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NRC-87-0199

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

- References:
- 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43
 - 2) Detroit Edison to NRC Letter NRC-87-0248, "Proposed Technical Specification (License Amendment) Primary Containment, 3/4.6.1, and Secondary Containment, 3/4.6.5", dated January 26, 1988

Subject: Supplemental Information on Proposed Technical Specifications - Primary Containment (3/4.6.1) and Secondary Containment (3/4.6.5)

This letter provides supplemental information on Reference 2 as discussed with the NRC Staff in a phone call on July 18, 1988. Reference 2 proposed changes to the Primary and Secondary Containment Integrity Technical Specifications that would allow non-instrumentated closure mechanisms located in locked high radiation areas to be verified closed each cold shutdown (if not performed within the previous 31 days) rather than every 31 days. Additionally, the proposed revision would specify that primary containment penetrations located in locked areas which remain high radiation areas during Cold Shutdown may be verified by review of high radiation area access controls. These proposed Technical Specifications implement the As Low As Reasonably Achievable (ALARA) philosophy while still giving assurance that containment integrity is being maintained.

The information requested is (1) a description of containment isolation devices located in locked high radiation areas that, per the current Technical Specifications, require a physical presence to verify closed, (2) a description of the process and criteria that will be used to control isolated penetrations located in locked high radiation areas without physically verifying the isolation device(s), and (3) a description of the mechanisms that will be utilized to detect the loss of isolation in the unlikely event that one would occur.

The enclosed Table describes the containment isolation devices for Primary and Secondary Containments which are directly affected by the

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proposed Technical Specification change (see Reference 2 for details). These devices are located in areas of the plant which are expected to be locked high radiation areas. Physical verification of each device would result in an estimated exposure of ten (10) man-rem each year. Detroit Edison believes that this exposure is excessive considering that the penetrations are located in locked areas to which entry is closely controlled and activities documented.

Isolated penetrations in locked high radiation areas will be assured to remain closed by administrative programs which require control and documentation for each area. Access to any locked high radiation area requires prior approval of a specific Radiation Work Permit (RWP) and key authorization for the applicable locked area. The isolation devices listed in the enclosed table are located in four locked high radiation areas. There are individual keys for each locked high radiation area. Two master keys do exist, one for the on-duty Nuclear Shift Supervisor (NSS) and one for the Senior Health Physics Technician, but these keys are not issued to anyone under normal plant conditions. Only the NSS or Senior Health Physics Technician can issue locked high radiation keys. Keys for the four locked high radiation areas containing the isolation devices will be uniquely designated in order to initiate a review by the NSS of the intended activities to be performed. The NSS will consider any pertinent information he feels is required to determine if additional control or subsequent re-verification is required to verify that the associated penetrations are still isolated. It is the Senior Health Physics Technician's responsibility to inform the NSS of any request for these keys prior to issuance. Because of the access control verification programs, the small number of locked high radiation areas containing isolation devices, and infrequent activities in these areas, it is extremely unlikely that an isolated containment penetration would inadvertently become unisolated.

During Cold Shutdown a review of access control documents will be performed on those areas which still remain locked high radiation areas and contain containment isolation devices (see enclosed list) that have not been physically verified within the previous 31 days. Any personnel entries will be scrutinized to determine if containment integrity could have been compromised in any way. Conformance to these administrative controls provides an equivalent assurance of containment integrity as compared to a normally accessible penetration verified on a 31 day frequency.

The spare TIP flange is the only penetration isolation device not expected to be verified during every Cold Shutdown (if not verified within the previous 31 days). Detroit Edison does not believe that this is a problem because this flange would be extremely difficult to disturb. It would require special tools and considerable time to

unisolate this penetration compared to a normal penetration isolated by a manual valve; one of the administrative access reviews would certainly identify any potential to modify this penetration.

