UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 29, 1999

Ms. Michelle Riddell
Safe Legacy
173 Huguenot Street
New Paltz, New York 12561

Dear Ms. Riddell:

I am responding to your letter dated March 23, 1999, addressed to Chairman Jackson of the U.S. Nuclear Regulatory Commission (NRC), which was received by us on May 27, 1999. In your letter, you stated that the Indian Point Unit 1 (IP1) spent fuel pool has been leaking radioactive water into the Hudson River since 1991 and that a Consolidated Edison (ConEd) official acknowledged this at the IP1 decommissioning meeting in Peekskill, New York, on January 20, 1999. In addition, you asked what the NRC is doing about this situation.

The IP1 spent fuel pool system includes seven interconnected pools that were used during operations to support storage and maintenance of spent fuel or other highly irradiated equipment. A drain and water collection system called the north curtain drain located on the perimeter footing of the fuel storage building is used to collect ground water and to monitor potential pool leakage. Low levels of radioactivity have been identified in the north curtain drain and the suspected source is one or more of the fuel storage building pools. Water is removed from the north curtain drain, stored, and processed by the station liquid radwaste system. The liquid radwaste system treats the water, reducing, if necessary, radioactive contaminants. After appropriate sampling, the water is permitted to be released from the facility in accordance with NRC requirements. ConEd continues to monitor this condition and reports to the NRC regularly on this matter in the Annual Radiological Effluent and Waste Disposal Report, which is available in the Local Public Document Room. We will provide a copy of the most recent report to you under separate cover.

In 1994, the NRC expanded its inspection of IP1 to include a comprehensive evaluation of ConEd's efforts to resolve this condition and evaluate public health and safety consequences. These inspections included independent radiological survey and sample analysis by NRC, New York State representatives, and ConEd. These inspections investigated the nature of the suspected pool leakage and reviewed activities to quantify the loss of water inventory from the spent fuel pool, identify water loss mechanisms and pathways to the environment, and assess any impact of the leakage on the environment and on public health and safety. The results of these inspections are contained in Inspection Reports 94-01 and 94-80, which are provided as Enclosure 1. These inspections determined that water leakage from the IP1 spent fuel pool was very small (i.e., on the order of 25 gallons per day from a combined spent fuel pool water inventory of well over 600,000 gallons) and confirmed that there was no measurable impact on the environment from this leakage. The NRC confirmed that ConEd had planned and implemented efforts to resolve the condition and established processes to monitor and control effluent releases to the environment in accordance with regulatory requirements.

As part of the NRC's assessment of this matter, a review of ConEd's measurements, calculations, and assessments of the loss of pool water and associated environmental impacts was performed in 1994. Using conservative assumptions and NRC Regulatory Guide 1.109 methodology, ConEd calculated that daily releases from the spent fuel pool of 100 gallons per day, or four times the estimated spent fuel pool leakage rate, would result in approximately

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0.1 percent of the routine plant releases. The annual radiation dose from such releases is primarily due to tritium through the fish pathway and is on the order of 0.0001 millirem/year (whole-body) dose to an individual. To put this radiation dose in perspective, the average individual receives over 300 millirem per year from natural background radiation in the United States.

Regarding the continued monitoring of radioactive effluents from Indian Point Station, Units 1 and 2 (operated by ConEd), and Unit 3 (operated by the New York Power Authority) have a common radiological environmental monitoring program. Accordingly, IP1 has been monitored by a radiological environmental monitoring program since its shutdown in 1974, and has been inspected by the NRC on a recurring basis. Recent NRC inspections have reviewed ConEd's continuing corrective actions and effluent monitoring program enhancements implemented as a result of suspected spent fuel pool leakage. These actions included elevating the boron concentration of the spent fuel pool water to help trace the source of the leakage, performing tritium analyses on a routine basis for the sphere foundation drain, which leads to the north curtain drain, and increasing the frequency of analyses of the sphere foundation drain and the north curtain drain effluents. Environmental samples to date have not indicated any elevated radioactive measurements as a result of this condition.

Since 1994, ConEd has undertaken a number of actions to identify the source of the pool leakage. Recent efforts included removing irradiated hardware from the east pool and initiating a project to de-sludge and drain the water storage pool. Future plans include draining all of the pools except for the west fuel pool, which still contains 160 spent fuel assemblies, and continued monitoring to determine if additional corrective measures are necessary.

To date, corrective measures taken by ConEd for suspected leakage from the spent fuel pool have been responsive to the concern and its potential impact on public health and safety and the environment. While the NRC's inspections to date have indicated that there is no health and safety impact on the public from suspected pool leakage, our review of ConEd's future actions to identify and reduce the leakage from the spent fuel pool will continue.

