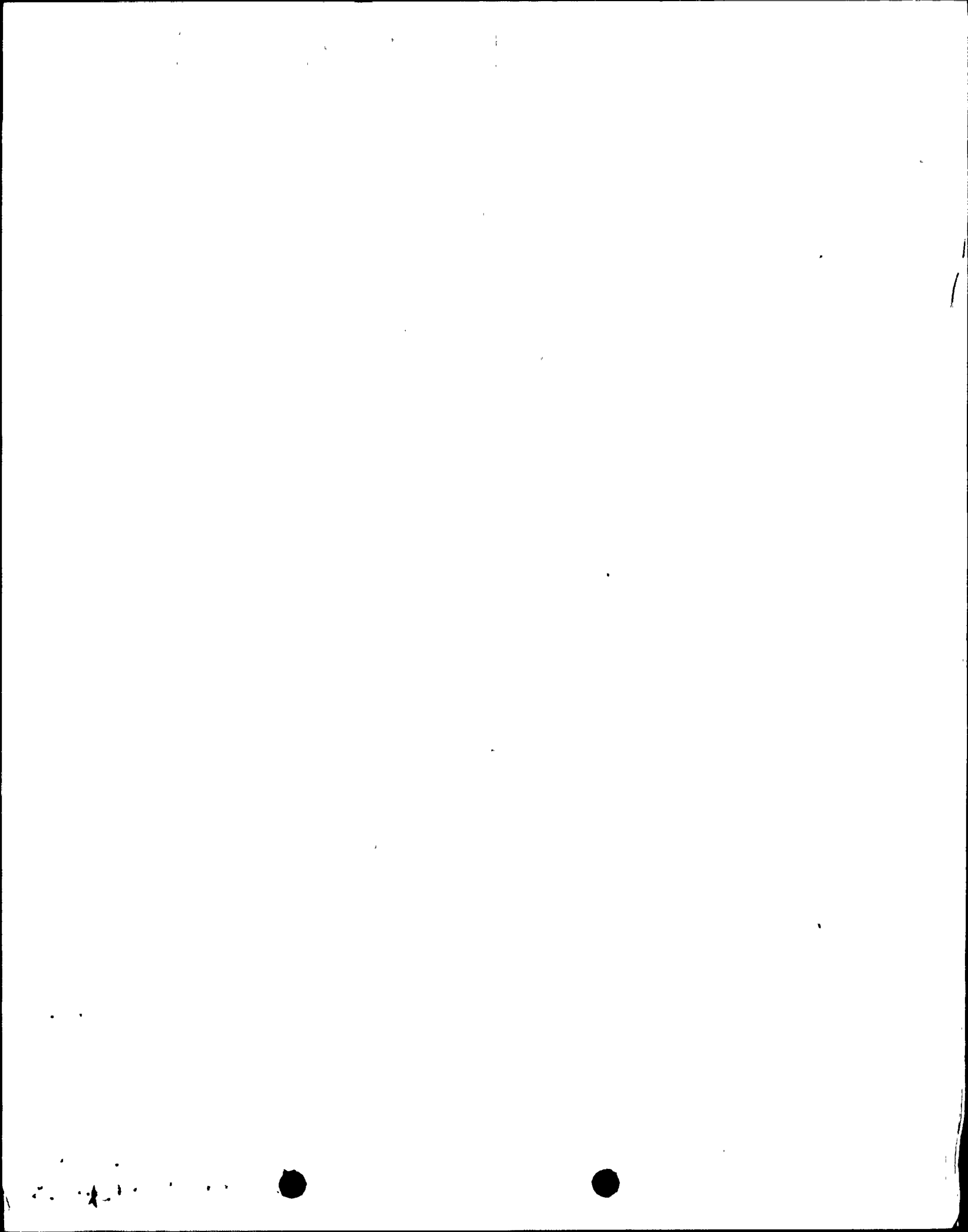
John O. Bradfute, Project Manager
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Enclosure: As stated

cc: See next page

*Meetings between NRC technical staff and applicants for licenses are open for interested members of the public, petitioners, intervenors, or other parties to attend as observers pursuant to "Open Meeting Statement of NRC Staff Policy", 43 Federal Register 28058, 6/28/78.

