

**IP2 HEAT SINK PERFORMANCE REQUESTED INFORMATION FOR 05000247/2004006**

**From:** Joseph Schoppy  
**To:** Conroy, Pat  
**Date:** 3/17/04 7:55AM  
**Subject:** Re: Indian Point Heat Sink Inspection

Pat,

Thanks for the quick response. I look forward to working with T. R. again. Once I select an appropriate sample ( 2-3 heat exchangers), I'll send T.R. an e-mail with a request for information. This will allow me to be more efficient and effective during my limited onsite time. Thanks again for your support.

Joe

T.R.,

Attached is a request for information for my upcoming inspection. I would like the information the morning of 4/12. Any of the information (not too bulky to mail) that is ready prior to April 5, can be provided electronically or mailed to our Region I office to my attention. (That will allow me to get a jump on some of the data during my prep week in the Region).

Please set up an Entrance Meeting for April 12 (15 minutes any time 9:30 a.m. - 2:00 p.m.).

Please set up an Exit Meeting for April 16 (30 minutes any time in the morning) or Thursday afternoon, April 15, if it's more convenient for your organization.

Please set up walkdowns of service water, EDG heat exchangers, HHSI pump oil coolers, and RHR HXs with the respective system engineers (30 minutes each any time after 9:30 a.m. on 4/12 through 9:00 p.m. on 4/13). These walkdowns can be combined if more convenient for your organization.

If you have any questions or comments please don't hesitate to reply. Please acknowledge receipt of this e-mail. Thank you.

Joe

**IP2 HEAT SINK PERFORMANCE REQUEST FOR INFORMATION**

Heat exchangers (HXs) of choice: RHR HXs, safety injection pump oil coolers, and EDG lube oil and jacket water HXs.

- GL 89-13 response \*
- IP2 89-13 program \*
- List of corrective action reports associated with service water (ESWS & NSWS), RHR, HHSI, and EDG lube oil and jacket water within the past two years (just the subject line).
- Most recent system health reports for ESWS, NSWS, RHR, EDGs, and HHSI.

- List of any planned work (PMs, CMs, or STs) on these systems (ESWS, NSWS, RHR, EDGs, and HHSI) during the week of 4/12.
- List of any completed work (PMs, CMs, or DCPs) on RHR HXs, EDG HXs, and HHSI pump oil coolers within the past two years.
- List of any self-assessments and QA assessments associated with the 89-13 program, service water systems, or heat exchangers (RHR, CCW, or EDG) completed within the last two years.
- Operating procedure for EDGs, HHSI, CCW, NSWS, and ESWS\*
- Abnormal procedures for icing, grassing/fouling of SW screens, loss of SW, and loss of CCW\*
- Any silt survey results at SW intake over the last two years
- Calculation PGI-00354-02\*
- Design basis calculations for HHSI pump oil coolers, EDG HXs, and RHR HXs\*
- Results of any RHR/EDG/HHSI HX Eddy Current Inspections since May 2002
- Anything else that you think will help me assess how Entergy is performing in this important area.

\* I do not need my own copy, especially for larger documents. Temporary access to material works.

**From:** Joseph Schoppy  
**To:** tjones2@entergy.com  
**Date:** 4/5/04 6:34AM  
**Subject:** IP2 Heat Sink Inspection Info Request

T.R.,

I just got back to my office this morning. I've been off inspecting at other places. I've had access to my e-mail but not my office voice mail. I tried calling you a few times last week but couldn't seem to catch you in your office. I just wanted to ensure that you received the info request. DCP stands for design change package (maybe you call them something else up there).

Any of the information ready that can be provided electronically?

Please acknowledge receipt of this e-mail. Thank you.

Joe

**From:** Joseph Schoppy  
**To:** tjones2@entergy.com  
**Date:** 4/5/04 2:05PM  
**Subject:** IP2 Heat Sink Inspection

T.R.,

Somehow I forgot to inform you that I will be accompanied by Carey Colantoni (cac7@nrc.gov, 610-337-5076) during the heat sink inspection. She will be observing her first heat sink inspection and also helping out with some of the inspection (her time will be split between training and direct inspection). Could you please provide Carey with the requisite badging info (this is her first time at Indian Point).

Please acknowledge receipt of this e-mail. Thank you.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 4/8/04 6:30AM  
**Subject:** RE: IP2 Heat Sink Inspection Info Request

T.R.,

I hope that you are feeling better. The exit date is up to you. Friday morning generally works best for us but I offered up Thursday afternoon as I remembered your work schedule up there. As the 16th is a day off for most IPEC employees, please schedule the exit for some time Thursday afternoon. We will continue our inspection through Friday afternoon and if per chance something crawls out from under one of the rocks we turn over then we'll re-exit if necessary. Please provide Carey with badging information. Thanks!

