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Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**Subject: Notice Concerning Irradiations Performed by Steris Isomedix,
Whippany, New Jersey**

This is notice to the NRC of issues arising from a 10 CFR part 50 inspection by the NRC of the irradiation processes conducted by Steris Isomedix.

On or about June 20, 2014 The Okonite Company Inc. ("Okonite") received a Part 21 notice dated June 18, 2014 from Steris Isomedix Services ("Steris") advising that the NRC had issued a Notice of Nonconformance. The Steris Notice stated that Certificates of Processing previously issued to Okonite may have incorrectly reported the amount of radiation certain Okonite samples received in the course of Steris irradiation services.

Okonite requested revised Certificates of Processing from Steris. On August 6 and on August 22, 2014 Okonite received revised Component Irradiation Certificates. The information contained in the revised Certifications impacted Okonite's Qualification Test Reports 526 Rev 2 and 527 Rev 1. Steris provided Okonite irradiation services in preparation for Okonite conducting testing to qualify its 1E cables under the High Energy Line Break ("HELB") and Normal Operation tests.

Under IEEE 383-1974 Steris was to have irradiated all Okonite samples to a minimum 50 MRADs. The Steris letter of June 18, 2014, and the Revised Certificates of August 6, 2014 reveal that:

(1) The samples may indeed have been irradiated to 50 MRADs, but

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(2) That if they were irradiated to less than 50 MRADs then at worst certain of the samples for the HELB and the normal operation tests were irradiated to a minimum 47.35 MRADs and others were irradiated to a range of from 48.35 to 48.38 MRADs.

Okonite evaluated the above facts to determine whether in its opinion the slightly less than specified irradiation, if it occurred, left the electric cables Okonite sold to licensees in such a condition that their continued use would create a substantial safety hazard. Okonite concluded that continued use of such cables does not create a substantial safety hazard.

These are the reasons supporting Okonite's conclusion:

The only samples impacted by the Steris irradiation were those used to qualify low and medium voltage cables under the high energy line break test, and low voltage cables under the normal operation test. Cables constructed of materials identical to those irradiated by Steris were submitted for LOCA testing. Steris had no involvement in the LOCA testing. The first step in LOCA testing is irradiating cables to 50 MRADs. Thus whether or not Steris irradiated Okonite's samples to 50 MRADs, cables constructed of the identical material irradiated by Steris were in fact irradiated to 50 MRADs by the entity that performed the LOCA testing.

As required by LOCA protocol, the cables were then heat aged and then subsequently irradiated to 150 MRADs. All the cables in question passed LOCA. Therefore, Okonite concluded that since its cables, which are known to have been definitely irradiated to 50 MRADs in the LOCA testing and then heat aged and further irradiated to 150 MRADs passed LOCA, they would similarly pass the high energy line break test had Steris irradiated the samples comprising those cables to the minimum 50 MRADs.

With respect to the normal Operation qualification test on the low voltage specimens, again the severity of the LOCA test performed by another entity where the identical materials were subjected to a full 200 MRADs of radiation, were thermally aged to simulate design life and subjected to the postulated LOCA conditions, all far exceed the conditioning required for the Normal Operation qualification. Based on passing this more severe test protocol it would seem that the now reported possibility of a 2.5 MRAD reduction in the prescribed 50 MRAD radiation dose would have no significant effect on the test results obtained in the Normal Operation qualification test.

Although Okonite has concluded that the continued use of its cables comprised of the same material Steris irradiated does not present a substantial (or for that matter any) safety hazard, nevertheless, out of an abundance of caution, Okonite is notifying the licensees of the information contained in this letter. Okonite will welcome and consider any comment it receives from any licensee and if necessary will communicate further with the NRC with respect to any such comment.

Okonite has also concluded that it should requalify its low and medium voltage 1E cables under the High Energy Line Break and Normal Operation tests. Okonite is currently pursuing this

avenue and is seeking completion by 60 days from and after August 6, 2014. If the requalification is not complete by then, Okonite will nevertheless report to the NRC the status at that time, and advise it of the anticipated completion date.

Very Truly Yours
The Okonite Company

A handwritten signature in black ink, appearing to read "Richard DiLorenzo". The signature is written in a cursive style with a large initial "R".

By: Richard DiLorenzo
Director Quality Assurance

Cc: Nuclear Regulatory Commission
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