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WNP-2

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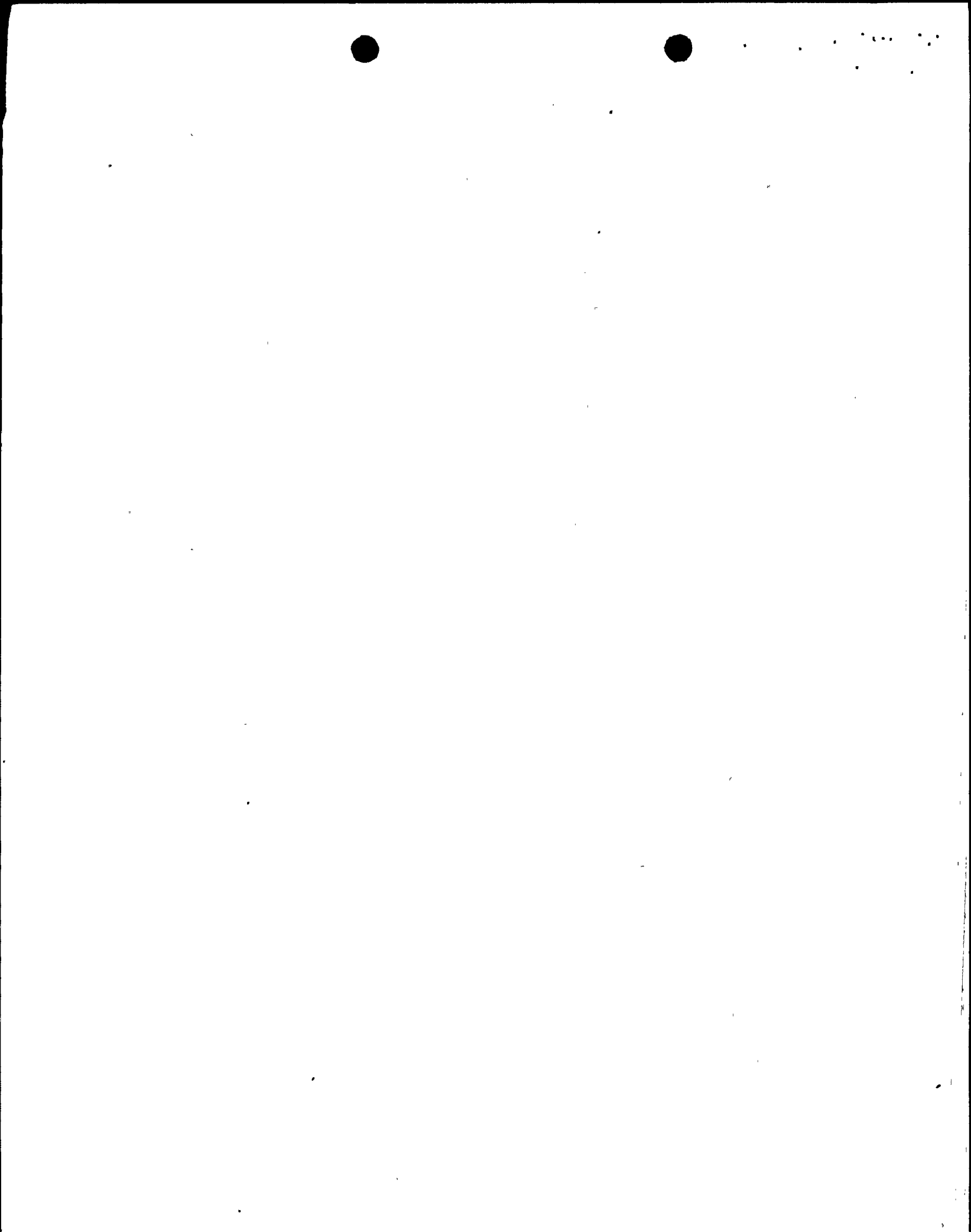
ATTACHMENT

WASHINGTON PUBLIC POWER SUPPLY SYSTEM PROJECT, UNIT 2
PUMP AND VALVE INSERVICE TESTING PROGRAM
QUESTIONS AND COMMENTS

1. VALVE TESTING PROGRAM

A. General Questions and Comments

1. The current NRC position is that rapid-acting valves are identified as those valves with a limiting value of full-stroke time of 2 seconds or less, and the requirements of IWV-3417(a) need not be applied to these valves. However, these valves must be verified to stroke in less than 2 seconds or the corrective actions of IWV-3417(b) must be met. WNP-2 relief request No. RV-1 is affected by this NRC staff position.
2. The limiting value of full-stroke time should be provided in the WNP-2 IST program for all active power operated valves included in the IST program.
3. Simple check valves should be categorized "C" instead of "B-C", since category "B" applies only to valves that can be mechanically operated.
4. What plant conditions could preclude quarterly testing of valves identified to be tested during "ALL" plant operating modes as defined on page 4-6 of the WNP-2 IST program?
5. The NRC has concluded that the applicable leak test procedures and requirements for containment isolation valves are determined by 10CFR50, Appendix J. Relief from Paragraphs IWV-3421 through -3425 for containment isolation valves presents no safety problem since the intent of IWV-3421 through -3425 is met by Appendix J requirements, however, the licensee shall comply with Paragraphs IWV-3426 and -3427. This NRC position affects WNP-2 relief request No. RV-4.
6. Provide clarification of the Code requirements for which relief is being requested in relief request No. RV-5. Is relief being requested from all of paragraph IWV-3427 or just for IWV-3427(b)?



