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SEP 19 1975

50-286

Cliff Haupt, Environmental Projects Branch 1, RL

REVIEW OF CON. EDISON'S RESPONSE TO QUESTIONS ON SPENT FUEL POOL MODIFICATIONS (TAR-1728 FOLLOW-UP)

Plant Name: Indian Point 2
Responsible Branch: EPB-1
Project Manager: C. Haupt
Request Received by RAB: 9/3/75
Review Status: Complete

In accordance with your request of 9/3/75, the Radiation Protection Section has reviewed Con. Edison's response to question 7 relevant to the I.P. 2 spent fuel pool modification and found it not responsive to our question. The applicant did not provide the source term (radionuclide concentration) in the spent fuel pool or the calculational (mathematical) models used to compute the concomitant dose rate above the pool. In his response he refers to primary coolant source terms (Table 9.2.5 of I.P. 3) but does not indicate the fuel pool dilution of this activity nor the factors of reduction provided by primary coolant and fuel pool clean-up systems.

In order to speed up the review process, we have searched out these factors. In so doing we found that the primary coolant of about 17,500 gals.* is diluted by the 350,000 fuel pool water. A factor of reduction of 10 was also used to approximate the clean-up systems effect on the fuel pool radionuclide concentration. As a result of this, our calculation of the dose rate above the pool is in agreement with the applicants. We are therefore satisfied that the impact on occupational exposures from the fuel pool expansion will not be significant.

This review was performed by S. Block, RPS/RAB.

Original signed by
W. E. Kreger

William E. Kreger, Leader
Radiation Protection Section
Radiological Assessment Branch
Division of Technical Review

memo 4

*Information contained in a Bechtel report.

cc: See Next Page

OFFICE	TR:RAB	TR:RAB				
SURNAME	SBlock:ps	WKreger				
DATE	9/19/75	9/19/75				

cc: R. Heineman
F. Schroeder
H. Denton
D. Muller
G. Knighton
M. J. Oestmann
J. Kastner
S. Block

OFFICE ➤						
SURNAME ➤						
DATE ➤						

Docket No. 50-286

AUG 4 1975

Harold Denton, Assistant Director for Site Safety, TR

INDIAN POINT UNIT NO. 3 ENVIRONMENTAL TECHNICAL SPECIFICATIONS

On April 10 and May 7, 1975, you submitted two memos to me regarding the surveillance and special studies program in the Indian Point Unit No. 3 Environmental Technical Specifications. These memos pointed out the positions taken by the Environmental Specialist Branch in their review of the applicant's environmental surveillance program in Section 4.0 and the reporting requirements in Section 5.6. Extensive meetings and working sessions were held with the applicant from March through May to resolve as many differences as possible on specific items.

In your May 7, 1975 memo, you also recommended deletion of Figure 4.1-1, as proposed by the applicant, which is a schematic showing the schedule for conducting the ecological program from April 1972 to January 1, 1977. The reason was to avoid having the ecological program bound to Con Ed's schedule, in which the data collection would end in 1975, and to require collection of a minimum of 2 years (1976 - 77) of postoperational data on Unit No. 3. Deletion of this schedule was done in the June version of the ETS which were sent to the printer for publication. Copies of the published ETS have been distributed to ESB for their information. This version took into account all the comments you submitted in your May 7, 1975 memo. (The June version of the ETS is being revised because of Con Ed's comments on Section 2.4 Radioactive Discharges).

On July 25, 1975, Con Ed management requested a meeting with A. Giambusso, DRL, to discuss the ecological program in the ETS. (See minutes of the meeting, dated July 30, 1975, for details). A TAR has been submitted to TR, requesting ESB to review Con Ed's comments and requested changes on the ecological program. Certain comments, particularly relating to the specifications in Sections 4.1.2a(1) General Ecological Survey, (2) Entrainment, (3) Impingement and (4) Special Studies, requiring review and prior approval by NRR of any changes or termination of the ecological program need to be carefully evaluated, in view of the ESB positions discussed in your May 7, 1975 memo. (See item e).

