

John D. O'Toole
Vice President

SAFEGUARDS INFORMATION

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, NY 10003
Telephone (212) 460-2533

October 30, 1985

Re: Indian Point Unit No. 2
Docket No. 50-247

Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Varga:

The purpose of this letter is to submit comments relative to the NRC's Regulatory Effectiveness Review (RER) conducted at Indian Point Unit No. 2 from May 13-17, 1985 and reported to us in your letter of August 29, 1985.

The findings of the RER, which were documented and enclosed in your August 29, 1985 letter as Part I, Safeguards Systems Effectiveness Review; Part II, Vital Area Definition; and Part III, Safety/Safeguards Interface Review are responded to in Attachments A, B and C of this letter, respectively.

We appreciate your acknowledgement that there are a great number of strengths in our safeguards program, and in light of your review we are looking at specific safeguards matters which in your view warrant further consideration for possible improvement.

10 CFR Section 73.21 provides that correspondence and reports to or from the NRC which relate to the physical protection of power reactors, including the information enumerated in subsections (b)(1)(i) through (xii) of 10 CFR Section 73.21, are to be protected from unauthorized disclosure. In accordance with these requirements, we therefore understand that the attached report will not be placed in the Public Document Room and will receive limited distribution.

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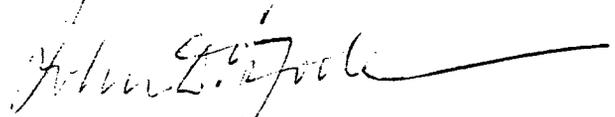
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Should you or your staff have any questions with regard to this letter please call me.

Very truly yours,



John D. O'Toole
Vice President

attach.

cc: Senior Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 38
Buchanan, New York 10511

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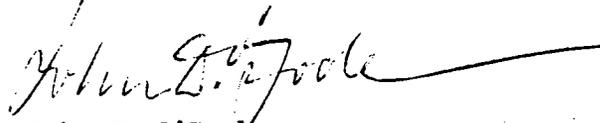
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SAFEGUARDS INFORMATION

Indian Point Unit No. 2
Docket No. 50-247
October 30, 1985

ATTACHMENT A

RESPONSE TO
REGULATORY EFFECTIVENESS REVIEW

PART I

SAFEGUARDS SYSTEMS EFFECTIVENESS REVIEW

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Indian Point Unit No. 2
Attachment A

Section 2.2 "SIGNIFICANT SAFEGUARDS INADEQUACIES"

Section 2.2 of your report defines significant safeguards inadequacies as "a safeguards program deficiency which causes the level of protection provided by the licensee to be significantly less than intended by the NRC, and if allowed to continue, could degrade to a safeguards vulnerability." Your review identified two items in this category.

Section 2.2.1, "Weakness in Vital Area Barrier Integrity" (P.I-3) states in part that, (1), unalarmed chain-link fencing employed as vital area barriers do not provide, in the team's judgement, sufficient strength to meet the performance requirements of 10 CFR 73.55(a) (2), that such fencing could be penetrated or circumvented easily thereby failing to sufficiently delay an adversary's penetration attempt until the arrival of the security force, (3) such fencing because of its open fabric, does not block observation of the vital equipment nor provide effective protection against attempts to damage vital equipment by individuals outside the vital area, and (4) since the fencing is unalarmed, it can be circumvented with no indication of intrusion.

Comment: Our physical security plan was initially accepted in 1977 and all vital areas (VA) protected with alarmed gates and chain-link fencing were found to be acceptable on subsequent NRC I&E inspections. VAs located indoors in either the nuclear or conventional portion of the plant, if fenced, have alarmed gates, those VAs located outdoors but within the protected area have all gates alarmed and most receive additional surveillance via CCTV. Those located outside the protected area have both gate and fence tamper alarms.

