OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Nov 14, 2012 09:18

PAPER NUMBER: LTR-12-0676 **LOGGING DATE:** 11/14/2012

ACTION OFFICE: EDO

To: Leeds, NRR
cys: OEDO
RIV
OPA
OIP
Mercke, OEDO

AUTHOR: Ace Hoffman

AFFILIATION: CANADA

ADDRESSEE:

SUBJECT: Concerns press release + 12-11-09 from the DAB Safety Team

ACTION: Appropriate

DISTRIBUTION:

LETTER DATE: 11/09/2012

ACKNOWLEDGED No

SPECIAL HANDLING:

NOTES:

FILE LOCATION: ADAMS

DATE DUE: **DATE SIGNED:**

Template: SECY-017 E-RIDS: SECY-01

Joosten, Sandy

From: Ace Hoffman [rhoffman@animatedsoftware.com]
Sent: Friday, November 09, 2012 5:36 PM
Subject: Fwd: Press Release + 12-11-09 From The DAB Safety Team

NEWS RELEASE

DAB Safety Team

Media Contact: Don Leichtling (619) 260-0160 or Ace Hoffman (760) 720-7261

Don Leichtling and Ace Hoffman are the spokesmen of the DAB Safety Team, who along with the support of an ever-growing number of SONGS Concerned Insiders and Whistleblowers have prepared the following analysis.

FOR IMMEDIATE RELEASE

Subject: SONGS Unit 2 RSG's Incomplete and Inadequate Tube Inspections

San Diego, CA (November 9, 2012) – The failure of eight Replacement Steam Generator (RSG) tubes (something which has never happened before) plus the structural integrity of thousands of additional damaged tubes in both SONGS Units 2 and 3 RSG's are now in question and affect the safety of about 8 million Southern Californians. This design failure, which has been termed by the NRC as "***a very serious safety issue***" because of the unprecedented tube damage: **Unit 3** has 807 tubes plugged and **Unit 2** has 510 tubes plugged – which makes them the **2 WORST RSG's** in the history of the entire U.S. Nuclear "Fleet". ***Which means that SCE was operating beyond their Current License Basis (CLB) and Safety Analysis Limits***, plus SCE has yet to be penalized by the NRC for these violations, as required by law. These RSG failures also offers real proof for the very first time, that if a Main Steam Line Break accident had occurred, at least eight RSG tubes would have leaked/ruptured and potentially caused the SONGS Unit 3 reactor to become a nuclear disaster (e.g., like Fukushima, Chernobyl or Three Mile Island) due to the loss of undetermined amount of radioactive core coolant!

The truth is that San Onofre escaped becoming an International Nuclear Events Scale (INES) Level 7 nuclear disaster by the slightest of margins, unlike Fukushima!

SONGS Reactor Compatibility Experiment (RCE) States, "Visual inspection of the tube sheet primary side of the SG 3E088, with the secondary side pressurized, identified the tube with the leak. Subsequent Eddy Current Testing (ECT) inspection identified extensive unexpected tube free-span wear at the leakage location, not typically seen in recirculating SGs, and tube-to-support wear. A full-length ECT inspection of each tube (100%) in all four SGs using a bobbin coil probe was performed and provided a comprehensive extent of condition evaluation for tube free-span and tube-to-support wear. The bobbin coil probe inspection was supplemented by

Rotating Coil (+Point) probe inspection, which provided further confirmation of the extent of condition. This supplemental rotating probe examination covered the U-bend portion of approximately 1300 tubes in each SG." Thousands of Unit 2 Steam generator tubes, Anti-vibration Bars and Tube support Plates have suffered extensive wear and undetermined amount of internal cracking during 22 months from flow-induced random vibrations and/or cyclic fatigue. **In addition, SCE has only performed remote visual inspection of 8% of the tubes in their damaged Unit 2 RSG's plus this does include inspection of any tube support plates for any visible damage, structural deformation, cracks and/or any other abnormalities.**

The methods employed by SONGS using bobbin and rotating coil (+Point) probes to inspect the Unit 2 damaged tubes cannot reliably determine the depth, extent and location of these cracks, ***so the actual condition of the tubes remains a dangerous unknown***! In a Rush to Restart Unit 2 and cut their costs, Edison has not inspected more than 2000 Unit 2 Steam Generator tubes with T/R single-pass array probes, laser-scanned penetrant inspection and ultrasonic detection technologies to accurately identify and determine the depth, extent and location of these internal cracks at the U-bends and tube-support intersections. NRC's regulations do not allow SONGS to start up with any steam generator tube cracked more than 35% of its wall thickness. Therefore by not performing these accurate inspections, Edison has not met the performance criteria specified in 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," Criterion 14, 15, 30 and 32, which establishes the fundamental regulatory requirements for the integrity of the SG tubes.