DPR

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Form AEC-318 (Rev. 9-53) AECM 0240

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After review of Con Ed's comments and requested changes, we plan to send Con Ed a listing of our agreements and/or disagreements (with bases) of each change prior to having a meeting with Con Ed. We want to have our positions finalized in advance of any meeting with Con Ed. After a meeting with Con Ed, the ETS will be finalized and republished ready for issuance with the OL for Unit No. 3.

Daniel R. Muller, Assistant Director
for Environmental Projects
Division of Reactor Licensing

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SURNAME	MJOestmann:sh	GKnighton	DRMuller			
DATE	7/30/75	7/31/75	8/1/75			

JUN 20 1975

Docket Nos. 50-3
50-247
50-286

Applicant: Consolidated Edison Company of New York, Inc.

Dates: March 14, 20 and April 10, 1975

Facility: Indian Point Units Nos. 1, 2, and 3-Radiological Environmental Technical Specifications.

On March 14, 20, and April 10, 1975 meetings were held with representatives of Consolidated Edison to discuss the radiological environmental technical specifications which will be incorporated in the Technical Specifications for Indian Point Units Nos. 1, 2, and 3 to be issued with the Operating License No. DPR-64 for Unit No. 3. Those specifications discussed include Sections 2.4 and 3.4 Radioactive Discharges and Section 4.2 Radiological Environmental Surveillance, which are of interest to the Effluent Treatment Systems and Radiological Assessment Branches.

Details of the discussions of the meetings are presented in Enclosure 1. A list of attendees is presented in Enclosure 2. Items of specifications submitted and commented on by the applicant are presented in Enclosure 3 and 4.

Original signed by
M. J. Oestmann

Mary Jane Oestmann
Environmental Project Manager
Environmental Projects Branch No. 1
Division of Reactor Licensing

Enclosures:
As stated

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NRCPDR
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NRR Reading
D. Muller, ADEP
T. Tedesco
J. Collins
J. Boegli
H. Denton
J. Kastner
E. Conti
M. Parsont
G. Knighton
M. J. Oestmann
IE(3)
F. Gray/T Bruen, (OELD)
R. Fraley, ACRS(3)
M. Aycock
P. Erickson
M. Slater

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MC#454949 SURNAME▶	MJO MJOestmann:bp	JBoegli	MParsont	GWKnighton		
6/3/75 DATE▶	6/5/75	6/9/75	6/17/75	6/19/75		

ENCLOSURE 1

DETAILS OF MEETINGS ON RADIOLOGICAL ENVIRONMENTAL TECHNICAL SPECIFICATIONS

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

DOCKET NOS. 50-3, 50-247, 50-286

Meetings were held with representatives of Consolidated Edison at NRC Headquarters on March 14 and 20 and April 10, 1975 to discuss the radiological sections of the proposed Environmental Technical Specifications to be issued with the Operating License No. DPR-64 for Indian Point Unit No. 3. Consolidated Edison initially proposed Section 4.2 Radiological Environmental Monitoring Survey as part of the Environmental Technical Specifications on January 24, 1974. After a meeting held on March 8, 1974, the applicant submitted revised pages to the Environmental Technical Specification on April 17, 1974. The applicant was informed on March 8, 1974, that the proposed radiological environmental program including two regimes would require revision to comply with the NRC guidelines to be published in Regulatory Guide 4.8 Guide to Preparation of Environmental Technical Specifications. Furthermore, the applicant was told that Section 3.9 Effluent Releases in Appendix A of the Technical Specifications would be transferred to Appendix B of the Technical Specifications as Sections 2.4 and 3.4 Radioactive Discharges for Indian Point Unit No. 3.