It is our opinion that the way our VAs are now protected and surveilled, coupled with the practice of established high frequency foot and mobile security patrols for both normal operation and contingency situations, significantly decreases the probability of an intrusion going undetected into any of the Indian Point 2 VAs. On the related subject of uninhibited view of vital equipment within VAs due to fencing open fabric, we feel that blocking the observation of vital equipment does not appreciably enhance the protection against attempts to damage vital equipment from outside the vital area. To the contrary, uninhibited observation of vital equipment within vital areas is necessary in those situations where operations and security require observation for plant safety/security reasons, and the avoidance of safety/safeguards problems.

Based on the foregoing, and our experience and past and present precautions, we disagree with the characterization that unalarmed chain-link fencing used as vital area barriers in and of itself constitutes a significant safeguards inadequacy.

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Section 2.2.1 "Weakness in Vital Area Barrier Integrity" (P.I-3 & I-4)
This section expresses concern with "all too frequent use of windows in vital area doors" that could be easily penetrated with no alarms to detect such attempted penetrations and therefore no notification to either the Central Alarm Station (CAS) and Secondary Alarm Station (SAS) of such an occurrence.

Comment: All windows in VA doors have been reinforced with open mesh screening which meets 10 CFR Part 73 specifications. This will improve the level of security in such doors and continue to allow operations to view vital equipment for any possible problems such as smoke, fire, steam leaks etc. All VA doors remain fully alarmed.

Section 2.2.1 "Weakness in Vital Area Barrier Integrity" (P.I-4) It was stated in your review that it was the team's belief that the flood panels installed at the bottom of two vital area doors in the Auxiliary Feedwater Pump Building (AFPB) provided a means of access into this building, and that it would be possible to slide a device underneath the door and use it to push open the crash bar inside.

Comment: As a point of clarification, of the two VA doors identified with floor panel bottoms only one has a crash bar and the other a door knob. The flood panels, which were installed to satisfy an earlier NRC commitment, are necessary for the safe operation of equipment found in these areas. The design of the flood panels (which are the same thickness as the doors to which they are attached) permits opening only at an angle considerably less than 90° from the hinge point. Because of the configuration of the door hardware and the panels, these doors could not be opened by a device maneuvered from under the door. The crash bar on the other VA door serves a safety function for personnel who work in this area of the AFPB. If this VA experiences a steam leak, an injured person might not have the use of his/her hands to manipulate a door knob.

Section 2.2.1 "Weakness of Vital Area Barrier Integrity" (P.I-4) It was noted in the RER review that a number of vital area barriers had ventilation and fan louvres. The report went on to question the substantiality of the louvres as well as the quality of their installation, which the RER team felt was inconsistent throughout the plant. It was deemed possible that unsubstantial construction and installation could allow access to these vital areas.

Comment: We concur with your appraisal of certain ventilation and fan louvres found in vital area barriers, and as a result we will undertake a study to determine the adequacy of louvre/damper installation for those louvre/dampers that are part of vital area barriers.

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Section 2.2.1 "Weakness of Vital Area Barrier Integrity" (P.I-4) The RER team observed that most of the vital area doors were mounted with hinges exterior to the vital area. One vital door in particular had its hinges secured only with phillips screws. This was felt to significantly reduce the penetration delay time provided by the doors as part of the vital area barrier.

Comment: We concur in your observation. All exposed vital area door hinge bodies and pins have now been welded.

Section 2.2.2 "Intrusion Detection Capability Needs Improvement" (P.I-5) It was stated in this section that despite the deployment of dual intrusion detection systems, weaknesses were found that contributed to systems ineffectiveness in detecting penetration. The RER team verified these weaknesses by penetrating two areas without causing an alarm. In one instance the weakness was blamed on installation and in the other a combination of installation and ground erosion. In addition, the RER team identified numerous areas around the protected area fence where the sensitivity of the fence protection system (FPS) was such that it would not be effective in detecting an intrusion. The RER report also noted that corrective actions were initiated before the team left the site.

