

NON-PUBLIC?: N
ACCESSION #: 9503210115
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Indian Point Unit No. 2 PAGE: 1 OF 5

DOCKET NUMBER: 05000247

TITLE: Paint Peeling on the 46 foot elevation floor inside
containment
EVENT DATE: 02/08/95 LER #: 95-005-00 REPORT DATE: 03/10/95

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: N POWER LEVEL: 000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION:

50.73(a)(2)(ii)

50.73(a)(2)(v)

LICENSEE CONTACT FOR THIS LER:

NAME: Claude Peart, Senior Engineer TELEPHONE: (914) 734-5190

COMPONENT FAILURE DESCRIPTION:

CAUSE: SYSTEM: COMPONENT: MANUFACTURER:

REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On February 4, 1995, with the reactor shutdown and the unit approximately 19 hours into the refueling outage, a maintenance planner and a system engineer discovered that the floor coating on certain portions of the 46 foot elevation of the containment floor had lifted and cracked. In other locations the floor coating would crack when stepped on. An earlier entry by health physics personnel that day also noted the same condition of the floor coating. This anomaly was subsequently determined reportable, and documented in an Open Item Report, on February 8th, 1995, with action to evaluate the cause of the paint coating failure and the impact of the observed anomaly on recirculation and containment sumps' function. The evaluation was completed with the conclusion that both sumps' function would not be compromised. The root cause was attributed to inadequate procedural adherence by station personnel in painting the area during the 1993 refueling outage.

No NRC limit was exceeded and there was no impact on public health and safety.

END OF ABSTRACT

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PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Paint peeling on the 46 foot elevation floor inside containment.

EVENT DATE:

February 8, 1995

REPORT DUE DATE:

March 10, 1995

REFERENCES:

Open Item Report (OIR) 95-02-086
Significant Occurrence Report (SOR) 95-89

PAST SIMILAR OCCURRENCE:

None

DESCRIPTION OF OCCURRENCE:

On February 4, 1995, with the reactor shutdown and the unit approximately 19 hours into the refueling outage, a maintenance planner and a system engineer noticed that the floor coating on certain portions of the containment floor on the 46 foot elevation, had lifted and cracked. It was also observed that at some locations the floor paint would crack when stepped on. An earlier entry by health physics personnel that day also noted the same condition of the floor coating. The anomaly was subsequently determined to be reportable and documented in an open item report (OIR) on February 8, 1995 with immediate action to assess the cause of the occurrence and the safety impact to both the recirculation and containment sumps.

The defective floor coating is epoxy self-priming surfacing enamel No. 4500 supplied by Keeler and Long. This paint was temporarily applied towards the end of the 1993 outage and was expected to perform well until the 1995 refueling outage when a more thorough recoating of the 46 foot elevation floor was planned with an epoxy self-leveling floor coating from the same manufacturer (i.e., their 5000 series). This latter activity will be effected during the current 1995 outage.

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DESCRIPTION OF OCCURRENCE: (continued)

In response to the OIR, an outside consultant was commissioned to perform an operability assessment of the recirculation and containment sumps due to a worst case complete containment floor painting failure, consistent with the licensing basis for the facility. This effort was completed and confirms the operability of the recirculation and the containment sumps under the aforementioned conditions.

ANALYSIS OF OCCURRENCE:

This report is being made consistent with the provision of 10 CFR 50.73 (a)(2)ii(b) and 10 CFR 50.73(a)(2)(v)(d) because a condition was found that was outside the design basis for painting inside the containment and could have limited the recirculation and containment sump function in mitigating the consequences of an accident. A conservative evaluation of the potential functional challenges to either sump, created by the observed loose paint, was performed with the conclusion that both sumps' function would not be compromised as a result of the observed anomaly. The 46 foot elevation of the containment will be cleaned and recoated during the 1995 Refueling Outage.