On March 14, 1975, the applicant received a copy of a draft of the revised Sections 2.4 and 3.4 Radioactive Discharges and Section 4.2 Radiological Surveillance, for the Appendix B, Environmental Technical Specifications. Comments on these sections were received from the applicant on March 14 and 20, 1975. They were also transmitted to NRC on April 7, 1975 and are listed in Enclosures 3 and 4. Additional discussion on the items listed in Enclosures 3 and 4 took place on April 10, 1975. Details of this discussion are presented below.

I. Sections 2.4 and 3.4 Radioactive Discharges

A. Per Unit vs Site Releases

A generic problem exists in that the Sections 2.4 and 3.4 were written for limits on releases from each Unit rather than for limits on releases from the entire site. Since the three Units have common facilities, particularly the steam generator blowdown interties from Units Nos. 2 or 3 to the Unit No. 1 SBBPS and the common discharge structure, the releases from each Unit cannot be differentiated. The applicant can maintain the overall site limit but not on a per Unit basis.

This issue has been resolved by modifying the wording and including item 1.18 in the Definitions section. Item 1.18 says that:

> "The release rate per site shall be equal to the release rate per reactor times the number of reactors producing radioactive effluents at the site irrespective of the actual release rate from each reactor through the shared liquid radioactive waste treatment systems."

B. Effluent Control Monitor and Automatic Waste Isolation Valve on the Unit No. 1 Waste Processing Plant

NRC staff has required that in Specification 3.4.1.h, Unit No. 1 should be provided with a continuous liquid effluent monitor with recorder, an alarm and automatic closure of each isolation valve, and a continuous flow measurement device with recorder. Since this equipment is presently not at Unit No. 1, the applicant has until June 1, 1976 to install the equipment. Prior to this date, the NRC staff is requiring that all Unit No. 1 liquid effluent releases shall be batch released and any unplanned or uncontrolled offsite releases of radioactive materials in the liquid effluents in excess of 0.5 curies shall require a 10-day notification to the NRC.

C. Analysis of Batches of Liquid Wastes

The applicant explained that in Specification 3.4.1.b, the requirement that each batch of liquid wastes be analyzed for gamma isotopes is not necessary. The applicant has used a limit of 1×10^{-7} µCi/cc concentration after dilution based on gross gamma - beta analyses of each discharge. The staff recommends each batch be analyzed for gamma emitters at a detectable concentration of 5×10^{-7} µCi/cc. For certain mixtures of gamma emitters, the staff has provided a means of calculating concentrations of each radionuclide using measured ratios with those radionuclides which are routinely identified and measured.

D. Waste Distillate Tanks at Unit No. 1

Specification 3.4.1.c calls for recirculation of two tank volumes prior to taking samples from a monitoring tank. Since it is presently not possible to recirculate the liquids in the Unit No. 1 tank, this Specification has been modified to require a recirculation system on the monitoring tanks at Unit No. 1 by June 1, 1976. Prior to this time, representative samples will be taken from the tank drain tap after flushing the line with five times the sample line volume.

E. Continuous Monitoring and Recording of Radioactivity

In Specification 3.4.1.d, the radioactivity in liquid wastes is required to be continuously monitored and recorded. Conditions are provided whenever the monitors are inoperable. The applicant believes that releases must be allowed after sampling when monitors are inoperable. Unit No. 1 also has no monitors to comply with this specification. As stated in item A above, the monitors at Unit No. 1 will be required by June 1, 1976. Specification 3.4.1.h describes the condition for Unit No. 1 monitoring requirements. However, for the other two Units, if monitors are inoperable for over 72 hours, no release from a liquid waste tank shall be made and any release in progress shall be terminated.

F. Flow Rate Measurements and Recorders

In reference to Specification 3.4.1.e, no flow rate measuring devices on Unit No. 1 liquid waste discharge lines and no flow rate recorders on any of the Units exist. The applicant determines flow rate by recording the time of start and finish of a discharge and the discharge pump capacity. The volume of liquid in a waste tank is recorded before discharges. However, Specification 3.4.1.e will require flow rates to be continuously measured and recorded or the tank level checked and recorded at least once every two hours during release.