Comment: As a result of the perimeter defense penetrations executed by the RER team during their site visit, we initiated adjustments to sensor equipment, added sensor equipment, and strategically placed barbed wire to correct those weaknesses identified at the time of the team's visit. With regard to the FPS, the fence fabric weave was tightened at indicated areas to prevent sway in the wind and improve FPS sensitivity. Signs presently attached to the protected area fence are in the process of being moved to fence posts thereby reducing microphonic noise that contribute to false alarms. These corrective measures will allow greater FPS sensitivity.

Section 2.3 Safeguards Concerns: A safeguards concern is defined as "an observed weakness in the safeguards program which so limits the effectiveness of specific elements of the facility's safeguards systems or procedures that improvements would be necessary to achieve the full intent of the regulations." The RER team found four items in this category at Indian Point 2 Station.

Section 2.3.1 "Improvements Needed In SAS Layout" (P.I-5 and I-6) The essence of this item is that the layout of the Secondary Alarm Station (SAS) is not conducive to smooth efficient and effective job performance. The examples given to support this contention were that (1) the spatial arrangement of the CCTV monitors and controls are awkward (long reach required), diminishing the operator's ability to clearly and accurately view monitors, (2) the phone in the SAS is located such that an operator must get up to answer the phone, which takes the operator's attention away from monitor and alarm displays, and (3) considerable personnel traffic in and out of the access control area where the SAS is also located creates distractions for the SAS operator, thereby detracting from his effectiveness.

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Comment: Con Edison has initiated a project for inclusion in the 1986 Budget that will look at the feasibility of CCTV system redesign in both the CAS and SAS. The intended purpose of this project is twofold: (1) to redesign the CCTV system for greater effectiveness, and (2) to incorporate appropriate improvements into the CAS/SAS based upon recommendations of a human engineering study.

Section 2.3.2 "Waterfront CCTV Assessment Is Limited" (P.I-6) This section states that the CCTV, which is used as a primary assessment of the intrusion detection system at the protected area fence, is an area of concern regarding the effectiveness of assessment capability due to the length and expanse of camera zones at the waterfront. In addition, operational equipment in the waterfront area blocked camera views and hampered assessment.

Comment: The overall upgrade and modification of the CCTV system referred to in our comment to Section 2.3.1 will encompass reconsideration of the effectiveness of CCTV coverage of the waterfront area. In addition, operational equipment in the waterfront area was removed during the RER team's visit to enhance camera viewing of the waterfront area.

Section 2.3.3 "Varying Sensitivity of the Fence Protection System" (P.I-6) The items of concern in this section were that: (1) variations in sensitivity of the fence protection system were attributed to inappropriate calibrations due to ineffective performance testing and different sensitivity capabilities between two different models of the same system, and (2) without suitable performance testing to identify problems with system's sensitivity level an individual could be afforded the opportunity to penetrate the system without generating an alarm.

Comment: As a result of your observations we have tightened fence fabric weave at locations indicated during the team's visit, replaced fence tamper alarm (FTA) sensor wire and re-emphasized checking of fence fabric tightness with periodic FPS maintenance. These modifications have improved the sensitivity of the Fence Protection System and allowed us to conduct more reliable and appropriate calibrations. The standards embodied in our "Testing Criteria and Acceptance Standards for Physical Security Alarm Systems - Indian Point Units 1 and 2" (August 1981) are sufficient to assure an adequate level of perimeter detection equipment calibration and performance and provide for reliable system operation.

Section 2.3.4 "Maintenance Needs Attention" (P.I-7) This section expresses a concern that there does not appear to be adequate management attention to the maintenance of security equipment. Evidence given to support this contention was (1) hinge pins coming out on vital area door hinges, (2) varying sensitivity of the fence protection system (FPS), and (3) inoperability of the red alarm lights on the CCTV monitors in both the CAS/SAS.

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Comment: Hinge pins on all vital area doors were knocked back in and welded at the time of the RER team visit. Corrective actions for varying FPS sensitivity was addressed in our comment to Section 2.3.3 above and inoperable red alarm lights on the CCTV will be corrected. The RER team's concerns about more attention being given to maintenance was impressed upon the responsible managers who are actively investigating ways to improve maintenance of security equipment.