7. Review any function important to safety for the excess flow check valves utilized by WNP-2 to determine if they should be included in the IST program and be categorized A-C.
8. All valves that are Appendix J leak tested to verify their containment isolation function should be included in the WNP-2 IST program and be categorized A, A-C, A passive, or A-C passive as applicable.
9. What cooling systems are used to cool the reactor control room in order to meet the control room habitability requirements? Are the applicable system pumps and valves included in the WNP-2 IST program?
10. Is credit taken at WNP-2 for a post accident sampling system? If so, all of the appropriate system valves should be included in the IST program.
11. Provide the P&IDs that show the neutron monitoring system at WNP-2 (specifically the traversing in-core probe system ball and shear valves).

M519 B. Reactor Core Isolation Cooling System

1. How does opening valve RCIC-V-13 during power operation result in tripping the main turbine generator (refer to note 1.k on page 4-43).
2. Should valve RCIC-V-13 be leak tested per Section XI and Appendix J to verify both its pressure boundary isolation function and its containment isolation function while valve RCIC-V-19 receives only an Appendix J leak test?
3. How is check valve RCIC-V-30 full-stroke exercised during the quarterly valve testing?
4. Review the safety function of valve RCIC-V-64 to determine if it should be included in the IST program and be categorized A passive.
5. How are valves RCIC-V-65 and 66 full-stroke exercised during the cold shutdown valve testing?

6. How is check valve RCIC-V-086 full-stroke exercised open quarterly during power operation?
7. Do valves RCIC-V-111 and 112 perform a function important to safety in the closed position? If so, how are these valves verified closed during the quarterly valve testing?
8. Review any function important to safety for the following valves to determine if they should be included in the WNP-2 IST program.

| <u>Valve</u> | <u>P&ID Coordinates</u> |
|--------------|-----------------------------|
| RCIC-V-25 | D-9 |
| RCIC-V-26 | D-9 |
| RCIC-V-54 | E-9 |
| RCIC-V-61 | C-13 |

14520 C. Low Pressure Core Spray System

1. Does the test flow path permit design accident flow to pass through check valve LPCS-V-3 during the quarterly valve test?
2. Does the air operator on LPCS-V-6 fully open the valve disc during cold shutdown testing of the valve? If not, how is this valve full-stroke exercised?
3. Do valves LPCS-V-33 and 34 perform any function important to safety in the closed position? If so, how is check valve LPCS-V-33 verified closed quarterly?

14520 D. High Pressure Core Spray System

1. Does the test flow path permit design accident flow to pass through check valves HPCS-V-2 and 24 during quarterly testing?
2. How is valve HPCS-V-16 full-stroke exercised during quarterly valve testing?
3. Does the air operator on HPCS-V-5 fully open the valve disc during cold shutdown testing of the valve? If not, how is this valve full-stroke exercised?

4. Do valves HPCS-V-6 and 7 perform any function important to safety in the closed position? If so, how is check valve HPCS-V-7 verified closed quarterly?
5. Does valve HPCS-V-23 perform any function important to safety in the open position?

M521 E. Residual Heat Removal System

1. Will the air operators on the following valves fully open the valves? If not, how are these valves full-stroke exercised?

RHR-V-41A, B, and C,

RHR-V-89

RHR-V-50A and B

2. Do valves RHR-V-84A, 84B, 84C, 85A, 85B, and 85C perform any function important to safety in the closed position? If so, how are check valves RHR-V-84A, 84B, and 84C verified closed quarterly?

3. What is the safety function of the following valves?

RHR-V-101A and B

RHR-V-103A and B

4. Review any safety function for the following valves to determine if they should be included in the IST program.

RHR-V-19

RHR-V-105

RHR-V-122A and B

M524 F. Service Water Systems

1. Why was note 3 referenced for valves HPCS-V-28, SW-V-1A, and SW-V-1B in the valve test tables when the valves were not specifically addressed by the note?
2. What is the safety function of valves SW-V-69A, 69B, 70A, and 70B?
3. Review the function important to safety for valves SW-V-38A and 38B to determine if they should be included in the IST program as Category B valves.