G. Blowdown Monitoring

In reference to Specification 3.1.4.g, the applicant reported that if the blowdown monitor is out of service, the condenser air ejector monitor will provide for continuous monitoring. Even if both of these monitors are out of service, the applicant carries out manual sampling which, according to him, will comply with Regulatory Guide 1.21 and Criteria 60 and 64 requirements. The NRC staff will, however, require continuous monitoring and recording of the steam generator blowdown radioactivity. If these monitors are inoperable, the blowdown flow is required to be diverted to the waste management system and the direct release to the environment shall be terminated.

H. Limitations on Gaseous Discharges

The applicant complained that the limits on the radioactive gaseous discharges as presented in Specifications 2.4.2.a(1) and 2.4.2.b(1) are more restrictive than the present limits which, according to the applicant, are based on the worst

meteorology. In addition in Specification 2.4.2.b(2), the annual limits are more restrictive than the quarterly limits which have now been applied. On April 15, 1975, the applicant submitted a letter including revised sections on the gaseous discharge limits. However, they were later withdrawn. The specifications on the limits have now been firmed up based on NRC guidelines.

I. Flow Measurements and Recorders of Gaseous Releases

As required by Specification 3.4.2.b, gaseous releases, except turbine building ventilation exhaust and as noted in Specification 3.4.2.c, are required to be monitored. However, no flow measurements or recording instrumentation is provided. The NRC staff is requiring that the flow of the gaseous releases be measured and recorded by June 1, 1976. The NRC staff agreed that prior to that date, the release rate in Specification 2.4.2 shall be based on the measured flow rate or the determined flow rate of each operating vent or stack exhauster, provided a flow rate calibration of all exhausters has been performed each 6 months and the damper position and exhauster operating conditions checked and recorded each shift.

J. Tables 2.4-1, 2.4-2, 2.4-3, and 2.4-4

Based on comments from the applicant, Tables 2.4-1, 2.4-2, 2.4-3 and 2.4-4 were modified such as to take into account the requirements to have various monitors for liquid discharges, which are not in the plant now, installed by June 1, 1976. The monitors for the steam generator blowdown vents shall be required for Units 1 & 3 by initial criticality of Unit No. 3.

The applicant's comments were taken into account wherever possible. Sections 2.4 and 3.4 are being finalized and will be included in the Technical Specification to be issued when the Operating License No. DPR-64 for Indian Point Unit No. 3 will be granted.

II. Radiological Environmental Monitoring Program

The radiological environmental monitoring program as described in Section 4.2 of the Technical Specifications for Unit No. 2 was revised by deleting a separate subsection for milk monitoring and incorporating all monitoring in one section for the new Technical Specifications for Units Nos. 1, 2, and 3. In addition, the

monitoring program was revised to eliminate the two regime concept and to include a one regime program consistent with the present day NRC guidelines. Comments on specific items of the revised Section 4.2 were received from the applicant and are listed in Enclosure 4. Each item was discussed on April 10, 1975. As a result on April 15, 1976, the applicant submitted a revised Section 4.2 to take into account his comments. The NRC staff has reviewed the revised section, and with some minor modifications, agree with the revised Section 4.2. Section 4.2 will be issued as part of the Appendix B at the time that the Operating License No. DPR-64 is granted for Unit No. 3. The applicant has also provided two maps locating the various sampling stations within 10 miles of the Indian Point site, which will be included in the Technical Specifications.

