ATTACHMENT I TO IPN-92-018

PROPOSED TECHNICAL SPECIFICATION CHANGES

RELATED TO

DETECTION AND REPORTING REQUIREMENTS OF IODINE-131

IN NON-DRINKING WATER SAMPLES

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

TABLE 2.7-2

REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES					
	REPORTING LEVELS				
Analysis	Water (pCi/ℓ)	Airborne Particulate or Gases (pCi/m^3)	Fish (pCi/kg, wet)	Milk (pCi/ℓ)	Food Products (pCi/kg, wet)
H-3	20,000*				
Mn-54	1,000		30,000		
Fe-59	400		10,000		
Co-58	1,000		30,000		
Co-60	300		10,000		
Zn-65	300		20,000		
Zr-Nb-95	400				
I-131	2**	0.9		3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200			300	

* For drinking water samples. This is 40 CFR Part 141 value. If no drinking water pathway exists, a value of 30,000 pCi/ℓ may be used.

** If no drinking water pathway exists, a value of 20 pCi/ℓ may be used.

TABLE 3.7-1

DETECTION CAPABILITIES FOR ENVIRONMENTAL SAMPLE ANALYSIS[a]

LOWER LIMIT OF DETECTION (LLD)[b,c]						
Analysis	Water (pCi/ℓ)	Airborne Particulate or Gases (pCi/m^3)	Fish (pCi/kg, wet)	Milk (pCi/ℓ)	Food Products (pCi/kg, wet)	Sediment (pCi/kg, dry)
gross beta	4	0.01				
H-3	2,000*					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	1**	0.07		1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15			15		

* If no drinking water pathway exists, a value of 3,000 pCi/ℓ may be used.

** If no drinking water pathway exists, a value of 15 pCi/ℓ may be used.

TABLE 3.7-1 (Continued)

TABLE NOTATION

a This list does not mean that only these nuclides are to be considered. Other peaks that are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Annual Radiological Environmental Operating Report pursuant to Specification 5.3.2.2.

b Required detection capabilities for thermoluminescent dosimeters used for environmental measurements are given in Regulatory Guide 4.13.

c The LLD is defined, for purposes of these specifications as the smallest concentration of radioactive material in a sample that will yield a net count, above system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal. Equations used in the calculation of the LLD for a particular measurement system are presented in the ODCM.

It should be recognized that the LLD is defined as an a priori (before the fact) limit representing the capability of a measurement system and not as an a posteriori (after the fact) limit for a particular measurement. Analyses shall be performed in such a manner that the stated LLDs will be achieved under routine conditions. Occasionally background fluctuations, unavoidable small sample sizes, the presence of interfering nuclides, or other uncontrollable circumstances may render these LLDs unachievable. In such cases, the contributing factors shall be identified and described in the Annual Radiological Environmental Operating Report pursuant to Specification 5.3.2.2.

ATTACHMENT II TO IPN-92-018

SAFETY EVALUATION

RELATED TO

DETECTION AND REPORTING REQUIREMENTS OF IODINE-131

IN NON-DRINKING WATER SAMPLES

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
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SAFETY EVALUATION
RELATED TO
DETECTION AND REPORTING REQUIREMENTS OF IODINE-131
IN NON-DRINKING WATER SAMPLES

Section I - Description of Changes

This application for amendment to the Indian Point Unit 3 Technical Specifications proposes to revise sections 2.7 and 3.7 of Appendix B of the Operating License. These proposed changes specify the Lower Limits of Detection (LLD) and reporting levels for Iodine-131 (I-131) in environmental samples of non-drinking water. Additionally, this application corrects an administrative error in Appendix B section 3.7.

Section II - Evaluation of Changes

The radiological environmental monitoring program surveillance requirements in technical specification section 3.7 currently state that, for water samples taken when a drinking water pathway does not exist, the I-131 LLD for gamma isotopic analysis may be used. The value of the gamma isotopic analysis LLD obtained for I-131 in non-drinking water samples varies from test to test. Therefore, the Authority proposes to change this requirement to state a specific number for the LLD value of I-131 in non-drinking water samples. The Authority proposes to use an LLD value of 15pCi/liter. This value is consistent with the LLD value provided by the NRC in recent drafts of Revision 3 to NUREG-0472, "Radiological Effluent Technical Specifications for Pressurized Water Reactors."

Further, the Authority proposes to revise Table 2.7-2 of the technical specifications to include a reporting requirement for I-131 in non-drinking water samples. Currently, a clear reporting requirement for the I-131 level in non-drinking water samples is not provided by the technical specifications. Proposed Table 2.7-2 states that the reporting requirement for I-131 in non-drinking water samples is 20pCi/liter. This proposed reporting requirement for I-131 in non-drinking water samples is consistent with the reporting requirement provided by the NRC in recent drafts to NUREG-0472.

The above revisions to the technical specifications will add specific values for the detection and reporting requirements for I-131 levels in non-drinking water samples. This will clarify technical specification requirements associated with non-drinking water sampling. The proposed detection and reporting values are the same values provided by recent drafts of NUREG-0472 and by NRC approved NUREG-1301. According to NRC letter dated November 14, 1990, licensees not electing to implement Generic Letter 89-01 should continue to follow the draft Radiological Effluent Technical Specifications (NUREG-0472).

An administrative change to Appendix B section 3.7 corrects the section referenced in Notes a and c to Table 3.7-1. The technical specification section that discusses the Annual Radiological Environmental Operating Report is section 5.3.2.2 not section 5.3.3.2.

Section III - No Significant Hazards Evaluation

Consistent with the requirements of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based on the following information:

(1) Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response:

The proposed changes do not involve an increase in the probability of a previously-analyzed accident because the changes will not affect the way the plant is operated. The changes clarify detection and reporting requirements for I-131 in non-drinking water samples. These changes make the detection and reporting requirements consistent with NRC criteria.

(2) Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response:

The proposed license amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated because the changes will not affect the way the plant is operated. The changes only clarify detection and reporting requirements for I-131 in non-drinking water samples.

(3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response:

The proposed amendment does not involve a significant reduction in a margin of safety. The changes clarify detection and reporting levels for I-131 in non-drinking water samples. These changes reflect current NRC criteria for I-131 detection and reporting requirements in non-drinking water samples.

Section IV - Impact of Change

This change will not adversely affect the following:

ALARA Program
Security and Fire Protection Programs
Emergency Plan
FSAR or SER Conclusions
Overall Plant Operations and the Environment

Section V - Conclusions

The incorporation of this change: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any Technical Specification; d) does not constitute an

unreviewed safety question; and e) involves no significant hazards considerations as defined in 10 CFR 50.92.

Section VI - References

a) IP-3 FSAR
b) IP-3 SER