

**SieneI, Beth**

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**From:** Hamer, Mike  
**Sent:** Monday, April 26, 2004 2:09 PM  
**To:** Devinentis, Jim; Goodwin, Scott; Callaghan, James; Pelton, David; SieneI, Beth  
**Subject:** PRO for CR-VTY-2004-00981

The attached PRO is for the discovery of a missing piece of shoot-out steel. This condition has been evaluated as "not reportable".



PRO-040981.pdf  
(275 KB)

A-666

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**INTEROFFICE MEMORANDUM  
REGULATORY COMPLIANCE  
POTENTIALLY REPORTABLE OCCURRENCE REPORT**

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**TO:** MIKE DESILETS, TECHNICAL SUPPORT MANAGER  
**FROM:** JIM DEVINCENTIS, MANAGER LICENSING *JM Devincenis*  
**SUBJECT:** CR-VTY-2004-0981 A PIECE OF SHOOT-OUT STEEL NOT INSTALLED  
**DATE:** APRIL 19, 2004  
**PRO NUMBER:** PRO-040981

**EVENT DESCRIPTION:**

On April 9, 2004, during CRD change-out, an observation was made that a piece of the CRD Housing support shoot-out steel was missing. An investigation revealed that the piece was probably not reinstalled during a prior outage. This support structure is required to be operable per TS 3.3.B.2 (attached).

The following 10CFR50.73 criterion was considered potentially applicable when determining reportability of this event:

Operation or Condition Prohibited by Technical Specifications

§50.73(a)(2)(i)(B) The licensee shall report "Any operation or condition which was prohibited by the plants Technical Specifications (TS) except when: (1) The TS is administrative in nature; (2) The event consists solely of a late surveillance test where the oversight was corrected, the test was performed and the equipment was found to be capable of performing its specified safety function; or (3) The TS was revised prior to the discovery of the event such that the operation or condition was no longer prohibited at the time of discovery of the event."

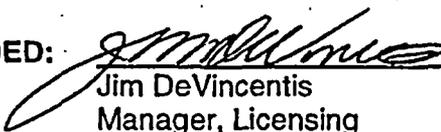
**DISCUSSION**

NUREG 1022, Rev. 2, page 37 (attached) provides additional guidance via an example of the extent to which conditions that are potentially applicable to this criterion should be reported. Example (4) discusses the identification of a component that was missing the required seismic restraint and concluded it would be reportable only if it was determined that the missing restraint caused the component to be inoperable.

In this case, Mechanical/Structural Engineering evaluated the as-found condition with the subject missing clamp and determined, based on engineering judgment, that the shoot out steel would have performed its intended function (attached). Based on this, no safety related equipment was made inoperable by the condition.

Based on this, this event is not reportable under 10CFR50.73 (a)(2)(i)(B). There is no corresponding 10CFR50.72 criterion.

**CONCLUSION:** This event is not reportable under 10CFR50.72 or 50.73.

**RECOMMENDED:**  1 4/19/04  
Jim DeVincentis Date  
Manager, Licensing

**APPROVED:**  1 4/26/04  
Michael P. Desilets Date  
Technical Support Manager

### 3.3 LIMITING CONDITIONS FOR OPERATION

2. The Control Rod Drive Housing Support System shall be in place when the Reactor Coolant System is pressurized above atmospheric pressure with fuel in the reactor vessel unless all operable control rods are fully inserted.

3. While the reactor is below 20% power, the Rod Worth Minimizer (RWM) shall be operating while moving control rods except that:

(a) If after withdrawal of at least 12 control rods during a startup, the RWM fails, the startup may continue provided a second licensed operator verifies that the operator at the reactor console is following the control rod program; or

(b) If all rods, except those that cannot be moved with control rod drive

### 4.3 SURVEILLANCE REQUIREMENTS

positive coupling and the results of each test shall be recorded. The drive and blade shall be coupled and fully withdrawn. The position and over-travel lights shall be observed.

2. The Control Rod Drive Housing Support System shall be inspected after reassembly and the results of the inspection recorded.

3. Prior to control rod withdrawal for startup the Rod Worth Minimizer (RWM) shall be verified as operable by performing the following:

(a) Verify that the control rod withdrawal sequence for the Rod Worth Minimizer computer is correct.

(b) The Rod Worth Minimizer diagnostic test shall be performed.

If the discrepancies are large enough that multiple valves are inoperable the event may also be reportable under § 50.73(a)(2)(vii) "Any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system ...."