Enclosure 2

List of Attendees

NRC

G. W. Knighton
J. Boegli
M. Parsont
M. J. Oestmann

Con Edison

J. Kelley
R. Van Wyck
C. Forsberg
R. Spring
K. T. Eccelston

LeBoeuf, Lamb, Leiby & MacRae

E. R. Fidell

From: R. Van Wyck

CONSOLIDATED EDISON

INDIAN POINT

PROPOSED TECHNICAL SPECIFICATIONS

APRIL 1975

Section	Page	Problem
2.4.b 2.4.1.b 2.4.1.c 2.4.1.f	2.4-1 2.4-3 2.4-3 2.4-3	This requires that total liquid curies releas be tabulated separately for each reactor. Th cannot be done because of the waste treatment interties mandated by the technical specifica
2.4.1.d	2.4-3	There is no "effluent control monitor" or aut matic" waste isolation valve" on the Unit 1 w processing plant. Even if there is a monitor would respond to dissolved and entrained nobl gases and preclude use for demonstrating compliance with 2.4.1.a.
3.4.1.b	2.4-3	This requirement for gamma isotopic analysis each release is not necessary. We now use a conservative limit of $1x10^{-7}$ u Ci/cc concentr after dilution based on a gross gamma, beta analysis of each discharge.
3.4.1.c	2.4-3	The waste distillate tanks on Unit No. 1 cann be recirculated so this specification cannot
3.4.1.d	2.4-3	Releases must be allowed after sampling when monitors are inoperable. Sampling can comply Reg. Guide 1.21 and Criterion 60 and 64. Sit will occur when monitors are inoperable and v continues to be produced even when the plant cold shutdown. In addition, Unit No. 1 has n monitors to comply with this specification.
3.4.1.e	2.4-3	There are no flow rate measuring devices on t liquid waste discharge lines and there are no rate recorders on any of the Units. Flow ra known now by recording the time of start and of a discharge and the discharge pump capaci In addition the volume of liquid in a waste recorded before discharge.
3.4.1.g	2.4-4	If the blowdown monitor is out of service, t condenser air ejector monitor (which is more sensitive to a leak) will provide continuous monitoring and vice versa. Even if both of monitors are out of service, manual sampling comply with R.G. 1.21 and Criterion 60 and 6 requirements.
2.4.2.a.1 2.4.2.b.1	2.4-7 2.4-9	This new limitation on gaseous discharges is more restrictive than the present limits whi already based on proposed Appendix I values worst meteorology. The basis for the much m restrictive limit is not identified.

Section	Page	Problem
2.4.2.b.2	2.4-9	The annual limits, more restrictive than the quarterly have now been applied. These did not exist before, what is the basis for this limit?
3.4.2.b	2.4-8	There is no flow measuring or recording instrumentation on the gaseous release point. It is determined by use of ventilation fan status & capacity.
Table 2.4-1	2.4-18	Principal gamma emitters on each batch, see comment on 3.4.1.b above.
Table 2.4.2	2.4-20	The requirement for tritium analysis on each tank and purge should be replaced by continuous tritium monitoring on the plant vent. The continuous monitoring will comply with all requirements of R.G. 1.21 and criterion 60 and 5 and will be far less expensive than individual samples.
Table 2.4-3	2.4-22	This table is very general, can be interpreted mean anything and should not be a part of a pla specification. Specifically, the chemical wast tanks on Unit 2 & 3 are transferred to the wast system and are not otherwise monitored. The detergent waste collection tank is combined wit other liquid wastes for discharge and is not reported separately. There are no monitors on the service water discharge pipe of any of the Units (1, 2 or 3). There are no monitors or sampling of turbine & building sumps. There are no high liquid level alarms on any of the tanks listed.
Table 2.4-4	2.4-23	The same general comment as above applies. The is no continuous monitor on the waste gas storag tanks. For tritium monitoring see comment on Table 2.4-2 above. The steam generator blowdow tank vent will only monitor for radioiodine. There are no monitors on the turbine gland seal condensor or the mechanical vacuum pump.