Should you have any further questions, please contact John Minns of my staff at 301-415-3166. I also understand that you have spoken to Richard Barkley of Region I about this matter and that he will provide you with additional information regarding routine radioactive effluents from the Indian Point Station. I am also enclosing a copy of NUREG-1628, "Staff Responses to Frequently Asked Questions Concerning Decommissioning of Nuclear Power Reactors, April 1998."

Sincerely,

John A. Zwolinski, Director
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Enclosures: 1. NRC Inspection Reports 94-01 and 94-80
2. NUREG-1628, April 1998

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Green Ticket #G19990272 Date: June 29, 1999

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Office of Nuclear Reactor Regulation

Enclosures: 1. NRC Inspection Reports 94-01 and 94-80
2. NUREG-1628, April 1998

ACTION

EDO Principal Correspondence Control

FROM: DUE: 06/10/99 EDO CONTROL: G19990272
DOC DT: 03/23/99
FINAL REPLY:

Michele Riddell
Safe Legacy

TO:

Chairman Jackson

FOR SIGNATURE OF : ** GRN ** CRC NO: 99-0451

Collins, NRR

DESC:

INDIAN POINT 1 -- SPENT FUEL POOL LEAKING
RADIOACTIVE WATER

ROUTING:

Travers
Knapp
Miraglia
Norry
Blaha
Burns
Miller, RI

DATE: 05/27/99

ASSIGNED TO: CONTACT:

NRR Collins

SPECIAL INSTRUCTIONS OR REMARKS:

NRR Action: DLPM: Zwolinski
NRR Received: May 27, 1999
NRR Routing: Collins/Zimmerman
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Sheron
NRR Mailroom

ACTION
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BY 6/7/99

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Date: 5/25/99 Total No. of Pages: 1	
To: SHIRLEY JACKSON	From: Michele Riddell
Co./Dept.: U.S. NRC	Co./Dept.: SAFE Legacy
Fax: 301-415-1672	Fax:
Phone:	Phone: 914-255-5482
Note:	E-Mail:

SAFE LEGACY

173 Huguenot Street
New Paltz, New York 12561
Email: safelegc@ulster.net
Co-presidents: Lexsea Linardakis and Michele Riddell (914) 255-5482

March 23, 1999

Ms. Shirley Jackson, Director
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Ms. Jackson,

I am writing on behalf of my group, Safe Legacy, which is part of a New York - New England coalition to end unsafe nuclear practices. I am concerned and outraged over the spent fuel pool at Indian Point, Unit 1 which has been leaking radioactive water into the Hudson River since 1991. This was acknowledged by Mr. A. Allen Blind of Consolidated Edison at the Indian Point 1 decommissioning meeting in Peekskill, NY on January 20, 1999.

I was appalled to learn that this leak was discovered in 1991 and has been allowed to steadily leak into the Hudson, an American Heritage river. I am extremely anxious to find out if you are doing anything to stop this radioactive leakage. Please let me know as soon as possible what corrective measures you are taking.

Sincerely,

Michele Riddell, Co-president

CC: Senator Daniel Patrick Moynihan
Senator Charles Schumer
Representative Maurice Hinchey

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OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

PAPER NUMBER: CRC-99-0451 LOGGING DATE: May 25 99

ACTION OFFICE: EDO

AUTHOR: MICHELE RIDDELL
AFFILIATION: NEW YORK

ADDRESSEE: CHAIRMAN JACKSON

LETTER DATE: Mar 23 99 FILE CODE: IDR 5 INDIAN POINT

SUBJECT: INDIAN POINT 1

ACTION: Direct Reply

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SPECIAL HANDLING: SECY TO ACK

CONSTITUENT:

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SIGNATURE: DATE SIGNED:
AFFILIATION:

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DOC DT: 03/23/99
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Chairman Jackson

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Collins, NRR

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RADIOACTIVE WATER

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Miller, RI

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ASSIGNED TO: CONTACT:

NRR Collins

SPECIAL INSTRUCTIONS OR REMARKS:

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BY 6/7/99

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Note:	E-Mail:

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Representative Maurice Hinchey

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SUBJECT: INDIAN POINT 1

ACTION: Direct Reply

DISTRIBUTION: CHAIRMAN, COMRS

SPECIAL HANDLING: SECY TO ACK

CONSTITUENT:

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DATE DUE: Jun ~~8~~ 10 99

SIGNATURE: DATE SIGNED:
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