**(4) Seismic Restraints**

Assume it is found that an exciter panel for one EDG lacked appropriate seismic restraints since the plant was constructed, because of a design, analysis, or construction inadequacy. Upon evaluation, the EDG is determined to be inoperable because it is not capable of performing its specified safety functions during and after an SSE.

An LER would be required because the ~~plant was outside of its design basis~~ the EDG was inoperable for a period of time longer than allowed by TS.

**(6) Vulnerability to Loss of Offsite Power**

Assume that during a design review it is found that a loss of offsite power could cause a loss of instrument air and, as a result, auxiliary feedwater (AFW) flow control valves could fail open. Then for low steam generator pressure, such as could occur for certain main steam line breaks, high AFW flow rates could result in tripping the motor driven AFW pumps on thermal overload. Therefore, the motor-driven AFW pumps are determined to be inoperable. The single turbine driven AFW pump is not affected.

An LER would be required because the motor-driven portion of AFW was inoperable for a period of time longer than allowed by the technical specifications.

**3.2.3 Deviation from Technical Specifications under § 50.54(x)**

| § 50.72(b)(1)   | § 50.73(a)(2)(i)(C)  |
|---|--|
| "... any deviation from the plant's Technical Specifications authorized pursuant to § 50.54(x) of this part." | " Any deviation from the plant's Technical Specifications authorized pursuant to § 50.54(x) of this part." |

An LER is required for a deviation authorized pursuant to Section 50.54(x). If not reported under § 50.72(a), an ENS notification is also required.

**Discussion**

10 CFR 50.54(x) generally permits licensees to take reasonable action in an emergency even though the action departs from the license conditions or plant technical specifications if (1) the action is immediately needed to protect the public health and safety, including plant personnel, and (2) no action consistent with the license conditions and technical specifications is