4. How are check valves SW-V-203 and 208 verified closed, their position important to safety, quarterly?

M525 G. Reactor Closed Cooling System

1. What risks associated with non-safety grade equipment outweigh the benefits of performing the Section XI testing of safety grade valves quarterly (refer to note 1.d)?
2. What is the function important to safety of the following valves?

RCC-V-129

RCC-RV-34A

RCC-V-130

RCC-RV-34B

RCC-V-131

M526 H. Fuel Pool Cooling System

1. Is credit taken for the fuel pool cooling system at WNP-2? If so, what is the safety grade cooling water supply to the fuel pool heat exchangers?
2. Review any function important to safety for check valves FPC-V-146A and B (P&ID coordinates J-10) and FPC-V-149 (coordinates C-9) to determine if they should be included in the IST program as Category C valves.
3. P&ID M526 indicates that the actuators for the following valves are inoperable, how are these valves exercised quarterly as indicated in the IST program?

FPC-V-172

FPC-V-175

FPC-V-181A

FPC-V-173

FPC-V-184

FPC-V-181B

4. Does the condition described in note 3 affect the ability of the referenced valves to perform their functions important to safety?

I. Control Rod Drive System

- M528 1. Review the function important to safety of the following hydraulic control unit valves to determine if they should be included in the IST program and be categorized as indicated.

| <u>Valve</u> | <u>Category</u> | <u>P&ID M528 Coordinates</u> |
|----------------------|-----------------|--------------------------------------|
| HCU-114 (185 valves) | C | C-2 |
| HCU-115 (185 valves) | C | C-5 |
| HCU-126 (185 valves) | B | C-4 |
| HCU-127 (185 valves) | B | C-3 |
| HCU-138 (185 valves) | C | C-4 |

M529 J. Main Steam System

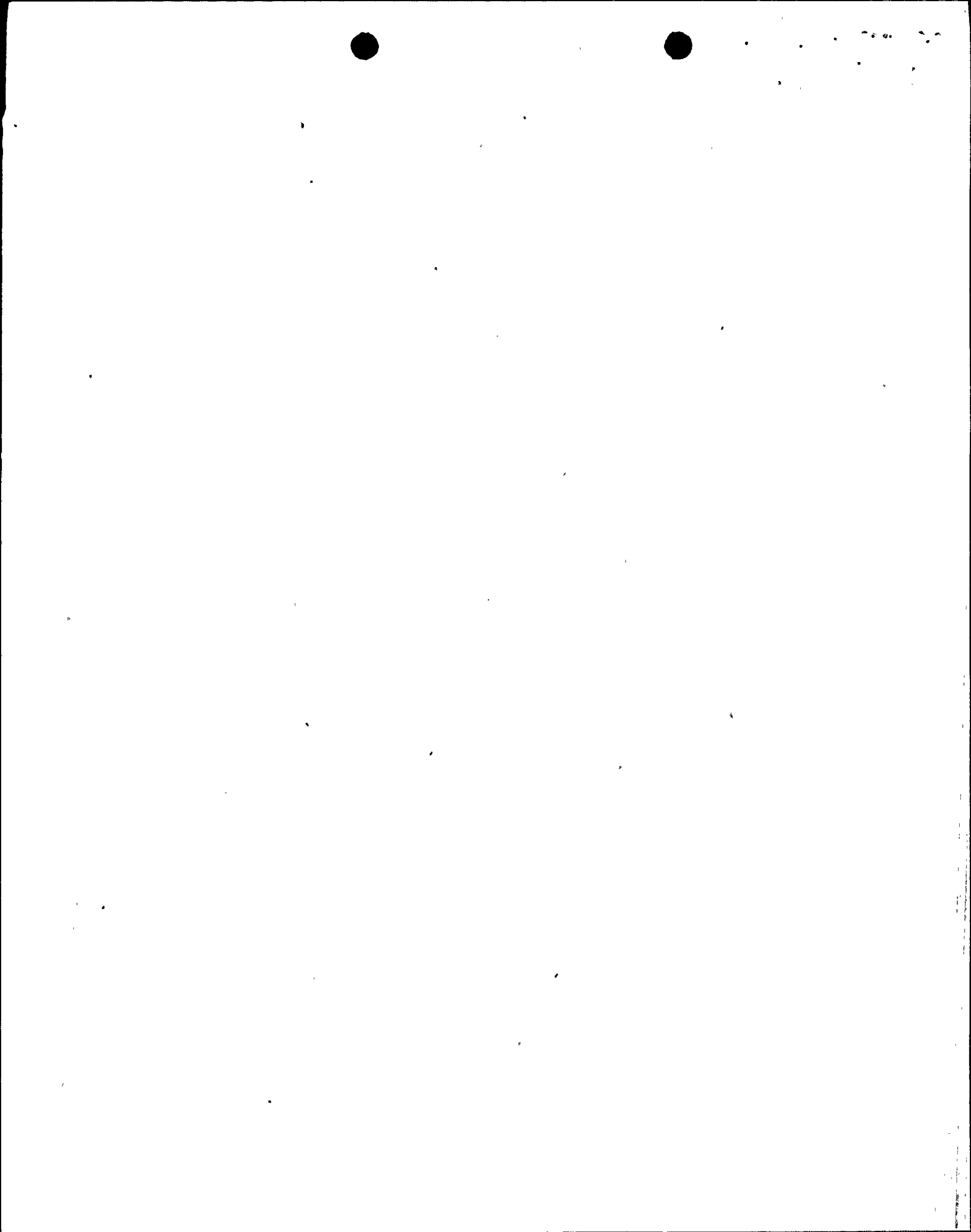
1. Do the main steam relief valve downcomer vacuum breakers (MS-V-37 series and 38 series) perform any function important to safety in the closed position?
2. When and how is operability of the actuator verified for the ADS valves (MS-RV-3D, 4A, 4B, 4C, 4D, 5B, and 5C)?

