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Subject: Fwd: RI-IST Files to be Forwarded to the NRC
Creation Date: 10/29/03 10:24AM
From: "Scott Head" <smhead@stpegs.com>

Created By: smhead@stpegs.com

Recipients

nrc.gov

owf4_po.OWFN_DO

DHJ (David Jaffe)

Post Office

owf4_po.OWFN_DO

Route

nrc.gov

Files

MESSAGE

Mail

Mime.822

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10/29/03 10:24AM

Options

Expiration Date:

None

Priority:

Standard

Reply Requested:

No

Return Notification:

None

Concealed Subject:

No

Security:

Standard

From: "Scott Head" <smhead@stpegs.com>
To: <Dhj@nrc.gov>
Date: 10/29/03 10:26AM
Subject: Fwd: RI-IST Files to be Forwarded to the NRC

As promised.

From: "Glen Schinzel" <geschinzel@stpegs.com>
To: "Scott Head" <smhead@stpegs.com>
Date: 10/29/03 8:33AM
Subject: RI-IST Files to be Forwarded to the NRC

Scott, here are the files to be forwarded to the NRC to support an RI-IST phone call on Thursday.

Glen

CC: "Bradley Scott" <bjscott@stpegs.com>, "Carl Grantom" <crgrantom@stpegs.com>, "Daniel Stillwell" <dwstillwell@stpegs.com>, "Mark McBurnett" <mamcburnett@stpegs.com>, "Michael Berg" <mjberg@stpegs.com>, "Philip Walker" <plwalker@stpegs.com>

STP's Approach for a Future RI-IST Resubmittal

- **Resubmittal of RI-IST will comply with SONGS template**
 - **F-V threshold adjusted**
 - **Treatment of RAW common cause adjusted**
 - **RG-1.175 satisfied**
- **RI-IST process will only be applied to those components remaining within the scope of IST following application of the Exemption allowances**
- **RI-IST will not affect the GQA categorization results nor the scope of components subjected to IST controls**
- **RI-IST treatments will comply with the SONGS approach**
- **RI-IST 'High' SSCs continue to receive full treatment**
- **RI-IST 'Low/High' SSCs can have intervals between tests extended as long as compensatory measures are put in place**
- **RI-IST 'Low' SSCs can have intervals extended up to a 6 year periodicity**
- **Determine if terminology of 'High, Low/High, Low' can be changed to something like 'IST Treatment Category 1, 2, 3'**
- **IST-scoped AOVs will follow JOG AOV recommendations (same as SONGS approach)**
- **RI-IST proposed testing strategies will be generated by a RI-IST Working Group, and approved by the Comprehensive Risk Management Expert Panel (same Panel that reviews and approves the GQA categorization results)**
- **While some RI-IST treatment categories may initially appear inconsistent with GQA categorization results, the RI-IST treatment categories focus on defining required inservice testing only**
- **RI-IST component examples will be used to demonstrate how an RI-IST treatment category compares to the GQA categorization**

Low Head Safety Injection Pump 1A Discharge MOV – 2N121XSI0018A

GQA Rank: Medium

Basis: Supports the following system functions

- **High risk:** Injection and Cold leg recirc modes
- **Medium risk:** Hot leg recirc mode
- **Low risk:** Pressure boundary and Containment Isolation

GQA ranked **Medium** based on:

- Initial PRA rank of Medium (recently lowered to Low)
- Redundant Trains
- Valve is normally open and stays open (i.e., passive) to support the High-risk functions. Transfer closed is not a credible failure.
- Valve is closed to isolate RHR from the LHSI pump when RHR is used for long-term accident recovery. Failure to close mitigated by the inside containment check valve.

RI-IST Treatment: Low

Basis: Valve is normally open which satisfies its safety function

The 'remain open' function is considered passive

IST testable function is to 'close on demand'

RI-IST Treatment of **Low** based on:

- F-V value of 4.3E-4 and a RAW value of 1.2
- Valve is normally in its required safety position – no change of state required
- Redundancy exists with three 100% safety trains to satisfy the injection modes
- Diversity exists with 3 High Head pumps to support recirculation and injection
- Valve is routinely monitored by other means to check valve position and flow

Conclusion: The GQA categorization process initially determines the risk of system functions, and then determines the risk of individual components that support these functions. The RI-IST process focuses directly on IST-scoped components and determines their specific importance. The GQA approach introduces additional conservatism into the categorization process since all components in a given system are assessed. In addition, the GQA Working Group deterministically ranked this component as Medium risk based on its support of High-ranked functions.