While an unisolated penetration is not anticipated to occur because of the above mentioned administrative access controls, one would be detected by at least one of the following systems or practices:

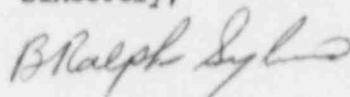
- 1) Actuation of one of the plant's numerous leak detection or fire detection systems. These systems detect leaks by sensing excess flow in process piping systems, sensing pressure and temperature changes in primary containment, monitoring temperature in areas containing equipment and piping systems, or monitoring activity of drain sumps.
- 2) Actuation of area radiation or continuous air monitors.
- 3) Abnormal system function or response (e.g., increase in Nitrogen usage, abnormal flowrate deviations, unexpected liquid storage tank level decreases or increases, etc).
- 4) Some locked high radiation areas will normally be checked daily at the door for abnormal conditions, e.g., steam, leaks, high temperatures, unusual noises, etc. (The on-duty NSS may alter these checks of high radiation areas based on Health Physics and/or ALARA concerns). Daily operator tours through open areas of the plant can also detect steam leakage from some areas due to communication between plant spaces.

The probability of any penetration in a locked high radiation area becoming unisolated is extremely small (and the reduction of physical verification is supported by the ALARA philosophy) when considering the relatively small number of isolation devices involved, the plant's leak detection practices and systems, and the multiple administrative access control programs.

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If you have any questions, please contact Mr. Gordon Nader at (313) 586-4513.

Sincerely,



Enclosure

cc: Mr. A. B. Davis
Mr. R. C. Knop
Mr. T. R. Quay
Mr. W. G. Rogers

PRIMARY CONTAINMENT

SIZE & TYPE OF ISOLATION DEVICE	PLANT IDENTIFICATION SYSTEM NUMBER	DESCRIPTION	LOCATION	EXPECTED LOCKED HIGH RADIATION AREA AT POWER	EXPECTED LOCKED HIGH RADIATION AREA DURING COLD SHUTDOWN
3/4" vent valves	P34-F013 P34-F014	Division 1 Drywell Atmosphere Sample Line	RWCU valve pit	Yes	No
3/4" drain valves	E21-F022A E21-F022B	Division 1 Core Spray Discharge	Reactor Bldg. Second Floor	Yes	No
3/4" drain valves	G33-F002 G33-F003	RWCU Suction Drain	RWCU Valve Pit	Yes	No
3/4" drain valves	B21-F017 B21-F018	MSIV Drain Line Drain	Steam Tunnel	Yes	No
3/4" Test Connections Valves	T48-F006A T48-F007A	Division 1 Hydrogen Recombiner	Reactor Bldg. Second Floor	Yes	No
3/4" Test Connections Valves	C41-F026 C41-F027	Standby Liquid Control Outboard Check Valve	RWCU Valve Pit	Yes	No
3/4" Test Connections Valves	B21-F025A-D B21-F026A-D	MSIV LLRT Test Taps (Lines A-D)	Steam Tunnel	Yes	No
3/4" Test Connections Valves	B21-F102A B21-F103A	MSIV Leak Detection System Test Taps	Steam Tunnel	Yes	No
3/4" Test Connection Valves	G33-F122 G33-F123	RWCU Discharge Outboard Test Taps	Steam Tunnel	Yes	No
3/4" Test Connections Valves	E51-F036 E51-F037	RCIC Steam Supply Test Taps	Steam Tunnel	Yes	No
3/4" Test Connections Valves	E41-F014 E41-F015	HPCI Steam Supply Test Taps	Steam Tunnel	Yes	No
TIP Flange	Penetration X-35A Blank Flange	Spare TIP Flange	TIP Room	Yes	Yes (1)

SECONDARY CONTAINMENT

DEVICE	PLANT IDENTIFICATION SYSTEM NUMBER	DESCRIPTION	LOCATION	EXPECTED LOCKED HIGH RADIATION AREA AT POWER	EXPECTED LOCKED HIGH RADIATION AREA DURING COLD SHUTDOWN
Blowout Panels		Blowout Panels for the Steam Tunnel	Steam Tunnel	Yes	No

(1) The TIP Room is expected to be unaccessible for at least 90 hours after TIP system operation has concluded. Although the area is expected to administratively remain a locked high radiation area at Cold Shutdown, access may be allowed pending verification of radiological conditions.

Please note that the majority of the above listed isolation devices are small (less than or equal to three quarter inch) drain, vent or test connections valves in series with another valve or large bulky (Blowout Panels) hard to disturb devices.