The DAB Safety Team has concluded that SONGS Unit 2 Replacement Steam Generators (RSG) are in worse shape now than certified by SCE and their three NEI Qualified, "U.S. Nuclear Plant Designers." The accident scenario of concern consists of two events: (1) a non-isolable secondary system break or rupture that is outside containment; and (2) a coupling of this break with the rupture of, or significantly increased leakage from, affected SG tubes. Even at 70% power operations, if a steam line break outside containment were to occur in Unit 2, the depressurization of the steam generators with the failure of a main steam isolation valve to close would result in 100% void fraction in the degraded U-Tube bundle and the *straight leg portion* between the Tube Support Plates. This condition of ZERO Water in the steam generators would cause fluid elastic instability (FEI) and flow-induced random vibrations, which would then result in massive cascading SG tube failures, involving hundreds of degraded active SG tubes. Fluid elastic instability (FEI) and flow-induced random vibrations can progress through a buffer zone of plugged tubes to reach pressurized, in-service tubes and create additional SG tube failures. The resulting SG secondary side blow-down could further increase tube leakage due to resonance vibrations within the affected SG tube bundle. With an undetermined amount of simultaneous tube leaks/ruptures, approximately 60 tons of very hot high-pressure radioactive reactor coolant would leak into the secondary system. The release of this amount of radioactive primary coolant, along with an additional approximately 200 tons of steam in the first five minutes from a broken steam line would EXCEED the SONGS NRC approved safety margins. ***So, in essence, the RSG's will become loaded guns, or a nuclear accident waiting to happen.*** Any failure under these conditions, would allow significant amounts of radiation to escape to the atmosphere and a major nuclear accident would easily result causing much wider radiological consequences and even a potential nuclear meltdown of the reactor! Since these events would happen at an extremely fast pace, no credit is assumed in the first 5 minutes of the main steam line break accident for: (1) Enhanced Unit 2 Defense-In-Depth Actions - SCE Restart Plan Enclosure 2, Item 9.0, and (2) The differential pressure across the SG tubes necessary to cause a rupture will not occur if operators prevent RCS re-pressurization in accordance with their Emergency Operating Procedures - Enhanced Unit 2 Defense-In-Depth Actions - SCE Restart Plan Enclosure 2, Item 5.2,2, Probabilistic Risk analysis.

In Emergency Planning Space, decisions have to be Accurate and Timely. Under-conservative, rushed and profit-motivated analyses based on limited facts, biased and ambiguous operational data, untested deterministic and probabilistic risk analysis, conflicting theories and differing operational assessments of degraded equipment at even reduced power operations for 150 days with conditional monitoring along with unproven and unreliable compensatory actions represent enormous risks to public safety, the environment and our nation's economy.

The NRC must **REALLY** resolve the concerns stated above as soon as possible. In the interim, the NRC must stop making favorable decisions to SCE (especially when it lacks defensible technical and inspection bases), which affect the lives of millions of Southern Californians."

The above analysis is consistent with the conclusions and reports provided earlier on this subject by:

1. 1.Fairewinds Associates Internationally Known Nuclear Consultant Arnie Gundersen and his team of Anonymous Industry insiders, who have had lengthy careers in the design, fabrication, and operation of nuclear steam generators.
2. 2.Professor Daniel Hirsch and Internationally Known Nuclear Consultant Dale Bridenbaugh.
3. 3.Dr. Joram Hopenfeld, a retired engineer from the Office of Nuclear Regulatory Research and NRC's Advisory Committee on Reactor Safeguards (ACRS) report issued in February 2001, which substantiated many of Dr. Hopenfeld's concerns,
4. 4.David A. Lochbaum, Director of the Nuclear Safety Project for the Union of Concerned Scientists (UCS).

CPUC: California Public Utilities Commission
DBA: Design Basis Accident
ECT: Eddy Current Testing
FEI: Fluid Elastic Instability
MHI: Mitsubishi Heavy Industry
MSLB: Main Steam Line Break
NRC: Nuclear Regulatory Commission
RCE: Reactor Compatibility Experiment
SCE: Southern California Edison
TTW: Tube-to-Tube Wear

****

** Ace Hoffman, Owner & Chief Programmer, The Animated Software Co.
** POB 1936, Carlsbad CA 92018
** U.S. & Canada (800) 551-2726; elsewhere: (760) 720-7261
** home page: www.animatedsoftware.com
** email: rhoffman@animatedsoftware.com
** To cease contact, please put "Unsubscribe-me-please" in the subject.
****