Joe

**From:** Joseph Schoppy  
**To:** Peters, James  
**Date:** 4/15/04 1:28PM  
**Subject:** Re: Unit 2 Service Water Chlorination

Jim,

What are the gaps in the sample data during periods when chlorination should be continuously in service (5/9-13, 6/6-8, 6/12 - 7/10 (out more than in), 7/20-28)? Thanks!

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/4/04 10:24AM  
**Subject:** feedback

Got it. Thanks. CAUTION: Once again, I caution engineering against presenting misleading information. I do not want to turn this into a "he said/she said" debate; however, I'm also one not to let incorrect information slide past without comment. Engineering presents a slightly different accounting than my recollection supports: Late on Friday morning, two engineers were in the EDG building when I entered. The engineers saw me enter. I walked down the EDGs, looked at the instrumentation for SW flow (found only in the common discharge line), and searched for the reported EDG cooler d/p instrumentation (I only found a SW inlet pressure). At this point, I **engaged engineering** and asked them where the outlet pressure gauge was for each cooler or where the d/p gauge was. It was at this point that engineering informed me that they had been mistaken. In addition, I mentioned that they should inform licensing that I no longer needed the operator logs previously requested to review operator's d/p trending (my attempt to reduce unnecessary regulatory burden as I know how tough it is to find old documentation at the site). The engineers stated that they had already turned off licensing's log search. I got the impression that engineering had not just found out but had realized their error long enough to inform licensing (but not the NRC). We're not talking days here, hours at the most. They probably had every intention of getting back to me had I not questioned them first. However, in my book, their notification does not warrant the "immediate" descriptor.

One additional comment: Engineering responded to a previous NRC comment in regards to complying with the SE-330 procedure stating "The in service time between inspections for the EDG coolers is approximately 6 months with very few exceptions. " For the 21 EDG coolers, the last four inspections were 5/13/02, 2/25/03, 6/16/03, and 2/24/03 (8.4 months, 3.7 months, and 8.3 months between inspections). Are these the few exceptions or is the periodicity 6 months +/- 2.5 months? Engineering apparently missed my point and the intent of the procedure step (document in-service time between inspections). By documenting and using this data to evaluate the EDG cooler as-found condition, engineers can more effectively track performance and identify negative trends. The grass and sediment buildup after 8.4 months is not the same as it is following 3.7 months even though engineering saw no apparent difference ("trending of edg coolers remains consistent"). The "as-found" pictures tell a different story.

No response is necessary as I've had my fill of "defensiveness" for today.

T.R. - these comments are directed back to engineering as I realize that you are merely the messenger in this case.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/4/04 10:26AM  
**Subject:** Re:

T.R.,

In addition to the pictures that we spoke of, I would also like a copy of the SE-330 package for the 21 EDG coolers for the February 2003 inspection. Thanks!

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/4/04 10:50AM  
**Subject:** SW intake inspections per GL 89-13

Got it. Thanks. This information goes a long way toward addressing our concern. I apologize for failing to adequately communicate to engineering regarding what we were looking for (show us how you're meeting your GL 89-13 commitment to inspect the SW intake and let us look at the documented results).

Please remove this item from the list of potential findings presented at our exit on April 15 and inform your senior management of such. Of course, this is still preliminary and subject to my management's review.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/5/04 11:09AM  
**Subject:** RE: SW intake inspections per GL 89-13

No need. I'm basing this on (1) prior to 2000, you actually performed inspection once per cycle as committed to in GL 89-13; and (2) no adverse silt issues identified. As I'm outside of my inspection week, I'll have to wait until next time to revisit your silt surveys and intake inspections. Thanks.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/6/04 4:55PM  
**Subject:** Re: FW: Operability Evaluations

T.R.,

In an effort to make sure that we continue to communicate efficiently, effectively, and in a timely manner in regard to this important issue (containment sump operability - past & present), I wanted to respond back promptly following my initial review of your updated information. I would ask that you respond similarly in ensuring that engineering receives this feedback and follow-up questions in a timely manner.

**Summary:** we had three main concerns:

- 1) existing gap in sump cover plates and existing debris in the sump area (46');
- 2) loose deck plates (potential to move and create gap during LOCA blowdown and initial sump flood-up);
- 3) existing gaps between the cover plate collars and lines entering the sump.

**Actions:**

- 1) corrected on the spot (deck cover plates repositioned and debris removed);
- 2) secured by TA-04-2-078;
- 3) gaps closed by TA-04-2-078.

**Operability (going forward):**

Satisfactorily addressed by actions above [assuming appropriate follow through on corrective actions with respect to the conduct of improved containment walkdowns - why wasn't the sump cover gap and debris identified and addressed in August 2003 (forced outage) or Fall 2002 (refueling outage)?]