CAUSE OF OCCURRENCE:

During the 1993 refueling outage, radwaste personnel initiated a request to the company paint specialist for the specification of a paint to cover worn bare areas of the floor on the 46 foot elevation. The desire was to cover these areas prior to the startup of the 1993 refueling outage as an interim measure, until a comprehensive resurfacing of the floor could be effected in the 1995 refueling outage. Due to the high radiation levels that existed in the area, it was deemed desirable that an extensive resurfacing job would be best addressed after the completion of the full decontamination of the reactor coolant system that was scheduled for implementation at the onset of the 1995 refueling outage. Significant reduction in personnel exposure would be achieved for this activity

because of the much lower post-decontamination radiation levels expected in that area.

The specialist responded with the recommended use of Keeler and Long No. 4500 paint as an interim fix as well as some specific instructions for its application. Specifically, the manufacturers dry film thickness requirement of 8 to 50 mils was included, as well as instructions for floor preparation prior to paint application. It appears that the recommended paint was extensively applied on the floor, and random samples of the as found cracking paint have thicknesses in excess of 100 mils. The plant personnel involved were trained to apply Keeler and Long 5000 series paint, not the 4500 series paint. The 5000 series is a self leveling paint and it is easy to apply. The 4500 paint comes in a paste form and is difficult to apply as confirmed by some of the painters involved. This condition caused the painters to use an excessive amount of paint thinner.

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CAUSE OF OCCURRENCE: (continued)

The excessive use of paint thinner for the 4500 series paint, which has only 92% solids as compared to the 5000 paint which has 98% solids, would result in significant paint shrinkage, as the paint dries, especially when the coating is applied too thick. This type of shrinkage would result in the paint lifting and cracking as observed on the 46' elevation floor. Additionally, it is believed that this type of paint shrinkage tends to pull previously applied paint with it as evidenced in samples taken in the area and corroborated in discussions with Keeler and Long. A test using a sample from the same batch of paint that was supplied to Con Edison in 1993 will be performed at Keeler and Long's shop to confirm this finding. Thus, improper application was a contributing factor to the paint's failure.

Further assessment of the cause of the anomaly revealed that appropriate in-place procedures were not followed. Although existing plant classification documents identified a specification for coating inside the containment and classified it as a class A activity, paint was applied to the entire floor by Radwaste personnel without Quality Control (QC) inspections and documentation as required by ANSI N101.4 "Quality Assurance for Protective Coatings Applied to Nuclear Facilities". Additionally, inconsistent with plant procedures, no work order was promulgated for this activity. Inadequate procedural adherence, through improper surface preparation, also contributed to the paint failure, because surface scuffing which removes previous coatings, greases, or previous wax or silicone buildup, was not done. This further

lack of procedural adherence is also contrary to the requirements of ANSI N101.4 which are invoked by existing specification for this activity.

Based on the above findings, the root cause for the observed anomaly is attributed to failure by plant personnel to follow established station procedures. Had the appropriate station procedures been followed, proper documentation of the desired activity would have been developed which would have effected the establishment of required implementing procedures and controls, such as quality control oversight and proper training of personnel, for the specific activity.

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CORRECTIVE ACTION:

- 1) Removal of the old paint on the 46 foot elevation of the containment, followed by appropriate surface preparation, repainting with qualified paint in accordance with manufacturers and station procedural requirements, will be implemented during the 1995 refueling outage.
- 2) Re-indoctrination of the appropriate plant personnel with management expectations for adherence to station procedures and established standards in the performance of painting activities within the station will be conducted prior to their involvement in future painting activities.
- 3) A test will be performed on a sample of paint from the same batch of paint utilized in 1993, to better ascertain the causes for paint failure. This is expected to be completed before the end of the 1995 refueling outage.

ATTACHMENT TO 9503210115 PAGE 1 OF 1

Stephen E. Quinn
Vice President

Consolidated Edison Company of New York, Inc.
Indian Point Station March 10, 1995
Broadway & Bleakley Avenue
Buchanan, NY 10511 Re: Indian Point Unit No. 2
Telephone (914) 734-5340 Docket No. 50-247
LER 95-05-00

Document Control Desk
US Nuclear Regulatory Commission

Mail Station P1-137
Washington, DC 20555

The attached Licensee Event Report LER 95-05-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Attachment

cc: Mr. Thomas T. Martin
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Francis J. Williams, Jr., Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
Washington, DC 20555

Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

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