CONSOLIDATED EDISON

INDIAN POINT

PROPOSED TECHNICAL SPECIFICATIONS

APRIL 1975

Section	Page	Problem
4.2.1.3	4.2-2	Due to the brief grazing season in this area, any changes in numbers of milch animals between the beginning and middle of the grazing season will be minimal. Therefore it is not necessary to conduct two surveys.
4.2.1.4	4.2-3	Since we already have established a control location at Roseton where air and fallout is sampled, it is unnecessary to establish a new station in the least prevalent wind direction just for food crops. We will sample food crops at Roseton.
Table 4.2-1	4.2-6	Sampling frequency for H.R. aquatic vegetation should be Spring and Summer. During the fall season very little vegetation is available for analysis. It is unnecessary to perform Sr-89, 90 analyses since various technical papers indicate that measuring Cs-134, 137 will yield the same results. *
Table 4.2-1	4.2-7	Sr-89, 90 analysis unnecessary as explained above. Control station for leafy green vegetable unnecessary as explained in 4.2.1.4 above.
Table 4.2-2	4.2-8	Sample point 1 should read Environmental Lab not Air Monitor House since sampler was relocated to eliminate heavy dust loading. Sampling point 5 should read NYU tower not Verplanck lab. The former has been a existing air sampling station and lies in the same sector as the latter. Therefore no need to change existing sampler.
Table 4.2-2	4.2-9	Sample points 26 and 27 not necessary since we are already sampling H.R. water on a continuous basis. Sample point 32, NYU Tower should be sample point 5. Sample point 33, Rover, is not only unnecessary but not meaningful as an indicator of plant effects since sample is moved periodically to different locations. Should be eliminated.

* Based on analysis of results of Indian Point 1 and 2 operational radiological environmental monitoring data, the use of Cs-134, 137 measurements as an indicator of Sr-89, 90 in appropriate media is allowed.

Section	Page	Problem
Table 4.2-2	4.2-10	Sample point 47 unnecessary as explained in 4.2.1.4 above.
Table 4.2-3	4.2-11	Sample size of 1 Kg for H.R. crabs/clams would require collecting 300-400 samples. It would be highly improbable that we could collect this many crabs/clams since this area is not permanent habitat for these organisms. Therefore the minimum detectable concentration will be dependent on the weight of the crabs/clams collected. Sr-89, 90 analysis on air particulate required on a monthly/quarterly basis but sample size indicates weekly sample. Sample size therefore should be increased to 1080 m^3 and 3240 m^3 for monthly and quarterly sampling respectively.
Table 4.2-3	4.2-12	The GSA MDC on milk sample would require sufficiently long enough counting time which would result in a physical change in the sample causing geometry changes which would render the analysis useless. An MDC of 5.0 pCi/l would be a proper compromise between counting time and detection limits. Since Cs-134, 137 will be analyzed by GSA, the above reasons apply to increasing the detection limit from 1.0 to 5.0 pCi/l.

JUN 2 1975

Docket Nos. 50-3
50-247
50-286

Daniel R. Muller, Assistant Director for Environmental Projects, RL
THRU: George W. Knighton, Chief, Environmental Projects Branch No. 1

DEPARTMENT OF INTERIOR - COMMENTS ON THE FES FOR INDIAN POINT UNIT NO. 3

On April 24, 1975, the Department of Interior commented on the FES for Unit No. 3 regarding the NRC response to the DOI comment concerning the impacts to downstream uses of the Hudson River water. A copy of the DOI letter is attached as Enclosure 1. The DOI comments refer to page XII-16 (copy enclosed) of the FES.

We addressed the question of water uses and its impacts in a number of subsections in the FES. On page VIII-2, we pointed out that commercial and industrial uses of the river, as well as public and recreation uses, should not be affected by the operation of Unit No. 3, except that the heated discharges limit the extent to which future industries in the immediate vicinity could further heat the water. The productivity of the river could not increase in this respect as long as the plants operate with once-through cooling. Furthermore, the following paragraph, which was in the DES for Unit No. 3 but was inadvertently left out of the FES, explains the limits of the heating capacity of the Hudson River water for the entire subregion starting with Lake Champlain.