**Operability (looking back):**

- 1) I haven't seen past operability/reportability screen yet.
- 2) Based on initial review (preliminary), looks like engineering's operability evaluation associated with CR-IP2-200401820 addressed this. Determined to be operable. The containment sump cover was degraded but operable. The sump and ECCS would have performed as designed.
- 3) I haven't seen past operability/reportability screen yet. You provided engineering's operability evaluation associated with CR-IP2-2004-1948 that discussed the excessive gaps (> 1/4") between the collars and the piping; however, this evaluation did not adequately address past operability. The evaluation/approach used to assess operability for concern (2) does not completely address this issue. In this case, the blowdown force doesn't need to move the plates/collars to create a screen bypass flow (bypassing the #6 mesh) as the gap had already existed for several of these lines. What was the potential for debris to flow through these gaps and directly into the recirculation pump suction (bypassing the screen mesh) during the recirculation phase? Once into the recirculation pump suction, then what is the resultant impact on the downstream ECCS components (recirc pumps, high head safety injection, and containment spray)? This same approach is perhaps what is needed for concern (1) above.

**Needed:**

- Completion date for TA-04-2-078.
- Past operability/reportability screens for concerns (1) and (3) above.
- We had requested the August 2003 (forced outage) and Fall 2002 (refueling outage) containment sump closeout inspection documentation; however, I understand that this can not be located and may not exist. Is there any existing documentation that these inspections were actually performed? During these inspections, did SAO-213 Attachment V contain the same inspection requirements (check for gaps & debris) as it now does?
- Estimated date when we can expect this information.
- IMMEDIATE FEEDBACK ON ANY OF THE ABOVE INFORMATION THAT IS INACCURATE, INCOMPLETE, OR MISUNDERSTOOD.

Thanks for your continued support.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/11/04 4:14PM  
**Subject:** Re:

T.R.,

I looked at CR 2004-2241. I understand that this documents NRC concerns relative to the EDG HX as-found condition in the IP2 corrective action system. This doesn't imply that IP2 agrees that there is a deficiency (past or present), only that they will review NRC's concern. Is this correct?

Do I already have all the engineering feedback that I'm going to get on this issue? Any luck on getting those as-found pictures and a copy of the 2/03 package for 21 EDG HXs?

Thanks!

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/13/04 11:02AM  
**Subject:** Re: FW: Scan from a Xerox WorkCentre Pro

T.R.,

Thanks for the update. I'm in the region today but I'm in a mandatory Media Training class. Do you have a 30 minute block in either of the following windows: 1130 - 1300, after 1530? This is a high priority item for us here in DRS and I will do whatever I can to facilitate resolution in a timely manner.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/18/04 2:53PM  
**Subject:** heat sink info

T.R.,

I just left you a voice message. I got your mailing (EDG packages). I wanted to touch base to ensure that we were still on track. You mentioned that I should receive the operability evaluations for the two containment sump issues. I noted that SAO-213, Revision 5, has an effective date of 10/29/03. As such, it doesn't look like it was in place during the August 2003 or Fall 2002 outages. It appears as if they added Step 4 to Attachment V (Rev. 5) as corrective action for CR-IP3-2003-02569. Please provide a copy of this CR (note that it's a Unit 3 CR, probably generated during its last refueling outage) and any of the corrective actions targeted for Unit 2. Any luck on the date and MOD number for the addition of those deck plate covers and collars (the ones that were in place prior to April 2004, not the Temp. Alt. done in April 2004)? Thanks!

Joe

**From:** Joseph Schoppy

**To:** Jones, T. R.  
**Date:** 5/20/04 11:23AM  
**Subject:** follow-up check

T.R.,

Please have engineering double check the actual dimensions of the #6 screen mesh. It was noted to be 1/4" x 1/4" in CR 2004-1948 and the dimension that they inspected to. However, SAO-213 Attachment V has you ensure no openings greater than 1/8" x 1/8." I just want to be sure that SAO-213 is merely being conservative. Please acknowledge receipt of this request. Thanks!

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/24/04 6:22AM  
**Subject:** Re: CR IP3-2003-02569

Got it. Thanks. Actually, I asked for any CR IP3-2003-02569 corrective action that pertained to Unit 2. Any answer to the question regarding the sump screen dimension (1/8" vs. 1/4")? When can I expect the operability evaluations?

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/24/04 8:07AM  
**Subject:** sump follow-up

T.R.,

Relative to CR-IP3-2003-02569: it's as I expected. Entergy follow-up actions for this IP3 CR represented a missed opportunity to identify the Unit sump issues sooner. Since April 2003, several opportunities (monthly containment building inspections) existed to sneak a peak at the Unit 2 recirc sump to ensure that it didn't have similar problems. In addition, the forced outage in August 2003 provided another opportunity to inspect both sumps. When they made the change to SAO-213 in October 2003, they could have checked the recirc sump to ensure that it was aligned with the improved guidance.