M530 K. Reactor Recirculation System

1. What risks associated with non-safety grade equipment are far greater than the benefits of performing Section XI testing of safety grade valves quarterly (refer to note 1.j)?

M543 L. Primary Containment Cooling and Purge System

1. Provide a more detailed technical justification for not meeting the corrective action requirements of IWV-3427 for the suppression chamber to drywell vacuum breaker valves (refer to relief request No. RV-6).
2. There is an apparent conflict between the frequency of performing the drywell to suppression chamber bypass leak test indicated in relief request No. RV-6 and WNP-2 Technical Specification 4.6.2.1.d.2. The relief request indicates that the test will be performed "at least once per 18 months", while the Technical Specification permits the frequency to increase to 40 ± 10 months (see WNP-2 Technical Specification 4.6.1.2.a).



3. Are the following valves Appendix J leak tested?

| <u>Valves</u> | <u>P&ID M543 Coordinates</u> | <u>Valves</u> | <u>P&ID M543 Coordinates</u> |
|---------------|--------------------------------------|---------------|--------------------------------------|
| PI-VX-262 | E-13 | PI-VX-266 | F-7 |
| PI-VX-263 | E-13 | PI-VX-267 | E-7 |
| PI-VX-264 | E-13 | PI-VX-268 | E-7 |
| PI-VX-265 | B-14 | PI-VX-269 | C-6 |

M554 M. Containment Atmosphere Control

1. Review any function important to safety for valves CAC-TCV-4A and B (P&ID M554 coordinates D-12 and D-4 respectively) to determine if they should be included in the IST program as category B valves.

M556 N. Containment Instrument Air System

1. Review the function important to safety for the following valves to determine if they should be categorized "C" instead of "A-C".

CIA-V-36M, P, R, S, U, and V .

CIA-V-40M, P, R, S, U, and V

O. Diesel Generator Systems

1. The current NRC position is that the emergency diesel generator and HPCS diesel generator air start systems perform a function important to safety and the appropriate system valves should be included in the IST program and be tested in accordance with the Code.

2. PUMP TESTING PROGRAM

1. How is pump flowrate measured for the following pumps?

Standby liquid control pumps SLC-P-1A and 1B

Diesel fuel oil transfer pumps D0-P-1A, 1B, and 2

2. How is pump discharge pressure measured on the following pumps?

Standby liquid control pumps SLC-P-1A and 1B

Diesel fuel oil transfer pump D0-P-2

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Original signed by:

John O. Bradfute, Project Manager
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03/20/85 03/20/85

THE UNITED STATES OF AMERICA
DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D. C. 20535

MEMORANDUM FOR THE DIRECTOR

DATE: 10/10/68
SUBJECT: [Illegible]

1. [Illegible]

2. [Illegible]

3. [Illegible]

4. [Illegible]

5. [Illegible]

Meeting Notices

Internal
Docket File

NRC PDR
Local PDR
PRC System
NSIC
LB#2 Reading
HDenton/DEisenhut
HThompson/FMiraglia
TNovak
BYoungblood
ASchwencer
GKnighton
EAdensam
JZwolinski
CGrimes
GHolahan
CThomas
GLainas
SVarga
DVassallo
JMiller
JStolz
JKnight, Acting Dir., DE
WJohnston
RBosnak, Acting, AD/CSE, DE
RBernero
LRubenstein
WHouston
DMuller
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