"According to a study made by the Hanford Engineering Laboratory[1] on thermal effects of projected growth for the Hudson River with its major tributary, the Mohawk River, and the drainage basin of Lake Champlain within the United States, the total stream-electric power capacity of this subregion is 11,043 MWe. At the present time, there is 6,155 MWe capacity, or 56%, of steam electric plants on the Hudson River which only includes the stretch from Troy to New York City. The assumption used in estimating the value of 11,043 MWe included operation with once-through cooling."

In addition, we did not have readily available information on all the industrial uses of process water of the Hudson River but we did state that we believed it was reasonable to assume that most users have processes that are sufficiently insensitive, or have sufficient cooling capacity margin, to accomodate any temperature changes of 4 to 5 F° with little inconvenience or cost. We further added that the use of the water for cooling Unit No. 3 would have a value and benefit to the welfare of people in the applicant's service area, relative to the need for power.

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SURNAME ➤						
DATE ➤						

On page V-49 of the FES, we also addressed the question of the effect of water use by industry stating that (1) the water consumption by Unit No. 3 is negligible, and (2) no interference from chemical discharges or increased turbidity is expected. The salty water prevents its use by many industries except for cooling and by municipals for drinking purposes.

We are unaware of any specific industry that could be affected by the thermal effluents from Indian Point Units Nos. 1, 2 or 3 except Bowline or Lovett fossil plants which also use the water for once-through cooling. We have thoroughly investigated the cumulative effects of thermal discharges from all power plants on the river.

Although we do not have all the information on other water users we would like to have, we believe we have provided a sufficient response on this subject in several subsections of the FES.

In addition, I agree with DOI that Chapter 5 of Reg Guide 4.2.1 should be appropriately amended to require that the applicants evaluate basin-wide impacts, such as on water uses, from operation of their plants.

Mary Jane Oestmann, Project Manager
Environmental Projects Branch No. 1
Division of Reactor Licensing

Enclosures:
1. DOI ltr dtd 4/24/75
2. Page XII-16 of IP-3 FES

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DATE ➤	5/29/75					

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

PEP ER-73/1405

APR 24 1975

Dear Mr. Knighton:

Thank you for your letter of February 21, 1975, transmitting copies of the Nuclear Regulatory Commission's final environmental statement for Indian Point Nuclear Generating Plant, Unit No. 3.

We believe the response to our comment concerning the impacts to downstream uses to be inadequate. Our review of the hydrologic aspects of the draft environmental statement concerned the effects from thermal effluents to other uses of water downstream from the plant. The staff response indicates that a survey of all process-water uses in the affected reach of the river is not available and, thus, an accurate evaluation of these effects is not possible. Evaluation of impacts downstream from an outflow point is an important part of environmental assessment and should become a formal requirement addressed by the applicant. Further, chapter 5 of Regulatory Guide 4.2.1. should be suitably amended to reinforce the requirement that any applicant evaluate basin-wide impacts from his operation.

We hope this comment will be helpful to you.

Sincerely yours,

(Sgd) Stanley D. Doremus

Deputy Assistant Secretary of the Interior

Mr. George W. Knighton, Chief
Environmental Projects Branch 1
Division of Reactor Licensing
Nuclear Regulatory Commission
Washington, D. C. 20555

7. Comment:

Thermal Effects on Water Uses – Anticipated impacts of thermal effluents on aquatic biota in the Hudson River appear to have been exhaustively analyzed. However, little or no information is included in the effect of the raised water temperature on other uses of the river water upstream and downstream from Indian Point, particularly at points between 90 and 120 miles downstream of Troy, New York. It is recognized that the effects will be partially inseparable from those of other power plants such as the Lovett and Bowline fossil-fuel plants, and that the effects would presumably not be significant after May 1, 1978, when a closed-cycle cooling system would become operational. However, it is suggested that assurances be given that thermal effects evaluated in the statement include effects on other industrial uses of the water, particularly the important use of the water as a coolant.