Not that you asked but since I reviewed it, I thought I'd give you some feedback on your current revision of SAO-213 (all part of the service). In Attachment V, consider adding words to steps 7 & 8 to align them more closely with steps 2 & 4. In particular, add the words "and there are no openings greater than a nominal 1"x 4"" to step 8 and the words "and there are no openings greater than a nominal 1/8"x 1/8"" to step 7 (modifying floor plates).

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/28/04 6:28AM  
**Subject:** Re: FW: Past Operability for Openings in Recirc and VC Sumps

Thanks. I didn't receive it when you sent it on Wednesday evening. Thanks for re-sending.

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 5/28/04 11:48AM  
**Subject:** Re: FW: Past Operability for Openings in Recirc and VC Sumps

T.R.,

I have some follow-up questions (see list below) that I would appreciate answers to as soon as possible. Please provide the answers as you get them vice waiting until you have all the answers. Please provide the name and number for the best engineering point of contact on this issue. Also please acknowledge receipt of this request. Thanks!

Joe

- 1) I still need MOD number and date implemented for the deck plate cover/collar mod (the one that modified the original sump design, not the Temp. Alt implemented in April 2004).
- 2) The operability evaluation again makes reference of a 1/4" design opening in the screen mesh ("The purpose of the pipe collars is to close the opening where the pipe penetrates the solid plate to prevent debris larger than 1/4" from entering the sump ."). This is not consistent with UFSAR Section 6.2.2.1.2 (screen mesh on both sumps designed to preclude passage of .125" particles). SAO-213 is consistent with this. The documented corrective action for CRs IP2-2004-01781, 01948, and 01951 indicate that the gaps were inspected to 1/4." Please verify the modified gap clearance provided by Temp. Alt. TA-04-2-078. In addition, verify the screen dimensions listed in your containment sump drawings, DWG 9321-2562 in particular, as CR IP2-2004-01948 documentation makes reference to this drawing ("the collar and plate assembly as shown on drawing 9321-2562 were designed to limit direct openings to the recirculation sump to less than 1/4").
- 3) In the evaluation, engineering takes credit for the redundant containment sump. Has anyone verified that this sump does not have the same deficiencies or worse? Maybe ALARA considerations preclude close inspection of the containment sump's deck plate cover and collars (if existing) while at power. If so, is there a corrective action generated off of one of the associated recirculation sump CRs to conduct an extent of condition review at the first available opportunity?
- 4) What are the recirc pump and HHSI pump impeller clearances? (The evaluation mentions the potential impact if debris passes through the pump suction but not the potential to bind the pump.)
- 5) Please explain the logic behind the statement in the "Hot Leg Injection Valves" section related to the filtering out of all debris by the fine mesh screens within 24 hours. (Does this assume a given turnover time for the water in the sump?) You still have 3.2% of your recirculation flow bypassing your fine mesh screen throughout the recirculation phase, right?
- 6) The evaluation doesn't specifically mention or analyze the debris actually found in the recirculation sump area (see CR IP2-2004-01781). How is this enveloped by the evaluation?
- 7) Relative to the throttle valves (856A/C/D/E) mentioned in the "Cold Leg Injection Valves" section, are these valves locked in the throttle position or can operators adjust them based on SI flow and/or DP?

8) What are the HHSI pump bearing clearances for the internal cooling passages? Are they similar in design to Davis-Besse's (see LER 05000346/2003-002)?

9) The following is documented in the "Containment Inspections" section: "Attachment VI is used to inspect the containment during routine entries and includes essentially the same activities as Attachment V for sump inspections. There is no activity to check clearances on the deck plate or pipe collars. Based on the above information, the collars could be installed incorrectly and not be picked up by the Attachment V or Attachment VI checklist." Is this another way of saying that you agree that your SAO-213 procedure is less than adequate as currently written? If so, what actions have you taken to correct?

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 6/3/04 1:24PM  
**Subject:** RE: FW: Past Operability for Openings in Recirc and VC Sumps

Please provide a copy of the CR written documenting the "enhancements" planned for your SAO-213 procedure.

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 6/7/04 8:43AM  
**Subject:** requested info

Please provide that mod number and date as soon as possible. Thanks!

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 6/7/04 10:13AM  
**Subject:** Re: FW: NRC Items for Ultimate Heat Sink

Got it. Thanks. Is that the best that you're going to be able to do (sometime between 3/29/82 and 11/25/91)?

Joe

**From:** Joseph Schoppy  
**To:** Jones, T. R.  
**Date:** 6/8/04 2:09PM  
**Subject:** Re: CR-IP2-2004-1781

Got it. Thanks! Do you have the modification number or date yet?

Joe