Section 2.4 "General Observations" General Observations is defined as either relatively minor items identified by the RER team or items which do not currently fall within the regulatory requirements but would greatly improve the overall security system effectiveness. The team identified three items in this category.

Section 2.4.1 "CAS/SAS Shift Lengths Questioned" (P.I-7) The item contained in this section is about concern over the present eight hour shifts for CAS and SAS operators and the effect of shift length on alertness and personnel performance.

Comment: We are not planning at this time to shorten the shift lengths of CAS/SAS operators. While we are continually analyzing our guard force's effectiveness, we are unaware of any information tending to show that shift duration diminishes effective performance. Any management decision to revise staffing or shift duration of the CAS and SAS posts will be made on a timely basis and as operating needs require.

Section 2.4.2 "Number of CAS/SAS Duties Appear Excessive" (P.I-7) The concern expressed by the RER team in this section is whether or not one person can maintain effectiveness for an entire shift with such a hectic pace and under constant pressure.

Comment: With regard to your concerns expressed in Section 2.4.2, captioned "Number of CAS/SAS Duties Appear Excessive," we are unable to agree with your observation at this time. As stated in our comment to Section 2.4.1 above on shift lengths, we are continually analyzing our guard force's effectiveness and looking at ways to optimize operator performance. Any management decisions regarding prioritization of the duties of CAS/SAS personnel will be made on a timely basis and as operating needs require.

Section 2.4.3 "Ineffectiveness of Pat-Down Search Procedures For Employees" (P.I-8) The RER team observed that the present pat-down search procedure was not truly random or performed all the time to be worthwhile. The procedure is considered by the RER team to be ineffective because it is too predictable and this predictability diminishes if not eliminates it's effectiveness.

Comment: We concur with your observation as stated in Section 2.4.3 and we are now developing a new pat-down search procedure for employees that will be random. This administrative change, once approved, will be incorporated into the appropriate security documents.

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Indian Point Unit No. 2
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ATTACHMENT B

RESPONSE TO
REGULATORY EFFECTIVENESS REVIEW

Part II
VITAL AREA DEFINITION

SAFEGUARDS INFORMATION

REPLACEMENT OF SAFEGUARDS
REQUIREMENTS FOR SEPARATION
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Indian Point Unit No. 2
Attachment B

PART II VITAL AREA DEFINITION

Part II of the RER Report called "Vital Area Definition" consists of five basic sections. Section 2.0 discusses general modeling assumptions used by teams from Los Alamos National Laboratory (LANL) to identify vital areas. Section 3.0 describes, at a systems level, basic approaches to sabotage protection. Section 4.0 presents the complete list of locations addressed in the Indian Point Unit 2 Vital Area Analysis (VAA). Section 5.0 addressed the general strategies involving the components found in the locations listed in Section 4.0. Included in this section is the solution from the vital area analysis showing various combinations of locations which, if protected, would interrupt the analyzed sabotage paths. Finally, Section 6.0 details the vital components and systems that must be protected within the location combinations presented in the previous section.

Comment: As noted in Section 5.4 of Part II to the RER report, the protected vital areas/equipment listed in our NRC-approved physical security plan satisfy the LANL VAA as well as those additional considerations stated in Section 5.2 of Part II of the RER report.

We disagree with the RER team's recommendation to designate the pipe tunnel, housing the city water tank pipes from the City Water Tank through the Air Monitor House to the plant, as a separate vital area. The Air Monitor House and its associated pipe tunnel is protected as a vital area in accordance with existing regulations and other ingress/egress points to the tunnel are locked and alarmed. There are compensatory measures for protection of this vital area in the event of a safeguards contingency. Thus, the pipe tunnel is adequately protected.