Response:

When all three Units at Indian Point are operating with once-through cooling and the effects of other power plants are considered, the average temperature of the Hudson River in about a 10-mile reach at Indian Point may at times be increased up to 4 F° over what it would have been without operation of the Indian Point Plant (see Chapter V). Industries and other users of process water will be adversely affected due to either slightly higher process temperatures or increased water circulation requirements. The effect will be most pronounced during July and August when river freshwater flow rates are low and the ambient river temperatures are highest. The staff believes it reasonable to assume that most users have processes that are sufficiently insensitive, or have sufficient cooling capacity margin, to accommodate this change with little inconvenience or cost. However, a complete survey and analysis of all process water uses in the affected reach of the river is not readily available and without such information the hardships, if any, as a result of raising the river temperature cannot be accurately estimated. Once closed-cycle cooling systems are in operation, thermal effects from the Indian Point Plants should be minimal.

8. Comment:

Cumulative Impacts – We believe it imperative, when considering impacts on fish and wildlife resources, that all units operating or planned on the Hudson River estuary be considered. The fishery loss associated with steam-electric power plants withdrawing water from the river should be discussed more thoroughly. Such an overall analysis of impacts would be more informative than a discussion of only the Indian Point Nuclear Generating Station's impacts.

Docket Nos. 50-3
50-247
50-286

MAY 22 1975

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EP-1 Reading
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Note to: J. Gallo, Chief Hearing Counsel, Office of the Executive Legal Director

INDIAN POINT UNITS NOS. 1, 2 AND 3 - PROPOSED ENVIRONMENTAL TECHNICAL SPECIFICATION REQUIREMENTS

Twenty copies of the "Proposed Environmental Technical Specification Requirements for Indian Point Nuclear Generating Units 1, 2, and 3," which have been prepared with the technical assistance of TR, have been sent to you under separate cover. We have held numerous meetings and discussions with Consolidated Edison during the last several months to reach agreement on various issues in the preparation of the ETS. The ETS for all three plants are to supersede the ETS for Units Nos. 1 and 2, as amended, issued with Amendment No. 3 to the OL for Unit No. 2 in August 9, 1973. An ETS change to take into account the deletion of the old ETS for the new ETS is being prepared.

In essence the new ETS follows the general format of the old ETS but have been upgraded to respond to comments from DIE and to comply with present-day NRC guidelines. The Section 3.9 Effluent Release has been transferred from Appendix A to Appendix B (ETS) as Section 2.4 and 3.4 Radioactive Discharges. However, this Section is based on the old Appendix I and will have to be modified by an ETS change by June 4, 1976. Until management has firmed up its guidelines on the new Appendix I, we will have to keep the Section 2.4 as is. The Section 4.2 Environmental Radiological Surveillance program has been changed to delete the two regime sampling program and to substitute an expanded one regime program to comply with present day guidelines. The ecological sections, 4.1.2a (1) General Ecology Survey, (2) Entrainment, (3) Impingement, and (4) Special Studies have been modified so as to comply with the Stipulation with the need to collect at least two years of post operational data. This extension goes beyond the original TI program, a schematic of which is enclosed. The original TI program was designed so that all field data collection would be completed by the end of 1975 and in 1976, the final report would be prepared. Because of the Environmental Specialist Branch's position taken (copy of memorandum, dated May 7, 1975), the schematic diagram has been deleted from the new ETS because ESB felt it was too binding in terms of the time schedule of the specifications. In addition, a condition has been added which indicates that the licensee cannot terminate the ecology program without the prior approval of NRR.

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If you have any questions regarding the ETS, please let us know by May 27, 1975. If not, would you please arrange to send them to the parties.

Original signed by
George W. Knighton

George W. Knighton, Chief
Environmental Projects Branch No. 1
Division of Reactor Licensing

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