

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
THE YORK WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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October 10, 1980

Docket No. 50-245
A01172

Director of Nuclear Reactor Regulation
Attn: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: (1) D. L. Ziemann letter to W. G. Council dated June 2, 1979.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 1
SEP Topic IV-1 - Organic
Materials and Post-Accident Chemistry

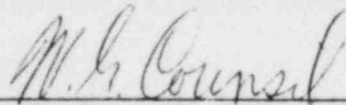
In Reference (1), Northeast Nuclear Energy Company (NNECO) was requested to provide information regarding the above-mentioned SEP topic. In response to that request, Attachment 1 is provided.

An oversight prevented NNECO from responding to Reference (1) by the originally required date. In recent telephone conversations with the NRC Staff, NNECO has committed to a response by October 10, 1980, which is satisfied by this letter.

We trust you find the attached information responsive to your request.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President

Attachment

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ATTACHMENT 1

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 1

SEP TOPIC IV-1 - ORGANIC

MATERIALS AND POST-ACCIDENT CHEMISTRY

OCTOBER, 1980

Question 1

Estimate the areas and thicknesses of the major protective coating systems inside containmen., including aluminum and zinc base paints, epoxy paints, acrylic lacquer, etc.

Response

- (a) Suppression Pool Shell - 30,000 sq.ft.
Headers and Supports, Downcomers, Vent Lines,
Spherical Junctions, etc. - 51,000 sq.ft.

Coatings: Primer - Zinc Epoxy Polyamide, 6-8 mils
Finish - Phenolic Resin, 6-8 mils

- (b) Drywell Concrete Surfaces - 6,000 sq.ft.

Coatings: Primer - Epoxy Polyamide, 5 mils
Intermediate - Lead Epoxy Polyamide, 3.5 mils
Finish - Epoxy Polyamide, 2.5 mils

Drywell Shell, Bio-shield Wall, Vessel Supports,
Structural Steel - 42,000 sq.ft.

Coatings: Primer - Lead Epoxy Polyamide, 3.5 mils
Finish - Epoxy Polyamide, 5 mils

Question 2

Indicate whether these coating systems and their methods of application were qualified according to the recommendations of Regulatory Guide 1.54.

Response

Millstone Unit No. 1 was constructed prior to the issuance of Regulatory Guide 1.54, and as such, the coatings and their application are not qualified to the guide recommendations.

Question 3

If not, describe the QA provisions which were used to assure proper application.

Response

No formal QA program was used. However, quality control standards were implemented by formal specifications issued to provide criteria for the protective coatings and their use, surface preparation, application methods, repairs, and testing.

Question 4

For coatings not qualified with Regulatory Guide 1.54, describe the present condition of the coatings, including estimates of the amounts of flaking, peeling, cracking, bubbles, etc.

Response

Coatings that are flaking, peeling, cracking, and blistering are routinely re-surfaced using approved procedures in accordance with Regulatory Guide 1.54 recommendations. In general, the coatings are in very good condition. Rework includes taking the surfaces to white metal and recoating with the following systems.

Steel: Epoxy-Polyamide, 2 coats, 2 mils each
 Epoxy-Polyamide, 1 coat, 2 mils each
 (with stainless steel added)

Suppression Pool: Same as above with second primer coat 4 mils DFT,
 and finish coat 4 mils DFT.

Question 5

Estimate the quantity of other miscellaneous coating materials (such as on snubbers) not qualified according to Regulatory Guide 1.54.

Response

Miscellaneous steel protective coatings were included in the response to Question 1. Additionally, there is approximately 350 sq.ft. of snubber surface area coated with Carbo Zinc 11 to a DFT of 3 mils.

Question 6

Estimate the types and amounts of other organic materials such as electrical insulation inside containment.

Response

The estimated organic cable material which includes jacket insulations and filler materials is 680 cu.ft.

Question 7

In addition to the information described above for organic coating systems, we will need the following information with respect to the related Topic VI-5, "Combustible Gas Control". Estimate the surface area and thickness of aluminum, zinc, and galvanized steel inside containment.

Response

- (a) Galvanized Steel Grating - 12,000 sq.ft.
1,725 lbs. zinc

- (b) HVAC Duct Work - 20,000 sq.ft.
2,500 lbs. zinc

- (c) Cable Trays, Wireways - Aluminum - 3,200 sq.ft.
Cable Pan Supports and Conduit - Galvanized Steel - 3,600 sq.ft.
280 lbs. zinc*

* Based upon .625 to 1.375 ounces per sq.ft. of zinc.