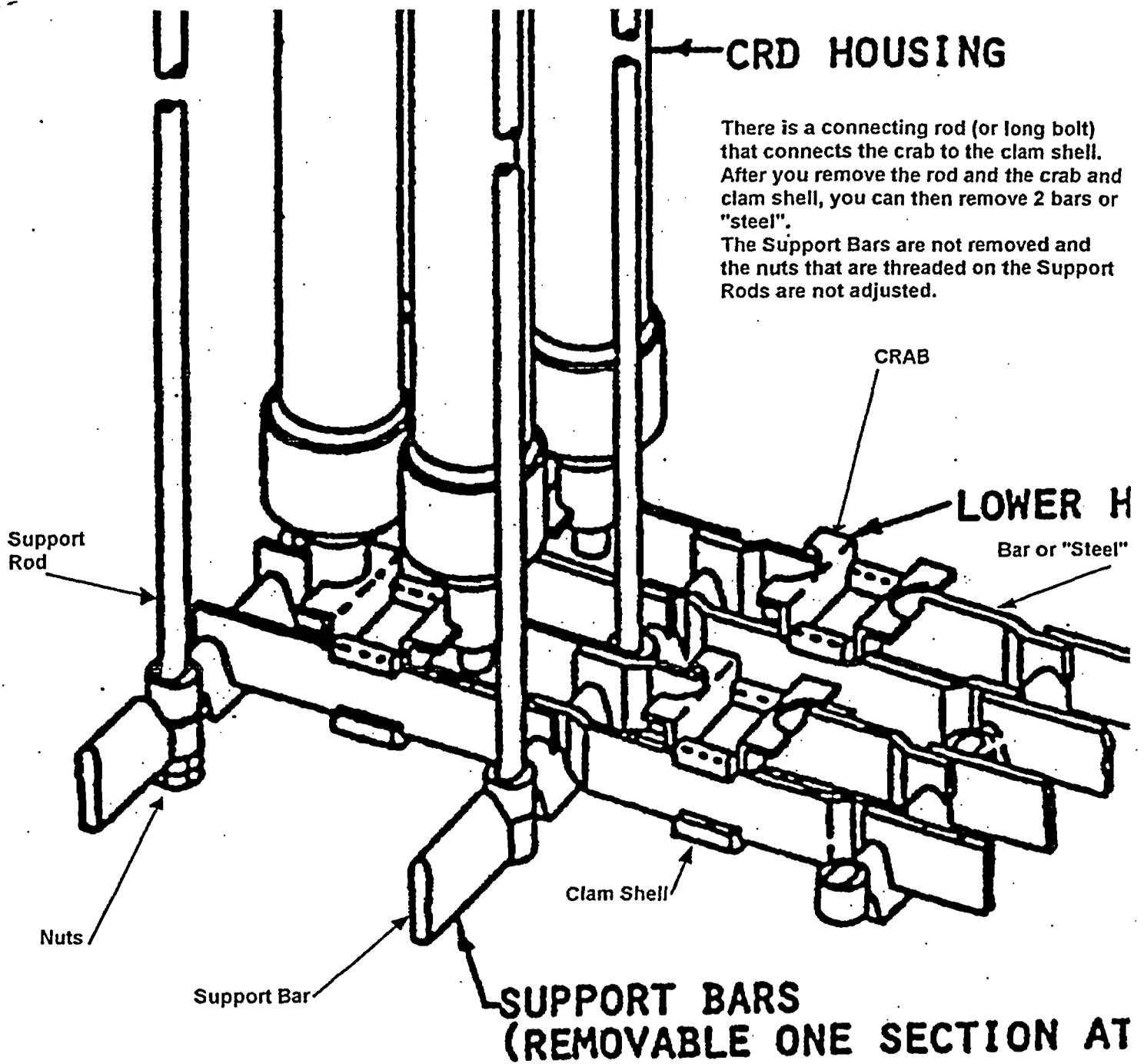


Figure 1-5. Lower Control Rod Drive Housing

## Devincentis, Jim

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**From:** Goodwin, Scott  
**Sent:** Saturday, April 10, 2004 4:46 PM  
**To:** Devincentis, Jim  
**Cc:** Callaghan, James; Meyer, Jeff; Hamer, Mike; Wanczyk, Robert; Daflucas, Ronda; Oliver, Bob; O'Connor, Tom; Todd, Jon; McKenney, Mike  
**Subject:** RE: Shoot out steel

Spoke with Jon Todd today regarding extent of condition related to this issue. Jon said that it is limited to one Clamshell piece associated with a CRD housing that was not worked this outage. Therefore, the missing piece has been missing for some indeterminate period.

See enclosed figure depicting configuration. The shootout steel is a latticed assembly supported by rods that have incorporated stacked disc springs into them. The assembly functions to resist the downward loads generated as a result of a postulated full circumferential break of a CRD Housing at full power operations. The Clamshell is centered beneath the Crab on the short Steel Bars that run between the Support Bars and Rods. The Clamshell includes a single bolt that protrudes through it from the underside and engages the Crab. Both the Clamshell and the Crab are configured with a notch, or recess, to fit snug across adjacent pieces of the Steel Bars to align the shootout steel as a lattice and to vertically align the CRD Housings. Based on the input received from Jon, the Clamshell was missing but the Crab was in place, engaged across the adjacent Steel Bars and performing its alignment function for the lattice assembly and CRD Housing positioning. Since the forces resultant of a postulated rupture of a CRD Housing are transferred directly to the structural framing (Steel bars, Support bars and Rods) making up the lattice/rod assembly and since that load transfer is not affected with the Clamshell alone being found missing, the prior function of the shootout steel remains assured.

Jon has discussed his intent for obtaining a replacement Clamshell and has initiated discussion with Procurement to buy or fabricate a replacement piece to re-install where the missing one was found.

Based on my conversation with Jon, I believe this e-mail satisfies the EDM log item, number 59, and it can be closed.

PDF

shootout steel.pdf  
(44 KB)

Scott Goodwin  
ENVY Design Engineering  
Mechanical/Structural

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-----Original Message-----

**From:** Goodwin, Scott  
**Sent:** Friday, April 09, 2004 7:56 PM  
**To:** Devincentis, Jim  
**Cc:** Callaghan, James; Meyer, Jeff; Hamer, Mike; Wanczyk, Robert; Daflucas, Ronda; Oliver, Bob; O'Connor, Tom  
**Subject:** RE: Shoot out steel

Tend to agree that if missing piece is isolated to a single clam shell and upper crab piece was still present. We are still awaiting input from Maint Support as to the extent of missing steel and what steel it was. Turnover day-to-night has occurred between TO'C and Bob O.

Scott Goodwin  
ENVY Design Engineering  
Mechanical/Structural

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-----Original Message-----

**From:** Devinentis, Jim

**Sent:** Friday, April 09, 2004 3:26 PM

**To:** Goodwin, Scott

**Cc:** Callaghan, James; Meyer, Jeff; Hamer, Mike; Wanczyk, Robert; Daflucas, Ronda

**Subject:** Shoot out steel

Scott --

I saw the CR on the missing piece of shoot-out steel. Since this is a potential LER (condition prohibited by TS 3.3.B.2) I will need an assessment of impact on past functionally. I believe it will not be reportable if we can say it was functional. My sense in looking at some pictures with BC is that it will not impact functionally I'll need you to agree.

I understand that the eng duty mgr has been asked to assess.

Please keep me informed.

Jim.

