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September 12, 1984

Docket No. 50-331

Iowa Electric Light and Power  
Company  
ATTN: Mr. Lee Liu  
President and Chief  
Executive Officer

IE Towers  
P. O. Box 351  
Cedar Rapids, IA 52406

Gentlemen:

Attached is an addendum consisting of a Confirmatory Measurements Program data sheet for Report No. 50-331/83-13 transmitted by our letter dated August 16, 1983. Please attach this addendum to your copy of the report.

This letter addresses the resolution of two issues involving the Duane Arnold Energy Center. For several years the licensee has had poor comparisons for strontium analyses in split liquid samples as part of our Confirmatory Measurements Program. Because of our concerns about inadequate strontium analysis we had requested that the licensee take several actions in an effort to check the adequacy of other strontium analyses and to correct inadequacies that had been identified. These actions are documented in this letter and in the addendum. The other issue involves followup on a report submitted by the licensee on August 19, 1983 identifying two cases in which environmental sampling and analysis have not been performed as required by Environmental Technical Specifications (ETS) Table 4.3-1.

By a letter dated October 3, 1983 the licensee transmitted comparisons of analyses performed on crosscheck samples supplied by Analytics, Inc. and analyzed by the licensee's contractor, Nuclear Utilities Services, Inc. (NUS). The analyses were for strontium-89 and strontium-90 on three samples. Comparisons were generally favorable except for the first sample from February 1983. NUS results were significantly lower than known results for both strontium-89 and strontium-90.

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In the same letter the licensee also transmitted a reanalysis of effluent release samples collected during the second quarter of 1983. The reanalysis yielded results for strontium-89 and strontium-90 that were within 15% of the initial analysis results; an exception was strontium-89 in a sample from the turbine building which was somewhat lower on the reanalysis. These results do not appear to warrant any amendment to the effluent release report. Based on the above results we will close Open Item 50-331/83-13-04.

By a Letter dated October 18, 1983 the licensee transmitted results for beta analyses on a sample collected during the inspection on July 18-21, 1983. This will close Open Item 50-331/83-13-03. The sample category labelled LIQUID 1 in this addendum lists comparisons of these results to those performed by the NRC Reference Laboratory. As in previous comparisons in this medium, a problem is evident for strontium-89 and strontium-90.

During a telephone conversation on November 14, 1983, Mr. B. Dye informed us that NUS had been audited by licensee representatives who believed that recent management changes at NUS would resolve the problems with the analyses. Mr. Dye also agreed to analyze a spiked sample supplied by the NRC Reference Laboratory.

On December 5, 1983 Mr. Dye informed us by telephone that NUS had reanalyzed the previous sample and that a problem had been discovered in the original sample analysis. Comparison for strontium using these revised numbers are listed in the addendum under Sample Category LIQUID 2. Mr. Dye also informed us that no more samples were to be sent to NUS. The licensee's new contractor for strontium analyses would be Teledyne Isotopes, Inc. starting in 1984. The analysis by Teledyne of the same sample are compared in the addendum under sample category LIQUID 3.

In a letter dated February 14, 1984, the licensee transmitted analytical results for strontium-89 and strontium-90 in the spiked sample provided by the NRC Reference Laboratory. The results of these comparisons are listed in the addendum under the sample category LIQUID 4.

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Based on the favorable comparisons achieved using the licensee's new contractor we will close Open Item 50-331/83-13-01.

On August 19, 1983 the licensee submitted a report identifying two cases in which environmental sampling and analysis have not been performed as required by Environmental Technical Specifications (ETS) Table 4.3-1. Specifically, quarterly ground water analysis for strontium-89 and strontium-90 had not been performed since 1980, and surface water samples have been composited and analyzed for gross beta on a quarterly basis rather than on a monthly basis.

In January, 1984 the inspectors examined the licensee's corrective actions. The licensee's contractor Teledyne Isotopes, Inc. was instructed to retrieve all 1983 ground and surface water samples, and re-analyze them according to the ETS. Also the study plan which defines the sampling and analysis program that the contractor is to perform was amended to include the sampling and analysis previously omitted. We are satisfied that the actions taken adequately address the identified problem.

Sincerely,

C. J. Paperiello, Chief  
Emergency Preparedness and  
Radiological Protection Branch

Attachment: Addendum

cc w/attach.:  
D. Mineck, Plant Superintendent  
Nuclear  
DMB/Document Control Desk (RIDS)  
Resident Inspector, RIII  
Thomas Houvenagle, Iowa  
Commerce Commission

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