We are also aware of the ongoing efforts of various NRC committees and work groups on safeguards requirements and vital area determination techniques respectively and the pending proposed rule change to 10 CFR 73 (entitled "Miscellaneous Amendments Concerning Physical Protection of Nuclear Power Plants") that will modify the NRC's present position on vital areas. Because vital areas/vital islands designations is a generic issue with the NRC's position still being formulated, and since we have an approved Physical Security and Safeguards Contingency Plan, we believe it prudent to await the final disposition of the proposed change to 10 CFR 73 before undertaking a re-evaluation of our vital areas to either increase or decrease the present number of designated vital areas.

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Indian Point Unit No. 2
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ATTACHMENT C

RESPONSE TO
REGULATORY EFFECTIVENESS REVIEW

PART III

SAFETY/SAFEGUARDS INTERFACE REVIEW

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Indian Point Unit No. 2
Attachment C

PART III SAFETY/SAFEGUARDS INTERFACE REVIEW

In response to the recommendations of the Ad Hoc Committee to Review Safeguards Requirements at Power Reactors, the Regulatory Effectiveness Review was modified to place increased emphasis upon the review of the possible impact of security upon plant safety. The Regulatory Effectiveness Review Team evidently believed that the following suggestions could further enhance the coordination and cooperation between site security and plant safety in support of the overall goal of the safe operation of the plant.

SECTION 1.0 "IDENTIFICATION TERMINOLOGY" (P.III-1)

Security and operations personnel use door numbers and area names, respectively, to identify locations throughout the site. This can cause confusion for both the security and operations staff when attempting to identify a specific area of concern and could become very important during an emergency situation.

Comment: We are currently conducting a study to evaluate a more comprehensive identification system that will best serve all Nuclear Power departments. Until this system is approved and implemented Security will use the interim measure of adding the geographical location of doors to their present numerical designation. This interim measure is now in effect. When the final nomenclature system is approved the appropriate security documents will be revised to reflect this new system.

Section 2.0 "ANTI-PASSBACK FEATURE OF ACCESS SYSTEM" (P.III-1)

The anti-passback feature of the key card access control system requires an individual to card out of one vital area prior to attempting access to a second vital area. The Committee to Review Safeguards Requirements At Power Reactors determined that the anti-passback feature had the potential to adversely affect safety by denying an individual access to a vital area if he/she failed to card out of a previous vital area or if the system malfunctioned. Inasmuch as this feature is beyond those of a basic access control system, the Committee did not recommend their use. However, the RER team believed that the availability of hard keys to operations personnel as well as the timely response afforded by security because of the number of patrols on-site lessened concerns about the anti-passback feature in use at Indian Point 2. This feature should be reviewed to ensure that it could not inhibit timely response in an emergency situation.

Comment: A review is in progress that will as one of its tasks look at eliminating anti-passback features presently in use. Should this review

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Indian Point Unit No. 2
Attachment C

indicate that antipassback features can be eliminated from the present security computer software and in anticipation of proposed changes to 10 CFR 73 we will factor the elimination of antipassback into the existing security software and into any possible future software upgrade.

Section 3.0 "MANUALLY ENTERED CODES FOR ACCESS" (P.III-2)

The key card access system requires, in addition to inserting a card in the card reader, that a personalized identification number be keyed on a key pad before access is granted. The Committee To Review Safeguards Requirements At Power Reactors felt that individual manually entered codes in access control systems could hamper prompt access to spaces and equipment that are vital to safe operations. Therefore, since this feature is beyond the requirements of a basic access control system, its use is not recommended. The RER team felt that any safety concerns in this regard would be minimized at Indian Point 2 due to the availability of hard keys and security officers on patrol who could provide timely response. However, the feature should be reviewed to ensure that it could not inhibit timely response in an emergency situation.

Comment: The present system of manually entered codes for access has been reviewed and it is our opinion, based on experience to date, that we have had no problems with the key card/manually entered code access system. We have in place an established back-up whereby operations personnel, NPOs and security patrols are all equipped with hard keys to override key card readers in an emergency.

We are studying the possibility of upgrading or replacing the present access control system. If we decide to implement a system upgrade or replacement, we may eliminate the manually entered code at that time.