Low Head Safety Injection Pump 1A – 2N121NPA102A

GQA Rank: High

Basis: Supports the following system functions

- **High risk:** Injection and Cold leg recirc modes
- **Medium risk:** Hot leg recirc mode
- **Low risk:** Pressure boundary and positive RCS volume control

GQA ranked **High** based on:

- Initial PRA rank of High (recently lowered to Medium*)
- Supports High risk functions
- No credit taken for redundancy

RI-IST Treatment: Low

Basis: Active function to ‘start and run’ to support injection and recirculation functions

RI-IST Treatment of **Low** based on:

- F-V value of 7.78E-4 and a RAW value of 1.2
- Redundancy exists with three 100% safety trains to satisfy the injection modes
- Diversity exists with 3 High Head pumps to support recirculation and injection

Conclusion: The GQA categorization process initially determines the risk of system functions, and then determines the risk of individual components that support these functions. The RI-IST process focuses directly on IST-scoped components and determines their specific importance. The GQA approach introduces additional conservatism into the categorization process since all components in a given system are assessed. Also, the GQA process conservatively addresses RAW common cause, whereas the RI-IST process addresses common cause using the SONGS template. In addition, the GQA Working Group deterministically ranked this component as High risk based on its support of High-ranked functions with no credit taken for redundancy.

RESIDUAL HEAT REMOVAL SYSTEM

REDUNDANT 3-TRAIN

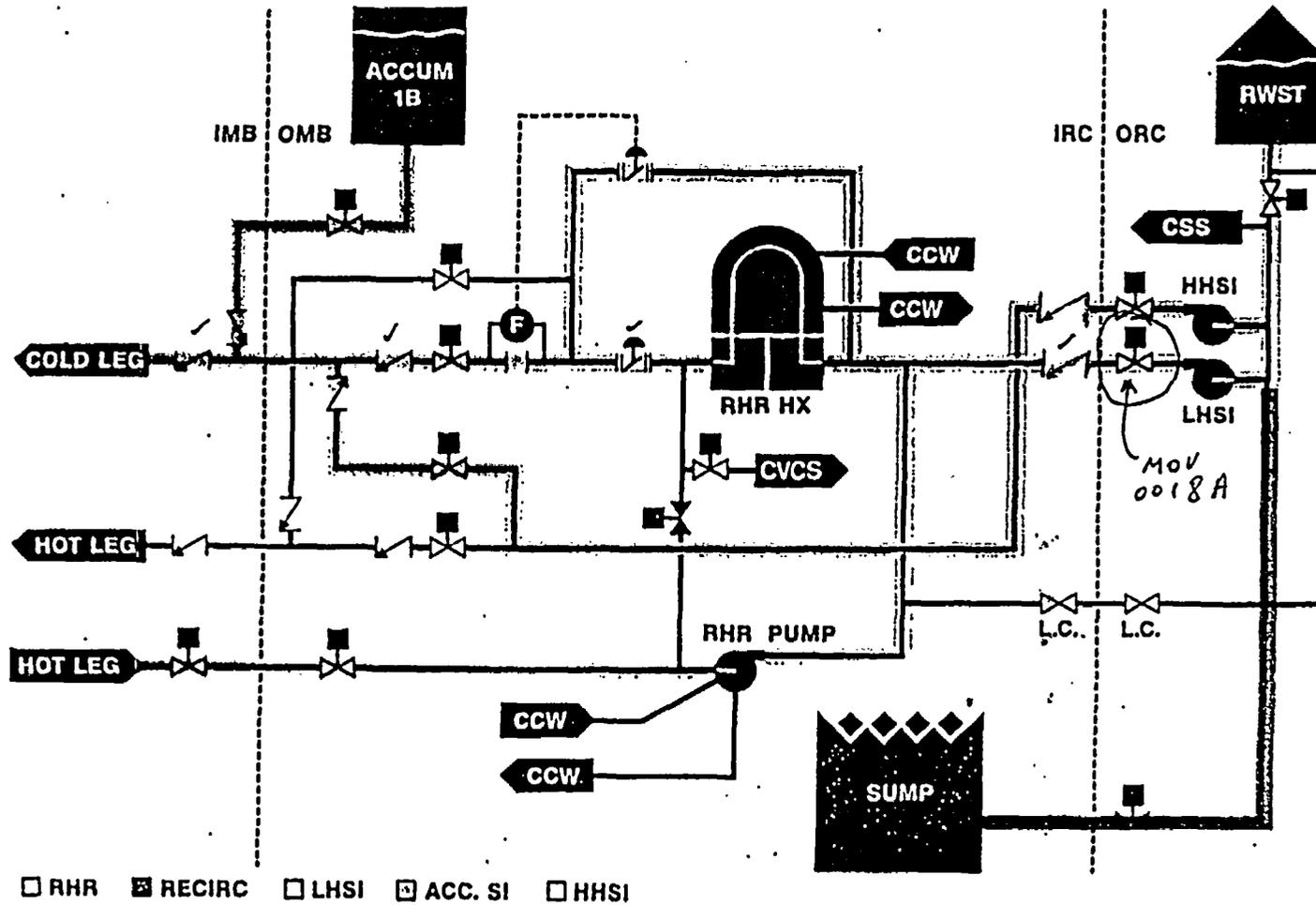


FIGURE 1